CLEANER AIR OREGON—RISK ASSESSMENT REPORT

STIMSON LUMBER COMPANY FOREST GROVE COMPLEX
GASTON, OREGON

Prepared for

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

CLEANER AIR OREGON AIR TOXICS PROGRAM

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ACRONYMS AND ABBREVIATIONS

AGL	above ground level
ASOS	automated surface observation station
CAO	Cleaner Air Oregon
DEQ	Department of Environmental Quality (Oregon)
DEQ-approved emissions inventory	emissions inventory approved by the DEQ on November 7, 2023
DEQ exempt TEU guidance	*Cleaner Air Oregon Exempt TEU Reporting* guidance document
EPA	U.S. Environmental Protection Agency
the facility	sawmill and wet process hardboard plant
g/s	grams per second
Hillsboro met station	Portland-Hillsboro Airport monitoring station
MFA	Maul Foster & Alongi, Inc.
MMIF	Mesoscale Model Interface Program
MMIF data	MMIF-derived prognostic meteorological data
MSL	mean sea level
OAR	Oregon Administrative Rule
RAL	risk action level
RBC	risk-based concentration
Stimson	Stimson Lumber Company
TAC	toxic air contaminant
TEU	toxic emissions units
ug/m^3	microgram per cubic meter
WWTP	wastewater treatment plant

1 INTRODUCTION

Stimson Lumber Company (Stimson) owns and operates a sawmill and wet process hardboard plant (alternatively referred to as the Forest Grove Complex) located at 49800 SW Scoggins Valley Road in Gaston, Oregon (the facility). The facility currently operates under Title V Permit No. 34-2066-TV-01 issued by the Oregon Department of Environmental Quality (DEQ) on June 1, 2023.

Maul Foster & Alongi, Inc. (MFA) was retained by Stimson to assist the facility with the dispersion modeling and risk assessment component of the Cleaner Air Oregon (CAO) permitting process. A timeline of the CAO permitting process to date is presented in Table 1-1.

Table 1-1. CAO Process Step Submittals and Approvals

CAO Requirement	Stimson Submittal Date	DEQ Approval Date
CAO Emissions Inventory	September 30, 2020 (Final Revision—May 15, 2023)	November 7, 2023
CAO Modeling Protocol	April 28, 2023 (Final Revision—November 3, 2023)	November 7, 2023
CAO Level 3 Risk Assessment Work Plan	May 28, 2023 (Final Revision—September 19, 2023)	November 7, 2023

Oregon Administrative Rule (OAR) 340-245-0030(1)(d)(ii) states that a Level 3 risk assessment is required to be submitted to the DEQ no later than 120 days after approval of the risk assessment work plan. Based on the November 7, 2023 approval, this Level 3 Risk Assessment is due on or before March 6, 2024. To satisfy this requirement, MFA performed a Level 3 Risk Assessment to estimate the potential cancer and noncancer risk impacts from the facility for comparison to the applicable risk action levels (RALs), shown in OAR 340-245-8010 Table 1.

1.1 Risk Action Level Analysis Overview

The results of the Level 3 Risk Assessment were compared to the most current RALs published in OAR 340-245-8010 Table 1. As shown in Table 1-2, the maximum predicted excess cancer risk is below the Community Engagement RAL. The chronic noncancer hazard index is below the source permit RAL and the acute noncancer hazard index is below the community engagement RAL. Because the calculated hazard indices are well below the Toxics Best Available Control Technology (TBACT) RALs, the calculation of the risk determination ratio was not required.

Table 1-2. Level 3 Risk Assessment Result Summary for Significant TEUs

Exposure Assessment	Facility Risk / Hazard Index	RAL Analysis
Cancer Risk (excess risk per million)		
Residential	**16**	**Below Community Engagement Level**
Non-Residential Child	<0.1	Below Source Permit Level
Worker	0.3	
Chronic Noncancer Hazard Index		
Residential	**0.5**	**Below Source Permit Level**
Non-Residential Child	<0.1	Below Source Permit Level
Worker	<0.1	
Acute Noncancer Hazard Index	**1**	**Below Community Engagement Level**

The remainder of this risk assessment report outlines the methodology used to complete the Level 3 Risk Assessment.

2 FACILITY DESCRIPTION

2.1 Facility Location

The facility is located in Gaston, Oregon, west of Oregon Route 47 in Washington County. The City of Gaston is located in the Tualatin Valley between the foothills of the Chehalem Mountains and the Coast Range. The area immediately surrounding the facility is the Scoggins Valley, a northwest-southeast-trending valley, with nearby elevations of approximately 1,200 feet above mean sea-level (MSL). Henry Hagg Lake is located northwest of the western property boundary. Stimson owns approximately 716 acres in the Scoggins Valley, including the 63-acre plot on which the facility sits. The facility is surrounded by a mixture of residential, private forest, and agricultural land-use zones. An aerial image of the facility location and the modeling boundary is shown in Figure 2-1. The topography of the area immediately surrounding the facility is presented in Figure 2-2.

2.2 Process Description

The facility operates a sawmill and a wet process hardboard plant. Douglas-fir, hemlock, and true fir logs are procured from private and company-owned timberlands, transported to the facility by truck, and unloaded for on-site storage in the log yard or log pond.

Logs are sorted in the log yard, then sent for processing in the sawmill. Once in the log processing line, logs are debarked by a debarker and sent to a horizontal saw for further processing. A lug loader is used to separate and route individually cut boards, via lug chains, for the trimming and sorting area. The lumber is then routed to the trimming and sorting area via a mechanical belt.

After trimming and sorting, lumber is sent to one of six steam-heated lumber kilns for drying to optimal moisture content. The temperature for each lumber-drying kiln depends on the species of wood; the maximum drying temperature set at 190 degrees Fahrenheit. Each lumber-drying kiln processes Douglas-fir, hemlock, and true fir species. Lumber products are dried to an acceptable moisture content (typically less than 14 percent) prior to further processing. After kiln drying is complete, dried lumber is sent to the planer for shaping to final product dimensions—typically in lengths of between 6 feet and 10 feet. End seal and other wood treatments are applied to portions of the kiln dried lumber. Final products are stacked and wrapped for storage and eventual shipment off site.

Wood residuals from the sawmill—including chips, sawdust, and planer shavings, called furnish—are pneumatically transferred to the hardboard plant to be used as raw material for a hardboard product. The residuals are sent through a screening process to sort the furnish into material of acceptable size. Wax is added to the furnish via two rotary valves, then the furnish is steamed and softened in two steam-heated digesters. The furnish is further processed in two steam-heated pressurized refiners to produce wood fiber.

The refined fiber slurry is piped to a stock and mix chest where resin is introduced to the fiber. Following the stock and mix chests, the fiber is sent to a secondary refiner, then to the forming machine, where fibers pack together to form a wet mat. Water drains below the mat, assisted by a vacuum pump.

After forming, the mat is trimmed to size and conveyed to a steam-heated press. Emissions from the hardboard press are routed to a scrubber. After leaving the press, the cured panels are stacked, then transported to the rough warehouse for finishing. At the rough warehouse, finishing operations include cutting boards to size, sanding, and punch pressing for a portion of the boards. Additionally, surface coatings, including topcoats and basecoats, are applied to a portions of the hardboards at the paint line.

Steam from three Dutch oven hogged fuel boilers (the three boilers) is used to provide heat for the lumber-drying kilns and the hardboard plant. Exhaust from the three boilers can be routed between a dry electrostatic precipitator or the fuel dryer, which ventilates into a wet scrubber. Wood residuals from the sawmill are used as fuel for the three boilers. During the wet months, the residuals are sent through a rotary dryer (fuel dryer) to dehydrate the fuel to an acceptable moisture content for efficient combustion. Heat for the fuel dryer is provided by exhaust from the three boilers.

The facility employs a wastewater treatment plant (WWTP) to repurpose wastewater from the hardboard plant operations. The WWTP uses an aeration basin and secondary clarifier to reduce the total suspended solids from the wastewater. Once treated, the wastewater is repurposed back to the facility for use in the hardboard plant.

A process flow diagram outlining the manufacturing process and points of emission to atmosphere was provided to the DEQ as part of the toxic air contaminant (TAC) emissions inventory submittal.

3 EMISSION ESTIMATES AND MODEL SOURCES

Daily and annual TAC emission estimates for the process equipment and emission-control devices, considered to be toxic emissions units (TEUs) as defined in OAR 340-245-0020(59), were prepared in the emissions inventory approved by the DEQ on November 7, 2023 (DEQ-approved emissions inventory). The DEQ-approved annual and daily TAC emission estimates were converted to units of grams per second (g/s) for the purpose of conducting the Level 3 risk assessment as shown in Tables 3-1 and 3-2. Only TACs that have a risk-based concentration (RBC) set forth in OAR 340-245-8010 Table 2 were assessed. Additional details regarding how the daily and annual TAC emission rates were used to complete the Level 3 risk assessment is provided in Section 5 of this report.

The TEUs identified in the DEQ-approved emissions inventory were included in the dispersion model developed to represent the facility. For annual (chronic cancer and noncancer) assessments, each TEU included in the dispersion model was modeled using a unit emission rate equivalent to 1 g/s for all modeled sources. Additional details describing unit emission rate modeling are provided in Section 5.5. For the 24-hour (acute) assessment, a risk equivalent emission rate was developed for each TEU, as shown in Table 3-3. Additional detail describing the risk equivalent emission rate modeling is also provided in Section 5.5.

3.1 Boilers

The facility employs three hog fuel-fired boilers that combine exhaust streams and vent to the atmosphere through two stacks. A common exhaust manifold and damper system allows the exhaust from the boilers to travel through two ducts, one east and one west. The west duct routes exhaust through a multicyclone, fuel dryer cyclone, fan, and stack that is controlled by a wet scrubber. The east duct exhausts to a multicyclone, fan, and stack that is controlled by a dry electrostatic precipitator.

The exhaust stacks for the boilers were represented in the air dispersion model as individual point sources with unique labels (**BLR_ESP**) and (**BLR_SCR**). The model source parameters for the boilers are presented in Table 3-4.

3.2 Kilns

There are six lumber-drying kilns currently in operation at the facility. Lumber Kiln 1 (Kiln 1) is a single track kiln and Lumber Kilns 2 through 6 (Kilns 2 through 6) are double track kilns. All six kilns are indirectly heated by steam from the three boilers. Emissions from the kilns are released to atmosphere through a series of passive roof vents during lumber drying. MFA parameterized kiln emissions as volume sources in the dispersion model. Because the kilns are downwash structures, the dimensions of the volume sources were set by the dimensions of the kilns. Kiln 1 was represented as four volume sources with unique labels (**KILN1_1** through **KILN1_4**). Kilns 2 through 6 were represented as 15 individual volume sources (three per kiln) with unique labels (**KILN2_1** through **KILN2_3, KILN3_1** through **KILN3_3, KILN4_1** through **KILN4_3, KILN5_1** through **KILN5_3,** and **KILN5_1** through **KILN5_3**). Kiln 1 is a single track kiln and the width of the building housing is approximately half that of the width of the buildings housing Kilns 2 through 6. Therefore, four volume sources with shorter side lengths were used to capture the Kiln 1 building footprint for modeling.

The release parameters for the kilns are shown in Table 3-4. In order to account for thermal buoyancy effects from the elevated temperature and velocity of the fugitive emissions releases through each kiln roof vent, MFA incorporated the plume rise calculation methodology consistent with U.S. Environmental Protection Agency (EPA) guidance (EPA 2019b). The plume rise calculations for each kiln source representation are presented in Table 3-5. As stated in Appendix 12 of the 2019 EPA document, "for the kilns with emissions characterized as volume sources, the plume rise was added to the midpoint of the volume release height."

The estimated plume rise shown in Table 3-5 was added to the midpoint of the volume release height, resulting in a calculated overall vertical dimension (estimated plume rise plus half of the kiln height). The effective release height for the volume source was set at half the overall vertical dimension. The initial vertical and lateral dimensions were derived consistent with EPA guidance for elevated sources on or adjacent to a building (EPA 2022).

Total daily and annual emissions from the kilns were divided based on the number of tracks per kiln and the number of volume sources per kiln as shown in Table 3-6.

3.3 Refiners

A mixture of wood fiber bundles, wax, and steam is pressurized and sent through rotary valves, refiners and ultimately, a mixing chest prior to continuing down the process line. As characterized in the DEQ-approved emissions inventory, there are two known release points of TAC emissions from the refiners (1) fugitive emissions emitted through one of two rotary valve exhaust stacks and (2) controlled emissions through a wet scrubber exhaust stack. At any given time, only one of the two rotary valves will be in operation and, as such, MFA modeled emissions from the rotary valve assuming one stack. The two rotary valve stacks are adjacent to each other. Because the exhaust stacks do not have a designated fan to provide constant airflow, MFA characterized emissions released from the rotary valve stack as a volume source. The rotary valve stack was represented in the dispersion model as a volume source with unique label (**REF_RV**), and the wet scrubber was represented in the dispersion model as a point source with unique label (**REF_S5**).

The model source parameters for the refiner sources in the dispersion model are presented in Table 3-4.

3.4 Forming Line

The wood fiber and wax mix is conveyed to a forming line where a vacuum pump is used to facilitate slurry removal prior to entering the hardboard press. The vacuum pump results in a negative pressure underneath the conveying line that captures most fugitive emissions loss during conveyance. Air captured by the vacuum pump is pneumatically conveyed to a stack on the side of the building. TAC emissions from the forming line can potentially be emitted to atmosphere through this stack or as fugitive emissions through a small opening near the roof. Forming line emissions through the designated stack were represented in the dispersion model as a point source with unique label (**FORM_STK**). Fugitive emissions from the forming line were represented in the air dispersion model as a volume source with unique label (**FORM_FUG**).

The model source parameters for the stack and fugitive forming line sources in the dispersion model are presented in Table 3-4.

3.5 Hardboard Press

The hardboard press is a wet-process, 250 pounds per square inch steam-heated press. Emissions from the hardboard press are primarily captured by an enclosure and routed through ductwork to a Tri-Mer scrubber control system. During a capture efficiency verification test conducted in 2009, it was identified that the enclosure captures approximately 98.8 percent of emissions emitted from the press. The remaining 1.2 percent of press emissions are expected to enter the atmosphere via an opening in the building near the press enclosure. Exhaust from the press was represented in the air dispersion model as a point source for the combined press vents with a unique label (**PV_STK**).

Uncaptured emissions from the press were represented in the air dispersion model as a volume source with unique label (**HPVUV_FUG**).

The model source parameters for the press sources in the dispersion model are presented in Table 3-4.

3.6 Fuel Dryer

The three boilers are connected to a manifold system that allows the fuel dryer to draw off a fixed amount of the boiler exhaust to dry the incoming fuel. The comingled boiler and fuel dryer exhaust is routed to a wet scrubber prior to entering the atmosphere. TAC emissions from the fuel dryer were summed with emissions from the boiler through the wet scrubber and represented in the air dispersion model using the point source labeled (**BLR_SCR**).

3.7 Finished Product Marking

Uncontrolled fugitive emissions from top and bottom paint application and surface treatment to the finished product were represented in the air dispersion model as volume sources with unique labels (**PAINT**) and (**LSP**), respectively. The length of side for the coating volume sources was estimated based on the size of the building opening nearest each source.

The model source parameters for the coating application sources in the dispersion model are presented in Table 3-4.

3.8 Hardboard Wastewater

There are three TEUs associated with the hardboard wastewater collection system. TAC emissions from the three open top tanks (whitewater chest, machine chest, and headbox) are identified in the air dispersion model with unique labels (**WHITE**, **MACH**, and **HEADBOX**), respectively. Emissions from the machine chest and headbox are expected to enter the atmosphere via roof vents directly above each tank. The exhaust vent over the headbox vent has a designated fan that continuously draws air from the room. As a result, **HEADBOX** was represented in the dispersion model as a point source. The exhaust vent above the machine chest does not have a designated fan, so **MACH** was represented in the air dispersion model as a volume source. Lastly, the whitewater chest is located adjacent to a bay door that is occasionally opened for employee access to the building. As a result, MFA characterized **WHITE** as a volume source with sides estimated to the width of the bay door.

The model source parameters for the hardboard wastewater sources in the dispersion model are presented in Table 3-4.

3.9 Wastewater Treatment

Emissions from each TEU in the WWTP system were individually characterized in the dispersion model. In total, there are nine emission units associated with the WWTP throughout the facility, including two hydrosieves and seven ponds immediately east of the facility. All nine WWTP sources were represented in the air dispersion model as area sources with the footprint of each TEU defined as the area source boundary. In the case of the two hydrosieves, the area source footprint is representative of the exposed subterranean section of the hydrosieve.

TAC emissions from the hardboard wastewater and boiler scrubber hydrosieves were represented in the air dispersion model with the unique labels **HYDRO** and **SCR_HYDRO**, respectively. TAC emissions from the secondary clarifier, sludge pit, aeration basin, sludge pond, reuse pond, surge pond, and east pond were represented in the air dispersion model with unique labels (**CLAR, PIT, ABASE, S_POND, R_POND, SURGE, E_POND**).

The model source parameters for the WWTP TEUs in the dispersion model are presented in Table 3-4.

3.10 Green-Wood Chipper

A green-wood chipper is used to reduce the size of wood residuals from the stud mill prior to going to the hardboard plant or fuel for the boiler. Exhaust from the chipper is routed through a cyclone to collect additional chip fragments prior to entering the atmosphere. Emissions from the green-wood chipper were represented in the air dispersion model as a point source with a unique label (**S_CYC**).

The model source parameters for the green-wood chipper in the dispersion model are presented in Table 3-4.

3.11 Bulk Storage Tanks

The facility uses six bulk storage tanks for vehicle fuel—one for gas, two for diesel, and three resin storage tanks for the hardboard plant. All six tanks are non-pressurized and are unheated. Per the *Cleaner Air Oregon Exempt TEU Reporting* guidance document (DEQ exempt TEU guidance; DEQ 2022) Section VII Storage Tanks, TAC emissions do not need to be estimated for diesel storage tanks that are kept at ambient temperature and are non-pressurized. In order to provide a comprehensive facility-wide emissions inventory, TAC emissions from the two diesel storage tanks were included in the DEQ-approved emissions inventory. However, in following with the DEQ exempt TEU guidance, MFA did not include the diesel tanks with the Level 3 risk assessment.

TAC emissions from the bulk gas storage tank can be emitted to atmosphere via a small exhaust port near the top of the tank. TAC emissions were characterized in the air dispersion model as a volume source with unique label (**GAS**). The three resin storage tanks are located inside a mostly enclosed room in the basement of the hardboard plant. Fugitive TAC emissions from standing and working losses can enter the atmosphere via open exhaust vents above each tank. As such, MFA characterized each resin tank vent as a volume source in the air dispersion model using unique labels (**RESIN1**, **RESIN2**, and **RESIN3**).

The model source parameters for the gas storage tank and the three resin tanks in the dispersion model are presented in Table 3-4.

3.12 Emergency Engines

A diesel-fueled emergency generator is used at the facility for energy supply during loss of power. A diesel-fueled fire pump is used at the facility to provide support for emergency firefighting activities. Stimson is proposing to install a second diesel-fueled emergency generator to provide power for boiler shutdown operations should there be a power outage at the facility. TAC emissions from the emergency generator and emergency fire pump, and proposed secondary emergency generator were represented in the air dispersion model as point sources with unique labels **BGEN, FIRE**, and **EGEN01** respectively.

The model source parameters for the existing emergency generator and fire pump, and proposed emergency generator in the dispersion model are presented in Table 3-4.

3.13 Welding

Welding activities occur in the facility maintenance shop located in the hardboard plant. A passive exhaust vent is located on the roof near where welding activities occur in the shop. As such, it is expected that any fugitive TAC emissions from the welding activities will enter the atmosphere via the roof vent. TAC emissions from welding activities were represented in the air dispersion model as a volume source with unique label (**WELD**).

The model source parameters for the welding activities roof vent in the dispersion model are presented in Table 3-4.

3.14 Babbitt Pot

Two babbitt pots are used at the facility to melt various metals for equipment maintenance activities. The babbitt pots are co-located in a maintenance shop west of the hardboard plant. A passive exhaust vent is located on the roof near where the two babbitt pots are located. TAC emissions from the combined babbitt pots are expected to enter the atmosphere via the roof vent. Babbitt pot emissions were represented in the air dispersion model as a volume source with unique label (**BPOT**).

The model source parameters for the babbitt pot roof vent in the dispersion model are presented in Table 3-4.

4 AIR DISPERSION MODELING METHODOLOGY

The following subsections detail the conceptual site model for the facility. This conceptual site model was used in support of the Level 3 risk assessment.

4.1 Model Selection

MFA set up the dispersion model of the facility using the models shown in Table 4-1. Lakes Environmental, a third-party overlay software, was used to execute the dispersion model.

Table 4-1. Model Selection

Model	Model Version
AERMOD	23132
AERMET	23132
AERMAP	18081
AERSURFACE	20060
AERMINUTE	15272
BPIP	04274
Note BPIP = Building Profile Input Program.	

4.2 Meteorological Data

To support the air dispersion modeling, MFA developed the meteorological and terrain data files shown in Table 4-2 below.

Table 4-2. Meteorological and Terrain Data

Data Set	Station ID
Surface	Station ID 94285 for Portland-Hillsboro Airport, Oregon (National Oceanic and Atmospheric Administration)
Upper Air	Station ID 24232 for Salem, Oregon (National Oceanic and Atmospheric Administration/ Earth System Research Laboratory Radiosonde Database)
Terrain	U.S. Geological Survey National Elevation Data Set (1/3-arc seconds with horizontal resolution of 10 meters)

4.2.1 Surface Meteorological Data

As shown in Figure 2-1, the facility is located at the northwest corner of the Scoggins Valley, a northwest-southeast oriented valley. Prominent terrain features are present on three sides of the facility. As a result, it is expected that meteorological conditions, and specifically wind, will be heavily influenced by the orientation of the valley. Prior to air dispersion modeling, MFA reviewed an area of up to 30 kilometers around the facility to identify an ambient monitoring station suitable for use with dispersion modeling. The results of the analysis indicated that the only ambient monitoring location with model-appropriate meteorological data was the Portland-Hillsboro Airport monitoring station (Hillsboro met station) (station ID 94261) in Hillsboro, Oregon. The Hillsboro met station is located approximately 19 kilometers east of the facility.

In addition to the Hillsboro met station, MFA reviewed a set of AERMOD-ready meteorological data files (surface [SFC] and profile [PFL]) that were provided to MFA by the DEQ in 2018. The DEQ met data files were prepared using Mesoscale Model Interface Program (MMIF)-derived prognostic meteorological data (MMIF data) modeled by the EPA in 2016. The MMIF data were modeled using a 12-kilometer by 12-kilometer grid size with the centroid of the grid located approximately 8 kilometers southwest of the facility.

MFA compared the two data sets to identify which would better represent expected meteorological conditions at the facility. MFA determined the Hillsboro met station data were more representative than the DEQ met data files for the following reasons:

- A comparison of wind roses generated for each data set demonstrated that the predominant winds from the Hillsboro met station aligned more with the orientation of the Scoggins Valley than the MMIF data. As shown in Figure 4-1, the Hillsboro met station wind rose shows a quasi-bimodal distribution, with most winds blowing from the northwest. The northwesterly component mimics the orientation of the Scoggins Valley. Winds from the MMIF data, as shown in Figure 4-2, are more evenly distributed from southwest to the north and do not include an obvious distribution expected given the location of the facility in the Scoggins Valley. This is likely an impact from the relatively large spatial area represented by the 12-kilometer grid size and higher base elevation of the MMIF data as compared to the Hillsboro met station, the latter of which is discussed further below.

- The centroid coordinates of the MMIF data have a base elevation of 840 feet above MSL, while the facility is located at approximately 213 feet above MSL. Conversely, the Hillsboro met station is located at an elevation of 207 feet above MSL, much nearer to that of the facility. Elevation is a key component for several meteorological phenomena including wind, barometric pressure, dewpoint, relative humidity, and temperature.

- The height above ground level (AGL) modeled in the MMIF data for the reference wind speed and direction is 33.1 feet (10 meters [m]) or 873 feet above MSL. As discussed above, this is well above the elevation of the facility (213 feet above MSL). As shown in Table 3-4, the tallest exhaust stack at the facility is 60 feet AGL or 262 feet above MSL. Section 8.4.2(b) in Appendix W to Part 51 states: "*for a variables such as wind direction, the data should ideally be collected near plume height to be adequately representative, especially for sources located in complex terrain.*" As the height of the reference wind speed and direction in the MMIF data is more than 611 feet above the plume height, the representativeness of the conditions near the plume is questionable. Further, the height of the anemometer at the Hillsboro met station is 33.1 feet (10 m) AGL or 240 feet above MSL, and only a 22-foot difference between the tower and the tallest exhaust stack at the facility.

As a result of this analysis, MFA used surface meteorological data collected from the Hillsboro met station. Hourly data for wind speed, wind direction, cloud cover, and temperature for the years 2018 through 2022 were downloaded by file transfer protocol from the National Oceanic and Atmospheric Administration, National Centers for Environmental Information website.

4.2.2 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 modeling period (2018 through 2022).

4.2.3 Data Processing—AERMET

The meteorological data were processed using the EPA AERMET program to produce five years of model-ready meteorological data for use in the AERMOD model. The adjustment to the surface frictional velocity option (i.e., ADJ_U*) was selected as part of the AERMET processing. The land-use surface characteristics were processed using AERSURFACE.

When automated surface observation station (ASOS) 1-minute data are used, AERMET enables a default wind speed adjustment option. This option adds 0.26 meters per second to all wind speeds to account for wind speed truncation (in units of whole knots) applied by the ASOS quality assurance system. Per the EPA technical memorandum *Use of ASOS Meteorological Data in AERMOD Dispersion Modeling*, dated March 8, 2013 (EPA 2013), a minimum wind speed detection threshold of 0.5 meters per second was used to account for the adjustment. Wind direction randomization was not selected when running AERMET because ASOS 1-minute data increases the precision of wind direction measurements and, unlike non-ASOS data, are rounded to the nearest ten whole degrees.

An analysis of the missing hours for the 2018 to 2022 meteorological data set produced by AERMET was performed by running AERMOD for each calendar quarter. Each calendar quarter was reviewed for the number of missing hours shown in the output file. To be considered complete and valid, each calendar quarter must have less than ten percent missing hours. As shown in Table 4-3, all quarters between 2018 and 2022 meet this criterion.

4.3 Land Use Data

AERSURFACE was used to generate seasonal values for albedo, Bowen ratio, and surface roughness heights required as part of the AERMET processing. State of Oregon National Land Cover Data Set 2016 land cover class definitions, along with concurrent percent impervious surface and percent tree canopy data, were downloaded from the U.S. Geological Survey and processed using AERSURFACE in order to generate the surface characteristics necessary to run AERMET. The State of Oregon National Land Cover Data Set 2016 data were processed in AERSURFACE using the settings described in Table 4-4.

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 February 2020 (AERSURFACE User's Guide; EPA 2020), as follows:

> [surface moisture] should be entered as either WET, DRY or AVERAGE, where, in general, WET is defined as precipitation amounts equal to or greater than the 70th percentile of the 30-year

climatological records; DRY is equal to or less than the 30th percentile; and AVERAGE is between the 30th and 70th percentiles.

Annual precipitation data for each year of the five-year meteorological data set were reviewed and compared against the 30-year climatological record to determine the representative soil moisture condition for each modeling year. As shown in Table 4-5, the average annual precipitation varied between the lower 30th percentile up to the middle 40th percentile of the 30-year climatological record. To account for this variability, AERSURFACE was executed for each year using the corresponding surface moisture condition associated with that year's annual rainfall.

MFA executed 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.

4.4 Emissions Source Locations

The location of each TEU included in the dispersion model is shown in Figure 4-3. For volume sources that are located on or adjacent to buildings, initial horizontal dimension and initial vertical dimension were calculated using the EPA method specified in the *User's Guide for the Industrial Source Complex Dispersion Models—Volume II—Description of Model Algorithms* (1995). Release heights were set to half the building height. Release heights for the kilns were adjusted to account for thermal buoyancy using the methods discussed in Section 3.2 of this risk assessment report.

4.5 Building Downwash

The current version of the Building Profile Input Program, shown in Table 4-1, was used.

The locations for structures that influence downwash are presented in Figure 4-4. Table 4-6 presents a summary of the building heights included in the air dispersion model.

4.6 Receptor Locations and Terrain

Dispersion factors and cumulative acute risk were determined for each modeling receptor identified outside the facility property boundary. MFA placed modeling receptors at potential exposure locations in the surrounding area up to 10 kilometers away from the center of the facility. Figure 4-5 presents the receptor spacing and locations for the modeling domain. Figure 4-6 presents the receptor locations in the area immediately surrounding the facility.

Receptors were defined in the dispersion model, as shown in Table 4-7 below.

Table 4-7. Receptor Locations

Receptor Spacing	Receptor Distance
25 m	Along fence line and out to at least: North: 435 m East and West: 200 m South: 425 m
50 m	North: 1,245 m East and West: 1,025 m South: 1,225 m
100 m	1,000 to 2,000 m
200 m	2,000 to 5,000 m
500 m	5,000 to 10,000 m
Note m = meter	

MFA reviewed an area within 1.5 kilometers of the facility property boundary to identify whether there were any locations considered to be sensitive areas (e.g., schools, hospitals). Results of the review indicated that there are no sensitive locations within 1.5 kilometers of the facility.

The terrain elevations for model receptors, source base elevations, and base elevations of downwash structures were taken from the U.S. Geological Survey National Elevation Data Set data at a resolution of 1/3 arc-seconds (a horizontal resolution of roughly 10 meters) and processed using the current version of AERMAP, shown in Table 4-1.

5 RISK ASSESSMENT METHODOLOGY

5.1 Non-Exempt TEUs

Calculated risks associated with Significant TEUs were compared with the applicable RALs. A Level 3 Risk Assessment was conducted that includes all facility TEUs.

5.2 Land-Use Zoning Classification—Exposure Types

The Oregon 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 provided 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 Washington County 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 processes indicated that multiple receptor locations fall within roadway and/or rail right-of-way interstitial spaces, which are identified in gray in Figures 4-5 and 4-6. These locations were included for dispersion modeling to maintain a uniform receptor grid. However, MFA did not conduct risk evaluations for any receptor locations in roadways or rail rights-of-way. In the crosswalk of receptors—which was 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 were modeled. Receptors that fall within roadway and/or rail right-of-way interstitial spaces that are beyond the 50-meter grid, as identified in Table 4-7, were assigned to the nearest zoning designation.

Figure 4-7 presents the existing land use zoning identified for the modeling domain, and Figure 4-8 is provided for the area immediately surrounding the facility. Figures 4-9 and 4-10 present the corresponding exposure location categorization for the modeling domain and the immediate area surrounding the facility, respectively. For additional clarification, Table 4-8, provided in electronic version only, shows all receptor locations and their exposure classification.

5.3 Exposure Pathways

Cancer and noncancer risk (i.e., chronic and acute hazard index) resulting from facility TEUs are assumed to 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, such as nearby farms where subsistence farming practices may occur. Since no additional exposure pathways have been observed, a Level 4 Risk Assessment was not warranted.

5.4 Risk-Based Concentrations

Excess cancer risk and chronic and acute noncancer risk was 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 included in the Level 3 Risk Assessment are presented in Table 5-1.

5.5 Risk Estimates

A single dispersion model was executed using a unit emission rate of 1 g/s for each TEU for annual (chronic cancer and noncancer) assessments. The maximum modeled unit concentration in micrograms per cubic meter (ug/m^3) at each modeled receptor for the annual averaging period is considered a modeled "dispersion factor" in units of ug/m^3 per g/s. A summary of the modeled dispersion factors for each significant TEU is provided in Table 5-2.

Risk estimates were determined for each TEU by multiplying this dispersion factor by the TAC-specific emission rate (g/s) presented in the DEQ-approved emissions inventory to produce a maximum predicted model concentration for a specific TAC. The maximum predicted model concentration for a specific TAC was then divided by the appropriate RBC. The calculated risks were summed for all Significant TEUs to obtain the total excess cancer risk and the total chronic noncancer hazard index at each exposure location.

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

5.5.1 Example Calculation—Level 3 Risk Assessment

Example calculations for estimating excess cancer risk and chronic noncancer hazard index for a single exposure location for Significant TEUs are presented in Equation 1 and Equation 2.

Equation 1.

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

Equation 2.

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

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

The total facility acute noncancer hazard index for Significant TEUs is taken directly from the model output. The maximum modeled concentration from all sources, which were modeled using risk equivalent emission rates, is the maximum facility acute risk.

6 RISK ASSESSMENT RESULT SUMMARY

The results of the Level 3 Risk Assessment are provided below. The modeled concentrations at the location of the maximum predicted risk for each modeled TEU are presented in Table 6-1.

6.1 Excess Cancer Risk

The maximum predicted excess cancer risk for significant TEUs is 16 additional chances of developing cancer in a population of 1,000,000 people (excess risk per million) as shown in Table 6-2.

6.2 Chronic Noncancer Hazard Index

The maximum predicted chronic noncancer hazard index for significant TEUs is 0.5 as shown in Table 6-1.

6.3 Acute Noncancer Hazard Index

The maximum predicted acute noncancer hazard index for significant TEUs is 1 as shown in Table 6-1.

6.4 Uncertainty Analysis

Although the Level 3 Risk Assessment was conducted using the most accurate and readily available information, there are various uncertainties associated with the executed risk assessment. Known quantitative and qualitative uncertainties with the Level 3 Risk Assessment include, but may not be limited to, the following:

Acute Assessments:

- To assess acute noncancer risk (i.e., acute hazard index), 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 three boilers typically do not need to operate at the maximum potential to emit to satisfy the steam 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 five-year period of hourly meteorological data. Some meteorological conditions, which may only occur a few days or less in a five-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.**

- The excess cancer risk and chronic noncancer risk assessments were performed assuming that all TEUs operate for the course of the calendar year at their potential to emit levels. It is physically impossible that the facility could operate several of the facility TEUs at maximum potential to emit for an entire year without shutdown time for maintenance and cleaning, such as the boilers. **Therefore, the Level 3 Risk Assessment will overestimate cancer and chronic noncancer risk due to the overestimation of emissions resulting from continuous facility operation at potential to emit levels.**

All Assessments:

- Only excess cancer risk and chronic and acute noncancer hazard index from TACs that have RBCs published by the DEQ were assessed. Table 6-2 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.**

- Temporal variability in meteorological conditions (e.g. ambient temperature and wind speed) and kiln operating conditions (kiln drying temperature, intake airflow) influence how emissions are released (i.e., plume rise) from the lumber kilns over the course of the batch drying time. Because emissions from the kiln are estimated using the kiln high temperature setpoint, plume rise from the kiln is also estimated using this temperature. Best available ambient temperature and wind data from the meteorological dataset used for the dispersion model were used to calculate plume rise from the kilns, as shown in Table 3-5. **As a result of the temporal variability of plume rise from the lumber kilns, the Level 3 Risk Assessment may over- or under-predict risk from the kilns during periods of variable meteorological and kiln operational conditions.**

- Emissions data for lumber kilns are representative of emissions over the duration of the drying cycle for a given kiln temperature setpoint. Due to the nature of the drying cycle, the temperature within the kiln will vary, but emissions are estimated based on the highest kiln setpoint temperature. Testing data demonstrates that the kiln emissions will decrease with decreasing temperature. **As a result of the varying temperature, the lumber kilns over the course of the drying cycle, and resulting emissions, the Level 3 Risk Assessment may over- or under-predict risk from the kilns.**

7 CLOSING

MFA looks forward to working with the DEQ throughout the CAO permitting process. If there are any questions or comments regarding this risk assessment report, please contact Andrew Rogers at 503.407.6406 or arogers@maulfoster.com.

LIMITATIONS

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TABLES

Table 3-1
DEQ-Approved Annual Emission Rates
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Toxic Air Contaminant	CAS or DEQ ID	RBC? (Yes/No)	Hogged Fuel-Fired Boiler (ESP Control)		Hogged Fuel-Fired Boiler (Scrubber Control)		Fuel Dryer		Total Scrubber		Kilns Total		Kiln 1 [1]		Kilns 2-6 [1]		Press (Stack)		Press (Fugitive)		Refiner (Rotary Valve)	
			(lb/yr) [2]	(g/s) [a]	(lb/yr) [2]	(g/s) [a]	(lb/yr) [2]	(g/s) [a]	(lb/yr) [b]	(g/s) [a]	(lb/yr) [2]	(g/s) [a]	(lb/yr) [c]	(g/s) [a]	(lb/yr) [d]	(g/s) [a]	(lb/yr) [2]	(g/s) [a]	(lb/yr) [2]	(g/s) [a]	(lb/yr) [2]	(g/s) [a]
Model ID	--	--	HBLR_ESP		--		--		HBLR_SCR		--		KILN1.1 -1.4		KILN2.1 - 6.3		PVUV_STK		HPVUV_FUG		RF12_RV	
Antimony and compounds	7440-36-0	Yes	0.28	4.1E-06	0.11	1.6E-06	--	--	0.11	1.6E-06	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic and compounds	7440-38-2	Yes	1.74	2.5E-05	0.62	9.0E-06	--	--	0.62	9.0E-06	--	--	--	--	--	--	--	--	--	--	--	--
Barium and compounds	7440-39-3	No	193	2.8E-03	22.3	3.2E-04	--	--	22.3	3.2E-04	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium and compounds	7440-41-7	Yes	0.026	3.8E-07	3.9E-03	5.6E-08	--	--	3.9E-03	5.6E-08	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium and compounds	7440-43-9	Yes	0.30	4.3E-06	0.18	2.6E-06	--	--	0.18	2.6E-06	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540299p	Yes	0.25	3.6E-06	0.013	1.9E-07	--	--	0.013	1.9E-07	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt and compounds	7440-48-4	Yes	0.46	6.6E-06	0.11	1.6E-06	--	--	0.11	1.6E-06	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and compounds	7429-90-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc oxide	1314-13-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and compounds	7440-50-8	Yes	3.50	5.0E-05	1.02	1.5E-05	--	--	1.02	1.5E-05	--	--	--	--	--	--	--	--	--	--	--	--
Lead and compounds	7439-92-1	Yes	4.80	6.9E-05	1.69	2.4E-05	--	--	1.69	2.4E-05	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus and compounds	504	No	286	4.1E-03	17.4	2.5E-04	--	--	17.4	2.5E-04	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and compounds	7439-96-5	Yes	88.3	1.3E-03	14.1	2.0E-04	--	--	14.1	2.0E-04	--	--	--	--	--	--	--	--	--	--	--	--
Mercury and compounds	7439-97-6	Yes	0.81	1.2E-05	0.062	8.9E-07	--	--	0.062	8.9E-07	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	No	2.86	4.1E-05	0.17	2.5E-06	--	--	0.17	2.5E-06	--	--	--	--	--	--	--	--	--	--	--	--
Nickel and compounds	7440020in	Yes	2.58	3.7E-05	0.41	5.9E-06	--	--	0.41	5.9E-06	--	--	--	--	--	--	--	--	--	--	--	--
Selenium and compounds	7782-49-2	Yes	1.49	2.1E-05	0.096	1.4E-06	--	--	0.096	1.4E-06	--	--	--	--	--	--	--	--	--	--	--	--
Silver and compounds	7440-22-4	No	0.91	1.3E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium and compounds	7440-28-0	No	--	--	0.10	1.5E-06	--	--	0.10	1.5E-06	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	0.55	7.9E-06	0.033	4.8E-07	--	--	0.033	4.8E-07	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and compounds	7440-66-6	No	53.1	7.6E-04	13.1	1.9E-04	--	--	13.1	1.9E-04	--	--	--	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	261	3.8E-03	15.9	2.3E-04	53.0	7.6E-04	69.0	9.9E-04	9,906	0.14	225	3.2E-03	600	8.6E-03	342	4.9E-03	20.2	2.9E-04	46.3	6.7E-04
Acetone	67-64-1	Yes	488	7.0E-03	29.8	4.3E-04	288	4.1E-03	318	4.6E-03	--	--	--	--	--	--	405	5.8E-03	6.93	1.0E-04	151	2.2E-03
Acetophenone	98-86-2	No	1.70	2.4E-05	0.10	1.5E-06	0.26	3.7E-06	0.36	5.2E-06	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	240	3.4E-03	14.6	2.1E-04	90.1	1.3E-03	105	1.5E-03	178	2.6E-03	4.04	5.8E-05	10.8	1.6E-04	--	--	--	--	--	--
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	904	0.013	55.1	7.9E-04	22.4	3.2E-04	77.5	1.1E-03	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	9.10	1.3E-04	0.56	8.0E-06	--	--	0.56	8.0E-06	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	729	0.010	44.4	6.4E-04	--	--	44.4	6.4E-04	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	24.7	3.6E-04	1.51	2.2E-05	--	--	1.51	2.2E-05	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene glycol monobutyl ether	111-76-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	108-05-4	Yes	--	--	--	--	0.24	3.5E-06	0.24	3.5E-06	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	15.3	2.2E-04	0.93	1.3E-05	--	--	0.93	1.3E-05	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	18.5	2.7E-04	1.13	1.6E-05	--	--	1.13	1.6E-05	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	41.3	5.9E-04	2.52	3.6E-05	31.2	4.5E-04	33.8	4.9E-04	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	30.7	4.4E-04	1.87	2.7E-05	--	--	1.87	2.7E-05	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	15.5	2.2E-04	0.95	1.4E-05	--	--	0.95	1.4E-05	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	40.2	5.8E-04	2.45	3.5E-05	--	--	2.45	3.5E-05	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	11.3	1.6E-04	0.69	9.9E-06	--	--	0.69	9.9E-06	--	--	--	--	--	--	--	--	--	--	--	--
Formaldehyde	50-00-0	Yes	968	0.014	59.1	8.5E-04	27.8	4.0E-04	86.9	1.3E-03	398	5.7E-03	9.04	1.3E-04	24.1	3.5E-04	353	5.1E-03	17.6	2.5E-04	12.8	1.8E-04
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	Yes	410	5.9E-03	25.0	3.6E-04	22.6	3.2E-04	47.6	6.8E-04	--	--	--	--	--	--	--	--	--	--	9.28	1.3E-04
Isopropylbenzene (Cumene)	98-82-8	Yes	16.3	2.3E-04	1.00	1.4E-05	0.31	4.5E-06	1.31	1.9E-05	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	Yes	266	3.8E-03	16.2	2.3E-04	--	--	16.2	2.3E-04	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	4,169	0.060	254	3.7E-03	--	--	254	3.7E-03	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	675	9.7E-03	41.2	5.9E-04	8.47	1.2E-04	49.7	7.1E-04	13,297	0.19	302	4.3E-03	806	0.012	15,561	0.22	302	4.3E-03	45.3	6.5E-04
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	FLUORIDES	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	10.4	1.5E-04	0.64	9.1E-06	0.38	5.5E-06	1.02	1.5E-05	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	40.1	5.8E-04	2.45	3.5E-05	1.57	2.3E-05	4.01	5.8E-05	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	53.3	7.7E-04	3.25	4.7E-05	--	--	3.25	4.7E-05	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethyl benzene	95-63-6	Yes	--	--	--	--	0.55	7.9E-06	0.55	7.9E-06	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	367	5.3E-03	22.4	3.2E-04	7.24	1.0E-04	29.6	4.3E-04	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	6.43	9.2E-05	0.39	5.6E-06	17.7	2.5E-04	18.1	2.6E-04	--	--	--	--	--	--	--	--	--	--	8.99	1.3E-04
Phenol	108-95-2	Yes	148	2.1E-03	9.00	1.3E-04	165	2.4E-03	174	2.5E-03	--	--	--	--	--	--	--	--	12.6	1.8E-04	--	--
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	Yes	287	4.1E-03	17.5	2.5E-04	29.5	4.3E-04	47.0	6.8E-04	172	2.5E-03	3.91	5.6E-05	10.4	1.5E-04	--	--	--	--	--	--
Styrene	100-42-5	Yes	433	6.2E-03	26.4	3.8E-04	0.99	1.4E-05	27.4	3.9E-04	--	--	--	--	--	--	--	--	--	--	6.55	9.4E-05
Toluene	108-88-3	Yes	10.5	1.5E-04	0.64	9.2E-06	36.7	5.3E-04	37.3	5.4E-04	--	--	--	--	--	--	--	--	1.39	2.0E-05	--	--
Xylene (mixture)	1330-20-7	Yes	4.81	6.9E-05	0.29	4.2E-06	--	--	0.29	4.2E-06	--	--	--	--	--	--	--	--	6.68	9.6E-05	--	--
Vinyl Chloride	75-01-4	Yes	17.0	2.4E-04	1.04	1.5E-05	--	--	1.04	1.5E-05	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	18.4	2.6E-04	1.12	1.6E-05	--	--	1.12	1.6E-05	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	--	--	--	--	11.1	1.6E-04	11.1	1.6E-04	--	--	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	11.1	1.6E-04	11.1	1.6E-04	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	--	--	--	--	0.20	2.8E-06	0.20	2.8E-06	--	--	--	--	--	--	--	--	4.54	6.5E-05	--	--
Hydrogen fluoride	7664-39-3	Yes	83.5	1.2E-03	1.43	2.1E-05	--	--	1.43	2.1E-05	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	52.8	7.6E-04	7.65	1.1E-04	--	--	7.65	1.1E-04	--	--	--	--	--	--	--	--	--	--	--	--
DPM	200	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PAHs (excluding Naphthalene)	401	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	0.79	1.1E-05	0.048	6.9E-07	--	--	0.048	6.9E-07	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	4.33	6.2E-05	0.26	3.8E-06	--	--	0.26	3.8E-06	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	2.47	3.6E-05	0.15	2.2E-06	--	--	0.15	2.2E-06	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	Yes	0.075	1.1E-06	4.6E-03	6.6E-08	--	--	4.6E-03	6.6E-08	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	2.05	2.9E-05	0.12	1.8E-06	--	--	0.12	1.8E-06	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	Yes	0.13	1.9E-06	8.0E-03	1.1E-07	--	--	8.0E-03	1.1E-07	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	0.19	2.8E-06	0.012	1.7E-07	--	--	0.012	1.7E-07	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	Yes	0.14	2.0E-06	8.5E-03	1.2E-07	--	--	8.5E-03	1.2E-07	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	Yes	0.14	2.1E-06	8.8E-03	1.3E-07	--	--	8.8E-03	1.3E-07	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	Yes	0.048	6.9E-07	2.9E-03	4.2E-08	--	--	2.9E-03	4.2E-08	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	Yes	0.073	1.0E-06	4.4E-03	6.4E-08	--	--	4.4E-03	6.4E-08	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	Yes	1.54	2.2E-05	0.094	1.4E-06	--	--	0.094	1.4E-06	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	2.78	4.0E-05	0.17	2.4E-06	--	--	0.17	2.4E-06	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	0.094	1.4E-06	5.7E-03	8.3E-08	--	--	5.7E-03	8.3E-08	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	No	1.29	1.9E-05	0.079	1.1E-06	--	--	0.079	1.1E-06	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	91.9	1.3E-03	5.60	8.1E-05	32.2	4.6E-04	37.8	5.4E-04	--	--	--	--	--	--	--	--	--	--	--	--
Perylene	198-55-0	No	0.030	4.2E-07	1.8E-03	2.6E-08	--	--	1.8E-03	2.6E-08	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	5.96	8.6E-05	0.36	5.2E-06	--	--	0.36	5.2E-06	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	3.26	4.7E-05	0.20	2.9E-06	--	--	0.20	2.9E-06	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	8.8E-07	1.3E-11	5.4E-08	7.7E-13	--	--	5.4E-08	7.7E-13	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	1.2E-06	1.8E-11	7.5E-08	1.1E-12	--	--	7.5E-08	1.1E-12	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	8.0E-07	1.2E-11	4.9E-08	7.0E-13	--	--	4.9E-08	7.0E-13	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	1.9E-06	2.8E-11	1.2E-07	1.7E-12	--	--	1.2E-07	1.7E-12	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	2.0E-06	2.9E-11	1.2E-07	1.8E-12	--	--	1.2E-07	1.8E-12	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	9.0E-06	1.3E-10	5.5E-07	7.9E-12	--	--	5.5E-07	7.9E-12	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	2.3E-05	3.3E-10	1.4E-06	2.0E-11	--	--	1.4E-06	2.0E-11	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	Yes	7.4E-06	1.1E-10	4.5E-07	6.5E-12	--	--	4.5E-07	6.5E-12	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	3.7E-06	5.3E-11	2.2E-07	3.2E-12	--	--	2.2E-07	3.2E-12	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	5.6E-06	8.1E-11	3.4E-07	4.9E-12	--	--	3.4E-07	4.9E-12	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	3.3E-06	4.7E-11	2.0E-07	2.9E-12	--	--	2.0E-07	2.9E-12	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	2.9E-06	4.2E-11	1.8E-07	2.6E-12	--	--	1.8E-07	2.6E-12	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	6.2E-07	8.8E-12	3.8E-08	5.4E-13	--	--	3.8E-08	5.4E-13	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	2.5E-06	3.5E-11	1.5E-07	2.2E-12	--	--	1.5E-07	2.2E-12	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	5.3E-06	7.6E-11	3.2E-07	4.6E-12	--	--	3.2E-07	4.6E-12	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	7.4E-07	1.1E-11	4.5E-08	6.5E-13	--	--	4.5E-08	6.5E-13	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	4.6E-06	6.6E-11	2.8E-07	4.0E-12	--	--	2.8E-07	4.0E-12	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	1336-36-3	Yes	7.0E-03	1.0E-07	4.3E-04	6.1E-09	--	--	4.3E-04	6.1E-09	--	--	--	--	--	--	--	--	--	--	--	--
Decachlorobiphenyl	2051-24-3	No	2.4E-04	3.5E-09	1.5E-05	2.1E-10	--	--	1.5E-05	2.1E-10	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	No	8.0E-03	1.2E-07	4.9E-04	7.0E-09	--	--	4.9E-04	7.0E-09	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	No	4.2E-03	6.1E-08	2.6E-04	3.7E-09	--	--	2.6E-04	3.7E-09	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	0.24	3.4E-06	0.015	2.1E-07	--	--	0.015	2.1E-07	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	Yes	0.87	1.2E-05	0.053	7.6E-07	--	--	0.053	7.6E-07	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	1.94	2.8E-05	0.12	1.7E-06	--	--	0.12	1.7E-06	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	0.043	6.2E-07	2.6E-03	3.8E-08	--	--	2.6E-03	3.8E-08	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	18.9	2.7E-04	1.15	1.7E-05	--	--	1.15	1.7E-05	--	--	--	--	--	--	--	--	--	--	--	--
di-n-octylphthalateb	117-84-0	No	0.10	1.5E-06	6.2E-03	8.9E-08	--	--	6.2E-03	8.9E-08	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	26.9	3.9E-04	1.64	2.4E-05	--	--	1.64	2.4E-05	--	--	--	--	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	257	3.7E-03	15.7	2.3E-04	--	--	15.7	2.3E-04	--	--	--	--	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	0.11	1.5E-06	6.4E-03	9.2E-08	--	--	6.4E-03	9.2E-08	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	0.022	3.1E-07	1.3E-03	1.9E-08	--	--	1.3E-03	1.9E-08	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	0.17	2.4E-06	0.010	1.5E-07	--	--	0.010	1.5E-07	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	12.8	1.8E-04	0.78	1.1E-05	--	--	0.78	1.1E-05	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	Yes	0.18	2.7E-06	0.011	1.6E-07	--	--	0.011	1.6E-07	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	Yes	0.20	2.8E-06	0.012	1.7E-07	--	--	0.012	1.7E-07	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	22.7	3.3E-04	1.38	2.0E-05	--	--	1.38	2.0E-05	--	--	--	--	--	--	--	--	--	--	--	--
Total TAC Emissions Estimate			**11,965**	**0.17**	**763**	**0.011**	**859**	**0.012**	**1,622**	**0.023**	**23,951**	**0.34**	**544** [1]	**7.8E-03**	**1,452** [1]	**0.021**	**16,661**	**0.24**	**372**	**5.4E-03**	**280**	**4.0E-03**

NOTES:
g/s = grams per second.
lb/yr = pounds per year.
RBC = risk-based concentration.
(a) Emission rate (g/s) = (annual emissions estimate [lb/yr]) x (453.592 g/lb) / (8,760 hrs/yr) / (3,600 s/hr)
(b) Total scrubber emissions (lb/yr) = (hogged fuel-fired boiler [lb/yr]) + (fuel dryer annual emissions [lb/yr])
(c) Model emission rate (kiln 1) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kiln 1 volume sources)
Model rate distribution for kiln 1 volume sources = 0.023 (3)
(d) Model emission rate (kiln 2-6) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kilns 2-6 volume sources)
Model rate distribution for kilns 2-6 volume sources = 0.061 (3)
(e) Total paintline emissions (lb/yr) = (basecoat emissions [lb/yr]) + (topcoat emissions [lb/yr])

REFERENCES:
(1) Emission rates representative of individual model volume sources and not entire kiln.
(2) Emissions estimate based on DEQ-approved TAC emissions inventory.
(3) See Table 3-6, Kiln Emissions Allocation.

Table 3-1
DEQ-Approved Annual Emission Rates (Cont.)
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Toxic Air Contaminant	CAS or DEQ ID	RBC? (Yes/No)	Annual Emission Estimates																											
			Forming Line (Fugitives)		HBWW - Whitewater Chest		HBWW - Machine Chest		WW - Hydrosieves		BLR-SCR - Hydrosieves		WW - Surge Pond		WW - Aeration Basin		WW - Secondary Clarifier		WW - Sludge Pit Conveyor		WW - Sludge Pond		WW - Reuse Pond		WW - Reuse Pond		Basecoat		Topcoat	
			(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)
Model ID	--	--	FORM_FUG		WHITE		MACH		HYDRO		SCR_HYDRO		SURGE		ABASE		CLAR		PIT		S_POND		R_POND		E_POND		--		--	
Antimony and compounds	7440-36-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic and compounds	7440-38-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium and compounds	7440-39-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium and compounds	7440-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium and compounds	7440-43-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540299p	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt and compounds	7440-48-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and compounds	7429-90-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc oxide	1314-13-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and compounds	7440-50-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead and compounds	7439-92-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus and compounds	504	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and compounds	7439-96-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury and compounds	7439-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel and compounds	7440020n	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium and compounds	7782-49-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver and compounds	7440-22-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium and compounds	7440-28-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and compounds	7440-66-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	26.1	3.8E-04	16.1	2.3E-04	248	3.6E-03	112	1.6E-03	1.06	1.5E-05	202	2.9E-03	8.41	1.2E-04	0.13	1.9E-06	3.3E-04	4.8E-09	0.024	3.4E-07	0.012	1.8E-07	0.017	2.4E-07	--	--	--	--
Acetone	67-64-1	Yes	11.5	1.7E-04	6.12	8.8E-05	83.8	1.2E-03	13.3	1.9E-04	2.73	3.9E-05	7.76	1.1E-04	0.039	5.6E-07	7.5E-04	1.1E-08	2.3E-19	3.4E-24	3.0E-05	4.3E-10	5.6E-06	8.1E-11	6.3E-06	9.1E-11	--	--	--	--
Acetophenone	98-86-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	2.22	3.2E-05	1.2E-19	1.7E-24	29.6	4.3E-04	1.1E-18	1.6E-23	7.16	1.0E-04	9.0E-19	1.3E-23	2.6E-20	3.7E-25	3.6E-22	5.2E-27	6.0E-20	8.6E-25	2.0E-18	2.8E-23	7.6E-19	1.1E-23	9.7E-19	1.4E-23	--	--	--	--
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene glycol monobutyl ether	111-76-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	66.0	9.5E-04	33.4	4.8E-04
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	108-05-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Formaldehyde	50-00-0	Yes	10.3	1.5E-04	16.1	2.3E-04	56.5	8.1E-04	6.08	8.8E-05	0.054	7.7E-07	77.2	1.1E-03	1.08	1.6E-05	0.018	2.5E-07	2.1E-05	3.1E-10	5.7E-03	8.1E-08	4.6E-03	6.7E-08	6.0E-03	8.6E-08	--	--	--	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	Yes	0.82	1.2E-05	1.59	2.3E-05	67.8	9.8E-04	50.7	7.3E-04	0.24	3.5E-06	7.79	1.1E-04	0.45	6.4E-06	3.0E-03	4.3E-08	1.8E-05	2.6E-10	2.1E-04	3.0E-09	6.3E-05	9.1E-10	8.1E-05	1.2E-09	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	59.1	8.5E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	FLUORIDES	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethyl benzene	95-63-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	1.62	2.3E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	Yes	--	--	0.25	3.6E-06	0.32	4.6E-06	0.16	2.3E-06	0.016	2.2E-07	6.1E-03	8.8E-08	1.4E-06	2.0E-11	2.8E-08	4.0E-13	1.9E-11	2.8E-16	1.3E-10	1.8E-15	3.2E-12	4.6E-17	3.7E-12	5.4E-17	--	--	--	--
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	Yes	--	--	0.67	9.7E-06	8.90	1.3E-04	4.12	5.9E-05	3.15	4.5E-05	6.74	9.7E-05	0.20	2.9E-06	3.4E-03	4.9E-08	7.2E-06	1.0E-10	5.4E-04	7.7E-09	2.6E-04	3.8E-09	3.5E-04	5.1E-09	--	--	--	--
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	1.63	2.3E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen fluoride	7664-39-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DPM	200	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PAHs (excluding Naphthalene)	401	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perylene	198-55-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	1336-36-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Decachlorobiphenyl	2051-24-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
di-n-octylphthalateb	117-84-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TAC Emissions Estimate			**113**	**1.6E-03**	**40.7**	**5.9E-04**	**495**	**7.1E-03**	**186**	**2.7E-03**	**14.4**	**2.1E-04**	**301**	**4.3E-03**	**10.2**	**1.5E-04**	**0.16**	**2.3E-06**	**3.8E-04**	**5.5E-09**	**0.030**	**4.3E-07**	**0.017**	**2.5E-07**	**0.023**	**3.4E-07**	**66.0**	**9.5E-04**	**33.4**	**4.8E-04**

NOTES:
g/s = grams per second.
lb/yr = pounds per year.
RBC = risk-based concentration.
(a) Emission rate (g/s) = (annual emissions estimate [lb/yr]) x (453.592 g/lb) / (8,760 hrs/yr) / (3,600 s/hr)
(b) Total scrubber emissions (lb/yr) = (hogged fuel-fired boiler [lb/yr]) + (fuel dryer annual emissions [lb/yr])
(c) Model emission rate (kiln 1) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kiln 1 volume sources)
Model rate distribution for kiln 1 volume sources = 0.023 (3)
(d) Model emission rate (kiln 2-6) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kilns 2-6 volume sources)
Model rate distribution for kilns 2-6 volume sources = 0.061 (3)
(e) Total paintline emissions (lb/yr) = (basecoat emissions [lb/yr]) + (topcoat emissions [lb/yr])

REFERENCES:
(1) Emission rates representative of individual model volume sources and not entire kiln.
(2) Emissions estimate based on DEQ-approved TAC emissions inventory.
(3) See Table 3-6, Kiln Emissions Allocation.

Table 3-1
DEQ-Approved Annual Emission Rates (Cont.)
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Toxic Air Contaminant	CAS or DEQ ID	RBC? (Yes/No)	Paintline Total		Lumber Surface Protection		Welding		Babbitt Pot		Chipper		Fire Pump		Backup Generator		Proposed Emergency Generator		Gas Storage Tank		Resin Storage Tank 1		Resin Storage Tank 2		Resin Storage Tank 3		Facility Total	
			(lb/yr) (e)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr) (2)	(g/s) (a)	(lb/yr)	(g/s)
Model ID	--	--	PAINT		LSP		WELD		BPOT		S_CYC		FIRE		BGEN		EGEN01		GAS		RESIN1		RESIN2		RESIN3		--	--
Antimony and compounds	7440-36-0	Yes	--	--	--	--	--	--	0.023	3.2E-07	--	--	2.3E-04	3.3E-09	1.3E-03	1.9E-08	4.7E-04	6.8E-09	--	--	--	--	--	--	--	--	0.42	6.0E-06
Arsenic and compounds	7440-38-2	Yes	--	--	--	--	--	--	--	--	--	--	1.2E-03	1.7E-08	6.5E-03	9.4E-08	2.4E-03	3.4E-08	--	--	--	--	--	--	--	--	2.38	3.4E-05
Barium and compounds	7440-39-3	No	--	--	--	--	--	--	--	--	--	--	2.7E-04	3.9E-09	1.5E-03	2.2E-08	5.6E-04	8.0E-09	--	--	--	--	--	--	--	--	215	3.1E-03
Beryllium and compounds	7440-41-7	Yes	--	--	--	--	--	--	--	--	--	--	3.4E-06	4.9E-11	1.9E-05	2.8E-10	7.1E-06	1.0E-10	--	--	--	--	--	--	--	--	0.030	4.3E-07
Cadmium and compounds	7440-43-9	Yes	--	--	--	--	--	--	--	--	--	--	1.1E-03	1.6E-08	6.1E-03	8.8E-08	2.2E-03	3.2E-08	--	--	--	--	--	--	--	--	0.49	7.0E-06
Chromium VI	18540299p	Yes	--	--	--	--	2.1E-03	3.1E-08	--	--	--	--	7.2E-05	1.0E-09	4.1E-04	5.9E-09	1.5E-04	2.1E-09	--	--	--	--	--	--	--	--	0.27	3.8E-06
Cobalt and compounds	7440-48-4	Yes	--	--	--	--	2.6E-04	3.7E-09	--	--	--	--	1.1E-05	1.6E-10	6.4E-05	9.3E-10	2.3E-05	3.4E-10	--	--	--	--	--	--	--	--	0.57	8.2E-06
Aluminum and compounds	7429-90-5	Yes	--	--	--	--	1.52	2.2E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.52	2.2E-05
Zinc oxide	1314-13-2	No	--	--	--	--	7.1E-03	1.0E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.1E-03	1.0E-07
Copper and compounds	7440-50-8	Yes	--	--	--	--	1.6E-03	2.2E-08	0.023	3.2E-07	--	--	3.0E-03	4.2E-08	0.017	2.4E-07	6.1E-03	8.8E-08	--	--	--	--	--	--	--	--	4.57	6.6E-05
Lead and compounds	7439-92-1	Yes	--	--	--	--	--	--	--	--	--	--	6.0E-03	8.6E-08	0.034	4.9E-07	0.012	1.8E-07	--	--	--	--	--	--	--	--	6.55	9.4E-05
Phosphorus and compounds	504	No	--	--	--	--	--	--	--	--	--	--	6.1E-03	8.7E-08	0.034	4.9E-07	0.013	1.8E-07	--	--	--	--	--	--	--	--	303	4.4E-03
Manganese and compounds	7439-96-5	Yes	--	--	--	--	0.29	4.1E-06	--	--	--	--	2.2E-03	3.2E-08	0.013	1.8E-07	4.6E-03	6.6E-08	--	--	--	--	--	--	--	--	103	1.5E-03
Mercury and compounds	7439-97-6	Yes	--	--	--	--	--	--	--	--	--	--	1.4E-03	2.1E-08	8.2E-03	1.2E-07	3.0E-03	4.3E-08	--	--	--	--	--	--	--	--	0.89	1.3E-05
Molybdenum trioxide	1313-27-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.04	4.4E-05
Nickel and compounds	7440020in	Yes	--	--	--	--	0.013	1.9E-07	2.3E-03	3.2E-08	--	--	2.8E-03	4.0E-08	0.016	2.3E-07	5.8E-03	8.4E-08	--	--	--	--	--	--	--	--	3.04	4.4E-05
Selenium and compounds	7782-49-2	Yes	--	--	--	--	--	--	--	--	--	--	1.6E-03	2.3E-08	9.0E-03	1.3E-07	3.3E-03	4.7E-08	--	--	--	--	--	--	--	--	1.60	2.3E-05
Silver and compounds	7440-22-4	No	--	--	--	--	--	--	--	--	--	--	3.5E-05	5.0E-10	2.0E-04	2.8E-09	7.2E-05	1.0E-09	--	--	--	--	--	--	--	--	0.91	1.3E-05
Thallium and compounds	7440-28-0	No	--	--	--	--	--	--	--	--	--	--	1.7E-04	2.5E-09	9.8E-04	1.4E-08	3.6E-04	5.1E-09	--	--	--	--	--	--	--	--	0.11	1.5E-06
Vanadium (fume or dust)	7440-62-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.58	8.4E-06
Zinc and compounds	7440-66-6	No	--	--	--	--	--	--	--	--	--	--	3.8E-03	5.4E-08	0.021	3.1E-07	7.8E-03	1.1E-07	--	--	--	--	--	--	--	--	66.3	9.5E-04
Acetaldehyde	75-07-0	Yes	--	--	--	--	--	--	--	--	--	--	0.56	8.1E-06	3.20	4.6E-05	1.17	1.7E-05	--	--	--	--	--	--	--	--	12,588	0.18
Acetone	67-64-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,746	0.025
Acetophenone	98-86-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.06	3.0E-05
Acrolein	107-02-8	Yes	--	--	--	--	--	--	--	--	--	--	0.024	3.5E-07	0.14	2.0E-06	0.051	7.3E-07	--	--	--	--	--	--	--	--	693	1.0E-02
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	2.09	3.0E-05	11.8	1.7E-04	4.32	6.2E-05	--	--	--	--	--	--	--	--	18.3	2.6E-04
Benzene	71-43-2	Yes	--	--	--	--	--	--	--	--	--	--	0.13	1.9E-06	0.76	1.1E-05	0.28	4.0E-06	3.62	5.2E-05	--	--	--	--	--	--	986	0.014
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.66	1.4E-04
Chlorine	7782-50-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	773	0.011
Butyl benzyl phthalate	85-68-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26.2	3.8E-04
Ethylene glycol monobutyl ether	111-76-2	Yes	99.4	1.4E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	99.4	1.4E-03
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	6,517	0.094	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6,517	0.094
Vinyl acetate	108-05-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	3.5E-06
Chlorobenzene	108-90-7	Yes	--	--	--	--	--	--	--	--	--	--	1.4E-04	2.1E-09	8.2E-04	1.2E-08	3.0E-04	4.3E-09	--	--	--	--	--	--	--	--	16.2	2.3E-04
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.7	2.8E-04
Crotonaldehyde	4170-30-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	75.1	1.1E-03
Dibutyl phthalate	84-74-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	32.6	4.7E-04
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16.4	2.4E-04
Diethylphthalate	84-66-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	42.7	6.1E-04
Ethyl benzene	100-41-4	Yes	--	--	--	--	--	--	--	--	--	--	7.9E-03	1.1E-07	0.045	6.4E-07	0.016	2.3E-07	0.16	2.3E-06	--	--	--	--	--	--	12.2	1.7E-04
Formaldehyde	50-00-0	Yes	--	--	--	--	--	--	--	--	--	--	1.24	1.8E-05	7.05	1.0E-04	2.57	3.7E-05	--	--	7.99	1.1E-04	7.99	1.1E-04	7.99	1.1E-04	2,282	0.033
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	638	9.2E-03
Isopropylbenzene (Cumene)	98-82-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.4E-03	1.2E-07	--	--	--	--	--	--	17.6	2.5E-04
Hexane	110-54-3	Yes	--	--	--	--	--	--	--	--	--	--	0.019	2.8E-07	0.11	1.6E-06	0.040	5.8E-07	--	--	--	--	--	--	--	--	282	4.1E-03
Isopropyl alcohol	67-63-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4,423	0.064
Methanol	67-56-1	Yes	--	--	--	--	--	--	--	--	63.7	9.2E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30,758	0.44
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.049	7.1E-07	--	--	--	--	--	--	0.049	7.1E-07
Fluorides	FLUORIDES	Yes	--	--	--	--	0.24	3.4E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	3.4E-06
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.029	4.2E-07	--	--	--	--	--	--	0.029	4.2E-07
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.00	8.6E-05	--	--	--	--	--	--	6.00	8.6E-05
Bromomethane (Methyl bromide)	74-83-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11.4	1.6E-04
Chloromethane (Methyl chloride)	74-87-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	44.1	6.3E-04
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	0.16	2.3E-06	0.89	1.3E-05	0.32	4.7E-06	--	--	--	--	--	--	--	--	1.37	2.0E-05
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	56.6	8.1E-04
1,2,4-Trimethyl benzene	95-63-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	1.6E-06	--	--	--	--	--	--	0.66	9.5E-06
Dichloromethane (Methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	397	5.7E-03
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	56.3	8.1E-04
Phenol	108-95-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8E-03	2.6E-08	1.8E-03	2.6E-08	1.8E-03	2.6E-08	335	4.8E-03
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	0.34	4.9E-06	1.92	2.8E-05	0.70	1.0E-05	--	--	--	--	--	--	--	--	2.96	4.3E-05
Propionaldehyde	123-38-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	546	7.9E-03
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.6E-04	6.6E-09	--	--	--	--	--	--	473	6.8E-03
Toluene	108-88-3	Yes	--	--	--	--	--	--	--	--	--	--	0.076	1.1E-06	0.43	6.2E-06	0.16	2.3E-06	2.56	3.7E-05	--	--	--	--	--	--	70.4	1.0E-03
Xylene (mixture)	1330-20-7	Yes	--	--	--	--	--	--	--	--	--	--	0.031	4.4E-07	0.17	2.5E-06	0.063	9.1E-07	--	--	--	--	--	--	--	--	12.1	1.7E-04
Vinyl Chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18.0	2.6E-04
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.5	2.8E-04
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11.1	1.6E-04
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.44	6.4E-06	--	--	--	--	--	--	11.6	1.7E-04
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	2.4E-06	--	--	--	--	--	--	4.90	7.0E-05
Hydrogen fluoride	7664-39-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	84.9	1.2E-03
Hydrochloric acid	7647-01-0	Yes	--	--	--	--	--	--	--	--	--	--	0.13	1.9E-06	0.76	1.1E-05	0.28	4.0E-06	--	--	--	--	--	--	--	--	61.6	8.9E-04
DPM	200	No	--	--	--	--	--	--	--	--	--	--	24.1	3.5E-04	33.6	4.8E-04	49.9	7.2E-04	--	--	--	--	--	--	--	--	108	1.5E-03
PAHs (excluding Naphthalene)	401	No	--	--	--	--	--	--	--	--	--	--	0.026	3.8E-07	0.15	2.1E-06	0.054	7.8E-07	--	--	--	--	--	--	--	--	0.23	3.3E-06
Acenaphthene	83-32-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.83	1.2E-05
Acenaphthylene	208-96-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.59	6.6E-05
Anthracene	120-12-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.62	3.8E-05
Benz[a]anthracene	56-55-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.080	1.1E-06
Benzo[a]pyrene	50-32-8	Yes	--	--	--	--	--	--	--	--	--	--	2.5E-05	3.6E-10	1.4E-04	2.1E-09	5.3E-05	7.7E-10	--	--	--	--	--	--	--	--	2.17	3.1E-05
Benzo[b]fluoranthene	205-99-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	2.0E-06
Benzo[e]pyrene	192-97-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	3.0E-06
Benzo[g,h,i]perylene	191-24-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	2.1E-06
Benzo[j]fluoranthene	205-82-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	2.2E-06
Benzo[k]fluoranthene	207-08-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.051	7.3E-07
Chrysene	218-01-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.077	1.1E-06
Fluoranthene	206-44-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.63	2.4E-05
Fluorene	86-73-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.95	4.2E-05
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.100	1.4E-06
2-Methyl naphthalene	91-57-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.37	2.0E-05
Naphthalene	91-20-3	Yes	--	--	--	--	--	--	--	--	--	--	0.014	2.0E-07	0.080	1.2E-06	0.029	4.2E-07	2.6E-03	3.8E-08	--	--	--	--	--	--	130	1.9E-03
Perylene	198-55-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.031	4.5E-07
Phenanthrene	85-01-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.32	9.1E-05
Pyrene	129-00-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.46	5.0E-05
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.3E-07	1.3E-11
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3E-06	1.9E-11
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.5E-07	1.2E-11
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.0E-06	2.9E-11
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.2E-06	3.1E-11
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.6E-06	1.4E-10
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.4E-05	3.5E-10
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.9E-06	1.1E-10
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.9E-06	5.6E-11
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0E-06	8.6E-11
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.5E-06	5.0E-11
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.1E-06	4.4E-11
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.5E-07	9.4E-12
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.6E-06	3.7E-11
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.6E-06	8.0E-11
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.8E-07	1.1E-11
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.9E-06	7.0E-11
Total PCBs	1336-36-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.4E-03	1.1E-07
Decachlorobiphenyl	2051-24-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.6E-04	3.7E-09
3-Methylcholanthrene	56-49-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.5E-03	1.2E-07
7,12-Dimethylbenz[a]anthracene	57-97-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.5E-03	6.4E-08
1-Methylphenanthrene	832-69-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	3.6E-06
2,4-Dinitrotoluene	121-14-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.92	1.3E-05
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.05	3.0E-05
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.046	6.5E-07
Hydrogen cyanide	74-90-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20.1	2.9E-04
di-n-octylphthalateb	117-84-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	1.5E-06
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28.6	4.1E-04
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	273	3.9E-03
4-nitrophenol	100-02-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	1.6E-06
2-Chlorophenol	95-57-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.023	3.3E-07
2,4-Dinitrophenol	51-28-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	2.5E-06
Trichlorofluoromethane (Freon 11)	75-69-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13.6	2.0E-04
2,4,6-Trichlorophenol	88-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.20	2.8E-06
Pentachlorophenol	87-86-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	3.0E-06
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24.1	3.5E-04
Total TAC Emissions Estimate			**99.4**	**1.4E-03**	**6,517**	**0.094**	**2.06**	**3.0E-05**	**0.047**	**6.8E-07**	**63.7**	**9.2E-04**	**29.0**	**4.2E-04**	**61.3**	**8.8E-04**	**60.0**	**8.6E-04**	**13.1**	**1.9E-04**	**7.99**	**1.1E-04**	**7.99**	**1.1E-04**	**7.99**	**1.1E-04**	**65,641**	**0.94**

NOTES:
g/s = grams per second.
lb/yr = pounds per year.
RBC = risk-based concentration.
(a) Emission rate (g/s) = (annual emissions estimate [lb/yr]) x (453.592 g/lb) / (8,760 hrs/yr) / (3,600 s/hr)
(b) Total scrubber emissions (lb/yr) = (hogged fuel-fired boiler [lb/yr]) + (fuel dryer annual emissions [lb/yr])
(c) Model emission rate (kiln 1) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kiln 1 volume sources)
Model rate distribution for kiln 1 volume sources = 0.023 (3)
(d) Model emission rate (kiln 2-6) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kilns 2-6 volume sources)
Model rate distribution for kilns 2-6 volume sources = 0.061 (3)
(e) Total paintline emissions (lb/yr) = (basecoat emissions [lb/yr]) + (topcoat emissions [lb/yr])

REFERENCES:
(1) Emission rates representative of individual model volume sources and not entire kiln.
(2) Emissions estimate based on DEQ-approved TAC emissions inventory.
(3) See Table 3-6, Kiln Emissions Allocation.

Table 3-2
DEQ-Approved Daily Emission Rates
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Toxic Air Contaminant	CAS or DEQ ID	RBC? (Yes/No)	Daily Emission Estimates																							
			Hogged Fuel-Fired Boiler (ESP Control)		Hogged Fuel-Fired Boiler (Scrubber Control)		Fuel Dryer		Total Scrubber		Kilns Total		Kiln 1 [1]		Kilns 2-6 [1]		Press (Stack)		Press (Fugitive)		Refiner (Rotary Valve)		Refiner (Scrubber 5)		Forming Line (Stack)	
			(lb/day) [2]	(g/s) [a]	(lb/day) [2]	(g/s) [a]	(lb/day) [2]	(g/s) [a]	(lb/day) [b]	(g/s) [a]	(lb/day) [2]	(g/s) [a]	(lb/day) [c]	(g/s) [a]	(lb/day) [d]	(g/s) [a]	(lb/day) [2]	(g/s) [a]	(lb/day) [2]	(g/s) [a]	(lb/day) [2]	(g/s) [a]	(lb/day) [2]	(g/s) [a]	(lb/day) [2]	(g/s) [a]
Model ID	--	--	HBLR_ESP		--		--		HBLR_SCR		--		KILN1.1 -1.4		KILN2.1 - 6.3		PVUV_STK		HPVUV_FUG		RF12_RV		RF12_STK		FORM_STK	
Antimony and compounds	7440-36-0	Yes	9.8E-04	5.1E-06	2.1E-03	1.1E-05	--	--	2.1E-03	1.1E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic and compounds	7440-38-2	Yes	6.1E-03	3.2E-05	0.012	6.1E-05	--	--	0.012	6.1E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium and compounds	7440-39-3	No	0.67	3.5E-03	0.42	2.2E-03	--	--	0.42	2.2E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium and compounds	7440-41-7	Yes	9.1E-05	4.8E-07	7.3E-05	3.8E-07	--	--	7.3E-05	3.8E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium and compounds	7440-43-9	Yes	1.0E-03	5.5E-06	3.4E-03	1.8E-05	--	--	3.4E-03	1.8E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540299p	Yes	8.7E-04	4.6E-06	2.5E-04	1.3E-06	--	--	2.5E-04	1.3E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt and compounds	7440-48-4	Yes	1.6E-03	8.4E-06	2.1E-03	1.1E-05	--	--	2.1E-03	1.1E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and compounds	7429-90-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc oxide	1314-13-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and compounds	7440-50-8	Yes	0.012	6.4E-05	0.019	1.0E-04	--	--	0.019	1.0E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead and compounds	7439-92-1	Yes	0.017	8.8E-05	0.032	1.7E-04	--	--	0.032	1.7E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus and compounds	504	No	0.99	5.2E-03	0.33	1.7E-03	--	--	0.33	1.7E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and compounds	7439-96-5	Yes	0.31	1.6E-03	0.26	1.4E-03	--	--	0.26	1.4E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury and compounds	7439-97-6	Yes	2.8E-03	1.5E-05	1.2E-03	6.1E-06	--	--	1.2E-03	6.1E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	No	1.0E-02	5.2E-05	3.3E-03	1.7E-05	--	--	3.3E-03	1.7E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel and compounds	7440020in	Yes	9.0E-03	4.7E-05	7.7E-03	4.1E-05	--	--	7.7E-03	4.1E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium and compounds	7782-49-2	Yes	5.2E-03	2.7E-05	1.8E-03	9.4E-06	--	--	1.8E-03	9.4E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver and compounds	7440-22-4	No	3.2E-03	1.7E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium and compounds	7440-28-0	No	--	--	1.9E-03	1.0E-05	--	--	1.9E-03	1.0E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	1.9E-03	1.0E-05	6.2E-04	3.3E-06	--	--	6.2E-04	3.3E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and compounds	7440-66-6	No	0.18	9.7E-04	0.24	1.3E-03	--	--	0.24	1.3E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	0.91	4.8E-03	0.30	1.6E-03	0.59	3.1E-03	0.89	4.7E-03	108	0.57	2.46	0.013	6.56	0.034	1.91	0.010	0.11	5.9E-04	0.24	1.2E-03	5.06	0.027	1.33	7.0E-03
Acetone	67-64-1	Yes	1.70	8.9E-03	0.56	2.9E-03	3.20	0.017	3.75	0.020	--	--	--	--	--	--	2.26	0.012	0.039	2.0E-04	0.77	4.0E-03	0.61	3.2E-03	0.59	3.1E-03
Acetophenone	98-86-2	No	5.9E-03	3.1E-05	1.9E-03	1.0E-05	2.9E-03	1.5E-05	4.8E-03	2.5E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	0.83	4.4E-03	0.27	1.4E-03	1.00	5.3E-03	1.27	6.7E-03	1.73	9.1E-03	0.039	2.1E-04	0.10	5.5E-04	--	--	--	--	--	--	0.56	2.9E-03	0.11	5.9E-04
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	3.14	0.016	1.03	5.4E-03	0.25	1.3E-03	1.28	6.7E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	0.032	1.7E-04	0.010	5.4E-05	--	--	0.010	5.4E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	2.53	0.013	0.83	4.4E-03	--	--	0.83	4.4E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	0.086	4.5E-04	0.028	1.5E-04	--	--	0.028	1.5E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene glycol monobutyl ether	111-76-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	108-05-4	Yes	--	--	--	--	2.7E-03	1.4E-05	2.7E-03	1.4E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	0.053	2.8E-04	0.017	9.2E-05	--	--	0.017	9.2E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	0.064	3.4E-04	0.021	1.1E-04	--	--	0.021	1.1E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	0.14	7.5E-04	0.047	2.5E-04	0.35	1.8E-03	0.39	2.1E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	0.11	5.6E-04	0.035	1.8E-04	--	--	0.035	1.8E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	0.054	2.8E-04	0.018	9.3E-05	--	--	0.018	9.3E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	0.14	7.3E-04	0.046	2.4E-04	--	--	0.046	2.4E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	0.039	2.1E-04	0.013	6.7E-05	--	--	0.013	6.7E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Formaldehyde	50-00-0	Yes	3.37	0.018	1.10	5.8E-03	0.31	1.6E-03	1.41	7.4E-03	7.01	0.037	0.16	8.4E-04	0.42	2.2E-03	1.97	0.010	0.099	5.2E-04	0.065	3.4E-04	0.65	3.4E-03	0.53	2.8E-03
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	Yes	1.43	7.5E-03	0.47	2.5E-03	0.25	1.3E-03	0.72	3.8E-03	--	--	--	--	--	--	--	--	--	--	0.047	2.5E-04	0.045	2.4E-04	0.042	2.2E-04
Isopropylbenzene (Cumene)	98-82-8	Yes	0.057	3.0E-04	0.019	9.8E-05	3.5E-03	1.8E-05	0.022	1.2E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	Yes	0.92	4.8E-03	0.30	1.6E-03	--	--	0.30	1.6E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	14.5	0.076	4.75	0.025	--	--	4.75	0.025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	2.35	0.012	0.77	4.0E-03	0.094	4.9E-04	0.86	4.5E-03	220	1.16	5.01	0.026	13.4	0.070	87.0	0.46	1.69	8.9E-03	0.23	1.2E-03	0.58	3.0E-03	3.01	0.016
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	FLUORIDES	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	0.036	1.9E-04	0.012	6.2E-05	4.2E-03	2.2E-05	0.016	8.5E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	0.14	7.3E-04	0.046	2.4E-04	0.017	9.1E-05	0.063	3.3E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	0.19	9.7E-04	0.061	3.2E-04	--	--	0.061	3.2E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethyl benzene	95-63-6	Yes	--	--	--	--	6.1E-03	3.2E-05	6.1E-03	3.2E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	1.28	6.7E-03	0.42	2.2E-03	0.080	4.2E-04	0.50	2.6E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	0.022	1.2E-04	7.3E-03	3.8E-05	0.20	1.0E-03	0.20	1.1E-03	--	--	--	--	--	--	--	--	--	--	0.046	2.4E-04	0.026	1.3E-04	0.083	4.3E-04
Phenol	108-95-2	Yes	0.51	2.7E-03	0.17	8.8E-04	1.84	9.6E-03	2.01	0.011	--	--	--	--	--	--	--	--	0.070	3.7E-04	--	--	--	--	--	--
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	Yes	1.00	5.2E-03	0.33	1.7E-03	0.33	1.7E-03	0.66	3.4E-03	1.15	6.0E-03	0.026	1.4E-04	0.070	3.7E-04	--	--	--	--	--	--	0.069	3.6E-04	--	--
Styrene	100-42-5	Yes	1.50	7.9E-03	0.49	2.6E-03	0.011	5.8E-05	0.50	2.6E-03	--	--	--	--	--	--	--	--	--	--	0.033	1.8E-04	0.033	1.8E-04	--	--
Toluene	108-88-3	Yes	0.037	1.9E-04	0.012	6.3E-05	0.41	2.1E-03	0.42	2.2E-03	--	--	--	--	--	--	--	--	7.7E-03	4.1E-05	--	--	--	--	0.083	4.4E-04
Xylene (mixture)	1330-20-7	Yes	0.017	8.8E-05	5.5E-03	2.9E-05	--	--	5.5E-03	2.9E-05	--	--	--	--	--	--	--	--	0.037	2.0E-04	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	0.059	3.1E-04	0.019	1.0E-04	--	--	0.019	1.0E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	0.064	3.3E-04	0.021	1.1E-04	--	--	0.021	1.1E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	--	--	--	--	0.12	6.5E-04	0.12	6.5E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	0.12	6.5E-04	0.12	6.5E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	--	--	--	--	2.2E-03	1.1E-05	2.2E-03	1.1E-05	--	--	--	--	--	--	--	--	0.025	1.3E-04	--	--	--	--	--	--
Hydrogen fluoride	7664-39-3	Yes	0.29	1.5E-03	0.027	1.4E-04	--	--	0.027	1.4E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	0.18	9.6E-04	0.14	7.5E-04	--	--	0.14	7.5E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DPM	200	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PAHs (excluding Naphthalene)	401	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	2.7E-03	1.4E-05	9.0E-04	4.7E-06	--	--	9.0E-04	4.7E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	0.015	7.9E-05	4.9E-03	2.6E-05	--	--	4.9E-03	2.6E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	8.6E-03	4.5E-05	2.8E-03	1.5E-05	--	--	2.8E-03	1.5E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	Yes	2.6E-04	1.4E-06	8.5E-05	4.5E-07	--	--	8.5E-05	4.5E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	7.1E-03	3.7E-05	2.3E-03	1.2E-05	--	--	2.3E-03	1.2E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	Yes	4.6E-04	2.4E-06	1.5E-04	7.8E-07	--	--	1.5E-04	7.8E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	6.8E-04	3.6E-06	2.2E-04	1.2E-06	--	--	2.2E-04	1.2E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	Yes	4.8E-04	2.5E-06	1.6E-04	8.3E-07	--	--	1.6E-04	8.3E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	Yes	5.0E-04	2.6E-06	1.6E-04	8.6E-07	--	--	1.6E-04	8.6E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	Yes	1.7E-04	8.7E-07	5.4E-05	2.9E-07	--	--	5.4E-05	2.9E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	Yes	2.5E-04	1.3E-06	8.3E-05	4.4E-07	--	--	8.3E-05	4.4E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	Yes	5.4E-03	2.8E-05	1.8E-03	9.2E-06	--	--	1.8E-03	9.2E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	9.6E-03	5.1E-05	3.2E-03	1.7E-05	--	--	3.2E-03	1.7E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	3.3E-04	1.7E-06	1.1E-04	5.6E-07	--	--	1.1E-04	5.6E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	No	4.5E-03	2.4E-05	1.5E-03	7.7E-06	--	--	1.5E-03	7.7E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	0.32	1.7E-03	0.10	5.5E-04	0.36	1.9E-03	0.46	2.4E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perylene	198-55-0	No	1.0E-04	5.4E-07	3.4E-05	1.8E-07	--	--	3.4E-05	1.8E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	0.021	1.1E-04	6.8E-03	3.6E-05	--	--	6.8E-03	3.6E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	0.011	6.0E-05	3.7E-03	2.0E-05	--	--	3.7E-03	2.0E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	3.1E-09	1.6E-11	1.0E-09	5.3E-12	--	--	1.0E-09	5.3E-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	4.3E-09	2.2E-11	1.4E-09	7.3E-12	--	--	1.4E-09	7.3E-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	2.8E-09	1.5E-11	9.1E-10	4.8E-12	--	--	9.1E-10	4.8E-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	6.7E-09	3.5E-11	2.2E-09	1.2E-11	--	--	2.2E-09	1.2E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	7.1E-09	3.7E-11	2.3E-09	1.2E-11	--	--	2.3E-09	1.2E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	3.1E-08	1.6E-10	1.0E-08	5.4E-11	--	--	1.0E-08	5.4E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	7.9E-08	4.1E-10	2.6E-08	1.4E-10	--	--	2.6E-08	1.4E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	Yes	2.6E-08	1.4E-10	8.5E-09	4.4E-11	--	--	8.5E-09	4.4E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	1.3E-08	6.7E-11	4.2E-09	2.2E-11	--	--	4.2E-09	2.2E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	2.0E-08	1.0E-10	6.4E-09	3.4E-11	--	--	6.4E-09	3.4E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	1.1E-08	6.0E-11	3.7E-09	2.0E-11	--	--	3.7E-09	2.0E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	1.0E-08	5.3E-11	3.3E-09	1.7E-11	--	--	3.3E-09	1.7E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	2.1E-09	1.1E-11	7.0E-10	3.7E-12	--	--	7.0E-10	3.7E-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	8.5E-09	4.5E-11	2.8E-09	1.5E-11	--	--	2.8E-09	1.5E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	1.8E-08	9.6E-11	6.0E-09	3.2E-11	--	--	6.0E-09	3.2E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	2.6E-09	1.3E-11	8.4E-10	4.4E-12	--	--	8.4E-10	4.4E-12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	1.6E-08	8.4E-11	5.3E-09	2.8E-11	--	--	5.3E-09	2.8E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	1336-36-3	Yes	2.4E-05	1.3E-07	8.0E-06	4.2E-08	--	--	8.0E-06	4.2E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Decachlorobiphenyl	2051-24-3	No	8.5E-07	4.5E-09	2.8E-07	1.5E-09	--	--	2.8E-07	1.5E-09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	No	2.8E-05	1.5E-07	9.1E-06	4.8E-08	--	--	9.1E-06	4.8E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	No	1.5E-05	7.7E-08	4.8E-06	2.5E-08	--	--	4.8E-06	2.5E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	8.3E-04	4.4E-06	2.7E-04	1.4E-06	--	--	2.7E-04	1.4E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	Yes	3.0E-03	1.6E-05	9.9E-04	5.2E-06	--	--	9.9E-04	5.2E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	6.7E-03	3.5E-05	2.2E-03	1.2E-05	--	--	2.2E-03	1.2E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	1.5E-04	7.8E-07	4.9E-05	2.6E-07	--	--	4.9E-05	2.6E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	0.066	3.4E-04	0.022	1.1E-04	--	--	0.022	1.1E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
di-n-octylphthalateb	117-84-0	No	3.5E-04	1.9E-06	1.2E-04	6.1E-07	--	--	1.2E-04	6.1E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	0.094	4.9E-04	0.031	1.6E-04	--	--	0.031	1.6E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	0.89	4.7E-03	0.29	1.5E-03	--	--	0.29	1.5E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	3.7E-04	1.9E-06	1.2E-04	6.3E-07	--	--	1.2E-04	6.3E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	7.5E-05	4.0E-07	2.5E-05	1.3E-07	--	--	2.5E-05	1.3E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	5.8E-04	3.0E-06	1.9E-04	9.9E-07	--	--	1.9E-04	9.9E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	0.045	2.3E-04	0.015	7.7E-05	--	--	0.015	7.7E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	Yes	6.4E-04	3.4E-06	2.1E-04	1.1E-06	--	--	2.1E-04	1.1E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	Yes	6.9E-04	3.6E-06	2.3E-04	1.2E-06	--	--	2.3E-04	1.2E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	0.079	4.1E-04	0.026	1.4E-04	--	--	0.026	1.4E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TAC Emissions Estimate			**41.6**	**0.22**	**14.3**	**0.075**	**9.54**	**0.050**	**23.8**	**0.12**	**338**	**1.78**	**7.69** [1]	**0.040**	**20.5** [1]	**0.11**	**93.1**	**0.49**	**2.08**	**0.011**	**1.43**	**7.5E-03**	**7.62**	**0.040**	**5.78**	**0.030**

NOTES:
g/s = grams per second.
lb/day = pounds per day.
RBC = risk-based concentration.
(a) Emission rate (g/s) = (daily emissions estimate [lb/day]) x (453.592 g/lb) / (24 hrs/day) / (3,600 s/hr)
(b) Total scrubber emissions (lb/day) = (hogged fuel-fired boiler [lb/day]) + (fuel dryer annual emissions [lb/day])
(c) Model emission rate (kiln 1) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kiln 1 volume sources)
Model rate distribution for kiln 1 volume sources = 0.023 (3)
(d) Model emission rate (kiln 2-6) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kilns 2-6 volume sources)
Model rate distribution for kilns 2-6 volume sources = 0.061 (3)
(e) Total paintline emissions (lb/day) = (basecoat emissions [lb/day]) + (topcoat emissions [lb/day])

REFERENCES:
[1] Emission rates representative of individual model volume sources and not entire kiln.
[2] Emissions estimate based on DEQ-approved TAC emissions inventory.
[3] See Table 3-6, Kiln Emissions Allocation.

Table 3-2
DEQ-Approved Daily Emission Rates (Cont.)
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Toxic Air Contaminant	CAS or DEQ ID	RBC? (Yes/No)	Daily Emission Estimates: Forming Line (Fugitives)		HBWW - Whitewater Chest		HBWW - Machine Chest		HBWW - Head box		WW - Hydrosieves		BLR-SCR - Hydrosieves		WW - Surge Pond		WW - Aeration Basin		WW - Secondary Clarifier		WW - Sludge Pit Conveyor		WW - Sludge Pond		WW - Reuse Pond		WW - Reuse Pond		Basecoat	
			(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)	(lb/day) (2)	(g/s) (a)
Model ID	--	--	FORM_FUG		WHITE		MACH		HEADBOX		HYDRO		SCR_HYDRO		SURGE		ABASE		CLAR		PIT		S_POND		R_POND		E_POND		--	
Antimony and compounds	7440-36-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic and compounds	7440-38-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium and compounds	7440-39-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium and compounds	7440-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium and compounds	7440-43-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540299p	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt and compounds	7440-48-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and compounds	7429-90-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc oxide	1314-13-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and compounds	7440-50-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead and compounds	7439-92-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus and compounds	504	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and compounds	7439-96-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury and compounds	7439-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel and compounds	7440020in	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium and compounds	7782-49-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver and compounds	7440-22-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium and compounds	7440-28-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and compounds	7440-66-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	0.13	7.0E-04	0.044	2.3E-04	0.68	3.6E-03	0.19	1.0E-03	0.31	1.6E-03	2.9E-03	1.5E-05	0.55	2.9E-03	0.023	1.2E-04	3.6E-04	1.9E-06	9.1E-07	4.8E-09	6.5E-05	3.4E-07	3.4E-05	1.8E-07	4.6E-05	2.4E-07	--	--
Acetone	67-64-1	Yes	0.059	3.1E-04	0.017	8.8E-05	0.23	1.2E-03	0.051	2.7E-04	0.037	1.9E-04	7.5E-03	3.9E-05	0.021	1.1E-04	1.1E-04	5.6E-07	2.1E-06	1.1E-08	6.4E-22	3.4E-24	8.1E-08	4.3E-10	1.5E-08	8.1E-11	1.7E-08	9.1E-11	--	--
Acetophenone	98-86-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	0.011	5.9E-05	3.2E-22	1.7E-24	0.081	4.3E-04	1.9E-21	1.0E-23	3.1E-21	1.6E-23	0.020	1.0E-04	2.5E-21	1.3E-23	7.0E-23	3.7E-25	9.9E-25	5.2E-27	1.6E-22	8.6E-25	5.4E-21	2.8E-23	2.1E-21	1.1E-23	2.7E-21	1.4E-23	--	--
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene glycol monobutyl ether	111-76-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.34	1.8E-03
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	108-05-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Formaldehyde	50-00-0	Yes	0.053	2.8E-04	0.044	2.3E-04	0.15	8.1E-04	0.036	1.9E-04	0.017	8.8E-05	1.5E-04	7.7E-07	0.21	1.1E-03	3.0E-03	1.6E-05	4.8E-05	2.5E-07	5.9E-08	3.1E-10	1.5E-05	8.1E-08	1.3E-05	6.7E-08	1.6E-05	8.6E-08	--	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	Yes	4.2E-03	2.2E-05	4.3E-03	2.3E-05	0.19	9.8E-04	0.067	3.5E-04	0.14	7.3E-04	6.7E-04	3.5E-06	0.021	1.1E-04	1.2E-03	6.4E-06	8.3E-06	4.3E-08	5.0E-08	2.6E-10	5.7E-07	3.0E-09	1.7E-07	9.1E-10	2.2E-07	1.2E-09	--	--
Isopropylbenzene (Cumene)	98-82-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	0.30	1.6E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	FLUORIDES	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethyl benzene	95-63-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	8.3E-03	4.3E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	Yes	--	--	6.8E-04	3.6E-06	8.8E-04	4.6E-06	4.1E-04	2.1E-06	4.4E-04	2.3E-06	4.3E-05	2.2E-07	1.7E-05	8.8E-08	3.7E-09	2.0E-11	7.6E-11	4.0E-13	5.3E-14	2.8E-16	3.5E-13	1.8E-15	8.8E-15	4.6E-17	1.0E-14	5.4E-17	--	--
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	Yes	--	--	1.8E-03	9.7E-06	0.024	1.3E-04	7.2E-03	3.8E-05	0.011	5.9E-05	8.6E-03	4.5E-05	0.018	9.7E-05	5.4E-04	2.9E-06	9.4E-06	4.9E-08	2.0E-08	1.0E-10	1.5E-06	7.7E-09	7.2E-07	3.8E-09	9.7E-07	5.1E-09	--	--
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	8.3E-03	4.4E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen fluoride	7664-39-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DPM	200	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PAHs (excluding Naphthalene)	401	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perylene	198-55-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	1336-36-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Decachlorobiphenyl	2051-24-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
di-n-octylphthalateb	117-84-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TAC Emissions Estimate			**0.58**	**3.0E-03**	**0.11**	**5.9E-04**	**1.36**	**7.1E-03**	**0.36**	**1.9E-03**	**0.51**	**2.7E-03**	**0.040**	**2.1E-04**	**0.82**	**4.3E-03**	**0.028**	**1.5E-04**	**4.3E-04**	**2.3E-06**	**1.0E-06**	**5.5E-09**	**8.2E-05**	**4.3E-07**	**4.8E-05**	**2.5E-07**	**6.4E-05**	**3.4E-07**	**0.34**	**1.8E-03**

NOTES:

g/s = grams per second.

lb/day = pounds per day.

RBC = risk-based concentration.

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

(b) Total scrubber emissions (lb/day) = (hogged fuel-fired boiler [lb/day]) + (fuel dryer annual emissions [lb/day])

(c) Model emission rate (kiln 1) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kiln 1 volume sources)

Model rate distribution for kiln 1 volume sources = 0.023 (3)

(d) Model emission rate (kiln 2-6) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kilns 2-6 volume sources)

Model rate distribution for kilns 2-6 volume sources = 0.061 (3)

(e) Total paintline emissions (lb/day) = (basecoat emissions [lb/day]) + (topcoat emissions [lb/day])

REFERENCES:

(1) Emission rates representative of individual model volume sources and not entire kiln.

(2) Emissions estimate based on DEQ-approved TAC emissions inventory.

(3) See Table 3-6, Kiln Emissions Allocation.

Table 3-2
DEQ-Approved Daily Emission Rates (Cont.)
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Toxic Air Contaminant	CAS or DEQ ID	RBC? (Yes/No)	Daily Emission Estimates																											
			Topcoat		Paintline Total		Lumber Surface Protection		Welding		Babbitt Pot		Chipper		Fire Pump		Backup Generator		Proposed Emergency Generator		Gas Storage Tank		Resin Storage Tank 1		Resin Storage Tank 2		Resin Storage Tank 3		Facility Total	
			(lb/day) [2]	(g/s) [(a)]	(lb/day) [(e)]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day) [2]	(g/s) [(a)]	(lb/day)	(g/s)
Model ID	--	--	--		PAINT		LSP		WELD		BPOT		S_CYC		FIRE		BGEN		EGEN01		GAS		RESIN1		RESIN2		RESIN3		--	--
Antimony and compounds	7440-36-0	Yes	--	--	--	--	--	--	--	--	6.8E-04	3.5E-06	--	--	4.6E-06	2.4E-08	2.6E-05	1.4E-07	1.1E-04	6.0E-07	--	--	--	--	--	--	--	--	3.9E-03	2.0E-05
Arsenic and compounds	7440-38-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	2.3E-05	1.2E-07	1.3E-04	6.9E-07	5.7E-04	3.0E-06	--	--	--	--	--	--	--	--	0.018	9.7E-05
Barium and compounds	7440-39-3	No	--	--	--	--	--	--	--	--	--	--	--	--	5.4E-06	2.8E-08	3.1E-05	1.6E-07	1.3E-04	7.0E-07	--	--	--	--	--	--	--	--	1.09	5.7E-03
Beryllium and compounds	7440-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	6.9E-08	3.6E-10	3.9E-07	2.0E-09	1.7E-06	9.0E-09	--	--	--	--	--	--	--	--	1.7E-04	8.7E-07
Cadmium and compounds	7440-43-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	2.2E-05	1.1E-07	1.2E-04	6.4E-07	5.4E-04	2.8E-06	--	--	--	--	--	--	--	--	5.1E-03	2.7E-05
Chromium VI	18540299p	Yes	--	--	--	--	--	--	1.4E-03	7.1E-06	--	--	--	--	1.4E-06	7.6E-09	8.2E-06	4.3E-08	3.6E-05	1.9E-07	--	--	--	--	--	--	--	--	2.5E-03	1.3E-05
Cobalt and compounds	7440-48-4	Yes	--	--	--	--	--	--	2.5E-04	1.3E-06	--	--	--	--	2.3E-07	1.2E-09	1.3E-06	6.8E-09	5.6E-06	3.0E-08	--	--	--	--	--	--	--	--	3.9E-03	2.0E-05
Aluminum and compounds	7429-90-5	Yes	--	--	--	--	--	--	0.092	4.8E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.092	4.8E-04
Zinc oxide	1314-13-2	No	--	--	--	--	--	--	2.5E-04	1.3E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5E-04	1.3E-06
Copper and compounds	7440-50-8	Yes	--	--	--	--	--	--	2.5E-04	1.3E-06	6.8E-04	3.5E-06	--	--	5.9E-05	3.1E-07	3.3E-04	1.8E-06	1.5E-03	7.7E-06	--	--	--	--	--	--	--	--	0.034	1.8E-04
Lead and compounds	7439-92-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	1.2E-04	6.3E-07	6.8E-04	3.6E-06	3.0E-03	1.6E-05	--	--	--	--	--	--	--	--	0.052	2.7E-04
Phosphorus and compounds	504	No	--	--	--	--	--	--	--	--	--	--	--	--	1.2E-04	6.4E-07	6.9E-04	3.6E-06	3.0E-03	1.6E-05	--	--	--	--	--	--	--	--	1.32	6.9E-03
Manganese and compounds	7439-96-5	Yes	--	--	--	--	--	--	3.0E-03	1.5E-05	--	--	--	--	4.5E-05	2.3E-07	2.5E-04	1.3E-06	1.1E-03	5.8E-06	--	--	--	--	--	--	--	--	0.57	3.0E-03
Mercury and compounds	7439-97-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	2.9E-05	1.5E-07	1.6E-04	8.6E-07	7.2E-04	3.8E-06	--	--	--	--	--	--	--	--	4.9E-03	2.6E-05
Molybdenum trioxide	1313-27-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.013	6.9E-05
Nickel and compounds	7440020in	Yes	--	--	--	--	--	--	0.011	5.9E-05	6.8E-05	3.5E-07	--	--	5.6E-05	2.9E-07	3.2E-04	1.7E-06	1.4E-03	7.3E-06	--	--	--	--	--	--	--	--	0.030	1.6E-04
Selenium and compounds	7782-49-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	3.2E-05	1.7E-07	1.8E-04	9.4E-07	7.9E-04	4.1E-06	--	--	--	--	--	--	--	--	8.0E-03	4.2E-05
Silver and compounds	7440-22-4	No	--	--	--	--	--	--	--	--	--	--	--	--	6.9E-07	3.6E-09	3.9E-06	2.1E-08	1.7E-05	9.0E-08	--	--	--	--	--	--	--	--	3.2E-03	1.7E-05
Thallium and compounds	7440-28-0	No	--	--	--	--	--	--	--	--	--	--	--	--	3.5E-06	1.8E-08	2.0E-05	1.0E-07	8.6E-05	4.5E-07	--	--	--	--	--	--	--	--	2.1E-03	1.1E-05
Vanadium (fume or dust)	7440-62-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5E-03	1.3E-05
Zinc and compounds	7440-66-6	No	--	--	--	--	--	--	--	--	--	--	--	--	7.5E-05	4.0E-07	4.3E-04	2.2E-06	1.9E-03	9.8E-06	--	--	--	--	--	--	--	--	0.43	2.3E-03
Acetaldehyde	75-07-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	0.011	5.9E-05	0.064	3.4E-04	0.28	1.5E-03	--	--	--	--	--	--	--	--	121	0.64
Acetone	67-64-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10.1	0.053
Acetophenone	98-86-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.011	5.6E-05
Acrolein	107-02-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	4.9E-04	2.6E-06	2.8E-03	1.5E-05	0.012	6.4E-05	--	--	--	--	--	--	--	--	4.63	0.024
Ammonia	7664-41-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	0.042	2.2E-04	0.24	1.2E-03	1.04	5.4E-03	--	--	--	--	--	--	--	--	1.32	6.9E-03
Benzene	71-43-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	2.7E-03	1.4E-05	0.015	8.0E-05	0.067	3.5E-04	0.20	1.0E-03	--	--	--	--	--	--	4.70	0.025
Carbon tetrachloride	56-23-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.042	2.2E-04
Chlorine	7782-50-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.36	0.018
Butyl benzyl phthalate	85-68-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	6.0E-04
Ethylene glycol monobutyl ether	111-76-2	Yes	0.43	2.2E-03	0.77	4.0E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.77	4.0E-03
Dipropylene glycol monomethyl ether	34590-94-8	No	--	--	--	--	34.2	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	34.2	0.18
Vinyl acetate	108-05-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.7E-03	1.4E-05
Chlorobenzene	108-90-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	2.9E-06	1.5E-08	1.6E-05	8.6E-08	7.2E-05	3.8E-07	--	--	--	--	--	--	--	--	0.071	3.7E-04
Chloroform	67-66-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.086	4.5E-04
Crotonaldehyde	4170-30-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.54	2.8E-03
Dibutyl phthalate	84-74-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	7.4E-04
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.072	3.8E-04
Diethylphthalate	84-66-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.19	9.7E-04
Ethyl benzene	100-41-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	1.6E-04	8.2E-07	8.9E-04	4.7E-06	3.9E-03	2.0E-05	0.011	5.8E-05	--	--	--	--	--	--	0.068	3.6E-04
Formaldehyde	50-00-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	0.025	1.3E-04	0.14	7.4E-04	0.62	3.2E-03	--	--	0.18	9.3E-04	0.19	1.0E-03	0.19	1.0E-03	17.0	0.089
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.70	0.014
Isopropylbenzene (Cumene)	98-82-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.3E-04	3.3E-06	--	--	--	--	--	--	0.079	4.2E-04
Hexane	110-54-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	3.9E-04	2.0E-06	2.2E-03	1.2E-05	9.6E-03	5.1E-05	--	--	--	--	--	--	--	--	1.24	6.5E-03
Isopropyl alcohol	67-63-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19.2	0.10
Methanol	67-56-1	Yes	--	--	--	--	--	--	--	--	--	--	0.34	1.8E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	317	1.66
1,3,5-Trimethylbenzene	108-67-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.0E-03	2.1E-05	--	--	--	--	--	--	4.0E-03	2.1E-05
Fluorides	FLUORIDES	Yes	--	--	--	--	--	--	2.5E-03	1.3E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5E-03	1.3E-05
1,2,3-Trimethylbenzene	526-73-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5E-03	1.3E-05	--	--	--	--	--	--	2.5E-03	1.3E-05
Cyclohexane	110-82-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32	1.7E-03	--	--	--	--	--	--	0.32	1.7E-03
Bromomethane (Methyl bromide)	74-83-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.052	2.7E-04
Chloromethane (Methyl chloride)	74-87-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.20	1.1E-03
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	3.1E-03	1.6E-05	0.018	9.3E-05	0.078	4.1E-04	--	--	--	--	--	--	--	--	0.099	5.2E-04
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	1.3E-03
1,2,4-Trimethyl benzene	95-63-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.8E-03	4.6E-05	--	--	--	--	--	--	0.015	7.9E-05
Dichloromethane (Methylene chloride)	75-09-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.77	9.3E-03
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	2.0E-03
Phenol	108-95-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.3E-04	1.2E-06	2.5E-04	1.3E-06	2.5E-04	1.3E-06	2.59	0.014
Propylene	115-07-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	6.8E-03	3.6E-05	0.038	2.0E-04	0.17	8.8E-04	--	--	--	--	--	--	--	--	0.21	1.1E-03
Propionaldehyde	123-38-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.95	0.015
Styrene	100-42-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.3E-05	1.7E-07	--	--	--	--	--	--	2.07	0.011
Toluene	108-88-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	1.5E-03	8.0E-06	8.6E-03	4.5E-05	0.038	2.0E-04	0.16	8.2E-04	--	--	--	--	--	--	0.76	4.0E-03
Xylene (mixture)	1330-20-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	6.1E-04	3.2E-06	3.5E-03	1.8E-05	0.015	8.0E-05	--	--	--	--	--	--	--	--	0.079	4.1E-04
Vinyl Chloride	75-01-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.078	4.1E-04
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.085	4.4E-04
m-Xylene	108-38-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	6.5E-04
p-Xylene	106-42-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.031	1.6E-04	--	--	--	--	--	--	0.15	8.1E-04
o-Xylene	95-47-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.012	6.2E-05	--	--	--	--	--	--	0.039	2.1E-04
Hydrogen fluoride	7664-39-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32	1.7E-03
Hydrochloric acid	7647-01-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	2.7E-03	1.4E-05	0.015	8.0E-05	0.067	3.5E-04	--	--	--	--	--	--	--	--	0.41	2.2E-03
DPM	200	No	--	--	--	--	--	--	--	--	--	--	--	--	0.48	2.5E-03	0.67	3.5E-03	12.0	0.063	--	--	--	--	--	--	--	--	13.1	0.069
PAHs (excluding Naphthalene)	401	No	--	--	--	--	--	--	--	--	--	--	--	--	5.2E-04	2.7E-06	3.0E-03	1.6E-05	0.013	6.8E-05	--	--	--	--	--	--	--	--	0.016	8.6E-05
Acenaphthene	83-32-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.6E-03	1.9E-05
Acenaphthylene	208-96-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.020	1.0E-04
Anthracene	120-12-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.011	6.0E-05
Benz[a]anthracene	56-55-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.5E-04	1.8E-06
Benzo[a]pyrene	50-32-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	5.1E-07	2.7E-09	2.9E-06	1.5E-08	1.3E-05	6.7E-08	--	--	--	--	--	--	--	--	9.5E-03	5.0E-05
Benzo[b]fluoranthene	205-99-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0E-04	3.2E-06
Benzo[e]pyrene	192-97-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.0E-04	4.7E-06
Benzo[g,h,i]perylene	191-24-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.4E-04	3.4E-06
Benzo[j]fluoranthene	205-82-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.6E-04	3.5E-06
Benzo[k]fluoranthene	207-08-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.2E-04	1.2E-06
Chrysene	218-01-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.4E-04	1.8E-06
Fluoranthene	206-44-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.1E-03	3.7E-05
Fluorene	86-73-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.013	6.7E-05
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.3E-04	2.2E-06
2-Methyl naphthalene	91-57-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0E-03	3.1E-05
Naphthalene	91-20-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	2.8E-04	1.5E-06	1.6E-03	8.4E-06	7.0E-03	3.7E-05	2.6E-04	1.4E-06	--	--	--	--	--	--	0.79	4.2E-03
Perylene	198-55-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.4E-04	7.2E-07
Phenanthrene	85-01-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.027	1.4E-04
Pyrene	129-00-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.015	7.9E-05
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.1E-09	2.1E-11
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.7E-09	3.0E-11
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.7E-09	1.9E-11
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.9E-09	4.7E-11
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.4E-09	4.9E-11
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.2E-08	2.2E-10
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.0E-07	5.5E-10
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.4E-08	1.8E-10
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.7E-08	8.9E-11
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.6E-08	1.4E-10
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5E-08	8.0E-11
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.3E-08	7.1E-11
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.8E-09	1.5E-11
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1E-08	5.9E-11
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.4E-08	1.3E-10
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.4E-09	1.8E-11
Octachlorodibenzofuran (OCDF)	39001-02-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.1E-08	1.1E-10
Total PCBs	1336-36-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.2E-05	1.7E-07
Decachlorobiphenyl	2051-24-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1E-06	5.9E-09
3-Methylcholanthrene	56-49-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.7E-05	1.9E-07
7,12-Dimethylbenz[a]anthracene	57-97-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.9E-05	1.0E-07
1-Methylphenanthrene	832-69-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1E-03	5.8E-06
2,4-Dinitrotoluene	121-14-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.0E-03	2.1E-05
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.9E-03	4.7E-05
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.0E-04	1.0E-06
Hydrogen cyanide	74-90-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.087	4.6E-04
di-n-octylphthalateb	117-84-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.7E-04	2.5E-06
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	6.5E-04
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.19	6.2E-03
4-nitrophenol	100-02-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.9E-04	2.5E-06
2-Chlorophenol	95-57-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.0E-04	5.3E-07
2,4-Dinitrophenol	51-28-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.7E-04	4.0E-06
Trichlorofluoromethane (Freon 11)	75-69-4	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.059	3.1E-04
2,4,6-Trichlorophenol	88-06-2	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.5E-04	4.5E-06
Pentachlorophenol	87-86-5	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.1E-04	4.8E-06
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.10	5.5E-04
Total TAC Emissions Estimate			**0.43**	**2.2E-03**	**0.77**	**4.0E-03**	**34.2**	**0.18**	**0.11**	**5.8E-04**	**1.4E-03**	**7.4E-06**	**0.34**	**1.8E-03**	**0.58**	**3.0E-03**	**1.23**	**6.4E-03**	**14.4**	**0.076**	**0.75**	**3.9E-03**	**0.18**	**9.3E-04**	**0.19**	**1.0E-03**	**0.19**	**1.0E-03**	**571**	**3.00**

NOTES:

g/s = grams per second.

lb/day = pounds per day.

RBC = risk-based concentration.

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

(b) Total scrubber emissions (lb/day) = (hogged fuel-fired boiler [lb/day]) + (fuel dryer annual emissions [lb/day])

(c) Model emission rate (kiln 1) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kiln 1 volume sources)

Model rate distribution for kiln 1 volume sources = 0.023 (3)

(d) Model emission rate (kiln 2-6) (lb/yr) = (total kiln emission rate [lb/yr]) x (model rate distribution for kilns 2-6 volume sources)

Model rate distribution for kilns 2-6 volume sources = 0.061 (3)

(e) Total paintline emissions (lb/day) = (basecoat emissions [lb/day]) + (topcoat emissions [lb/day])

REFERENCES:

[1] Emission rates representative of individual model volume sources and not entire kiln.

[2] Emissions estimate based on DEQ-approved TAC emissions inventory.

[3] See Table 3-6, Kiln Emissions Allocation.

Table 3-3
DEQ-Approved Acute Risk Equivalent Emission Rates
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Toxic Air Contaminant	CAS or DEQ ID	Acute Risk-Based Concentration (Yes/No)	Acute Risk Based Concentration [1] (ug/m^3)	Acute Risk Equivalent Emission Rate [a] (g/s per ug/m^3)															
				Hogged Fuel-Fired Boiler (ESP Control)	Total Scrubber	Kiln 1 [2]	Kilns 2-6 [2]	Press (Stack)	Press (Fugitive)	Refiner (Rotary Valve)	Refiner (Scrubber 5)	Forming Line (Stack)	Forming Line (Fugitives)	HBWW - Whitewater Chest	HBWW - Machine Chest	HBWW - Head box	WW - Hydrosieves	BLR-SCR - Hydrosieves	WW - Surge Pond
Model ID	--	--	--	HBLR_ESP	HBLR_SCR	KILN1.1 -1.4	KILN2.1 - 6.3	PVUV_STK	HPVUV_FUG	RF12_RV	RF12_STK	FORM_STK	FORM_FUG	WHITE	MACH	HEADBOX	HYDRO	SCR_HYDRO	SURGE
Antimony and compounds	7440-36-0	Yes	1.00	5.1E-06	1.1E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic and compounds	7440-38-2	Yes	0.20	1.6E-04	3.1E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium and compounds	7440-39-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium and compounds	7440-41-7	Yes	0.020	2.4E-05	1.9E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium and compounds	7440-43-9	Yes	0.030	1.8E-04	5.9E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540299p	Yes	0.30	1.5E-05	4.3E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt and compounds	7440-48-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and compounds	7429-90-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc oxide	1314-13-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and compounds	7440-50-8	Yes	100.0	6.4E-07	1.0E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead and compounds	7439-92-1	Yes	0.15	5.8E-04	1.1E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phosphorus and compounds	7723-14-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and compounds	7439-96-5	Yes	0.30	5.4E-03	4.6E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury and compounds	7439-97-6	Yes	0.60	2.5E-05	1.0E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Molybdenum trioxide	1313-27-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel and compounds	7440020in	Yes	0.20	2.4E-04	2.0E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium and compounds	7782-49-2	Yes	2.00	1.4E-05	4.7E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver and compounds	7440-22-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thailium and compounds	7440-28-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	0.80	1.2E-05	4.1E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and compounds	7440-66-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	470	1.0E-05	9.9E-06	2.7E-05	7.3E-05	2.1E-05	1.3E-06	2.6E-06	5.7E-05	1.5E-05	1.5E-06	4.9E-07	7.6E-06	2.2E-06	3.4E-06	3.3E-08	6.2E-06
Acetone	67-64-1	Yes	62,000	1.4E-07	3.2E-07	--	--	1.9E-07	3.3E-09	6.5E-08	5.2E-08	5.0E-08	5.0E-09	1.4E-09	1.9E-08	4.3E-09	3.1E-09	6.3E-10	1.8E-09
Acetophenone	98-86-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	6.90	6.3E-04	9.7E-04	3.0E-05	8.0E-05	--	--	--	4.2E-04	8.6E-05	8.6E-06	2.4E-25	6.2E-05	1.5E-24	2.3E-24	1.5E-05	1.9E-24
Ammonia	7664-41-7	Yes	1,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	29.0	5.7E-04	2.3E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	Yes	1,900	8.7E-08	2.9E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	170	7.8E-05	2.6E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene glycol monobutyl ether	111-76-2	Yes	29,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	108-05-4	Yes	200	--	7.0E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	490	6.9E-07	2.3E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	230	1.2E-06	4.0E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	22,000	9.3E-09	3.1E-09	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Formaldehyde	50-00-0	Yes	49.0	3.6E-04	1.5E-04	1.7E-05	4.6E-05	2.1E-04	1.1E-05	7.0E-06	6.9E-05	5.7E-05	5.7E-06	4.7E-06	1.7E-05	3.9E-06	1.8E-06	1.6E-08	2.3E-05
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	3,200	2.4E-05	7.8E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	28,000	4.4E-07	1.6E-07	9.4E-07	2.5E-06	1.6E-05	3.2E-07	4.3E-08	1.1E-07	5.7E-07	5.7E-08	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	FLUORIDES	Yes	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane (Methyl bromide)	74-83-9	Yes	3,900	4.9E-08	2.2E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane (Methyl chloride)	74-87-3	Yes	1,000	7.3E-07	3.3E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	660	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	11,000	8.8E-08	2.9E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethyl benzene	95-63-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	2,100	3.2E-06	1.2E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	5,000	2.3E-08	2.1E-07	--	--	--	--	4.8E-08	2.7E-08	8.7E-08	8.7E-09	--	--	--	--	--	--
Phenol	108-95-2	Yes	5,800	4.6E-07	1.8E-06	--	--	--	6.4E-08	--	--	--	--	6.2E-10	7.9E-10	3.7E-10	3.9E-10	3.9E-11	1.5E-11
Propylene	115-07-1	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	21,000	3.8E-07	1.3E-07	--	--	--	--	8.3E-09	8.3E-09	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	7,500	2.6E-08	2.9E-07	--	--	--	5.4E-09	--	--	5.8E-08	5.8E-09	--	--	--	--	--	--
Xylene (mixture)	1330-20-7	Yes	8,700	1.0E-08	3.3E-09	--	--	--	2.3E-08	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	Yes	1,300	2.4E-07	7.8E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	2.10	1.6E-04	5.2E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
m-Xylene	108-38-3	Yes	8,700	--	7.5E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Xylene	106-42-3	Yes	8,700	--	7.5E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	Yes	8,700	--	1.3E-09	--	--	--	1.5E-08	--	--	--	--	--	--	--	--	--	--
Hydrogen fluoride	7664-39-3	Yes	16.0	9.5E-05	8.8E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	2,100	4.6E-07	3.6E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DPM	DPM	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PAHs (excluding Naphthalene)	PAHs	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	2.0E-03	0.019	6.1E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[b]fluoranthene	205-99-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	200	8.4E-06	1.2E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Perylene	198-55-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	1336-36-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Decachlorobiphenyl	2051-24-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	340	1.0E-06	3.3E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--
di-n-octylphthalateb	117-84-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	12,000	3.9E-07	1.3E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	41.0	1.0E-05	3.3E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TEU Risk Equivalent Emission Rate [b] (g/s per ug/m^3)				**0.027**	**0.014**	**7.5E-05**	**2.0E-04**	**2.5E-04**	**1.2E-05**	**9.8E-06**	**5.5E-04**	**1.6E-04**	**1.6E-05**	**5.2E-06**	**8.6E-05**	**6.1E-06**	**5.2E-06**	**1.5E-05**	**2.9E-05**

NOTES:
g/s = grams per second.
TAC = toxic air contaminant.
ug/m^3 = micrograms per cubic meter.
TEU = toxic emission unit.

(a) TAC acute risk equivalent emission rate (g/s per ug/m^3) = (daily emissions estimate [g/s]) / (acute risk based concentration [ug/m^3])
Daily emissions estimate (g/s) = (3)
(b) TEU Risk Equivalent Emission Rate (g/s per ug/m^3) = ∑ (TAC acute risk equivalent emission rates [g/s per ug/m^3])

REFERENCES:
[1] Oregon Administrative Rule 340-245-8010 Table 2.
[2] Acute risk equivalent emission rates representative of individual model volume sources and not entire kiln.
[3] See Table 3-2, Proposed Daily Emission Rates.
[4] TAC does not have an acute based concentration listed in OAR 340-245-8010 Table 2.

Table 3-3
DEQ-Approved Acute Risk Equivalent Emission Rates (Cont.)
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Toxic Air Contaminant	CAS or DEQ ID	Acute Risk-Based Concentration (Yes/No)	Acute Risk Based Concentration [1] (ug/m^3)	Acute Risk Equivalent Emission Rate [a] (g/s per ug/m^3) WW - Aeration Basin	WW - Secondary Clarifier	WW - Sludge Pit Conveyor	WW - Sludge Pond	WW - Reuse Pond	WW - Reuse Pond	Paintline Total	Lumber Surface Protection	Welding	Babbitt Pot	Chipper	Fire Pump	Backup Generator	Proposed Emergency Generator	Gas Storage Tank	Resin Storage Tank 1	Resin Storage Tank 2	Resin Storage Tank 3
Model ID	--	--	--	**ABASE**	**CLAR**	**PIT**	**S_POND**	**R_POND**	**E_POND**	**PAINT**	**LSP**	**WELD**	**BPOT**	**S_CYC**	**FIRE**	**BGEN**	**EGEN01**	**GAS**	**RESIN1**	**RESIN2**	**RESIN3**
Antimony and compounds	7440-36-0	Yes	1.00	--	--	--	--	--	--	--	--	--	3.5E-06	--	2.4E-08	1.4E-07	6.0E-07	--	--	--	--
Arsenic and compounds	7440-38-2	Yes	0.20	--	--	--	--	--	--	--	--	--	--	--	6.1E-07	3.4E-06	1.5E-05	--	--	--	--
Barium and compounds	7440-39-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium and compounds	7440-41-7	Yes	0.020	--	--	--	--	--	--	--	--	--	--	--	1.8E-08	1.0E-07	4.5E-07	--	--	--	--
Cadmium and compounds	7440-43-9	Yes	0.030	--	--	--	--	--	--	--	--	--	--	--	3.8E-06	2.1E-05	9.4E-05	--	--	--	--
Chromium VI	18540299p	Yes	0.30	--	--	--	--	--	--	--	--	2.4E-05	--	--	2.5E-08	1.4E-07	6.3E-07	--	--	--	--
Cobalt and compounds	7440-48-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aluminum and compounds	7429-90-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc oxide	1314-13-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper and compounds	7440-50-8	Yes	100.0	--	--	--	--	--	--	--	--	1.3E-08	3.5E-08	--	3.1E-09	1.8E-08	7.7E-08	--	--	--	--
Lead and compounds	7439-92-1	Yes	0.15	--	--	--	--	--	--	--	--	--	--	--	4.2E-06	2.4E-05	1.0E-04	--	--	--	--
Phosphorus and compounds	7723-14-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese and compounds	7439-96-5	Yes	0.30	--	--	--	--	--	--	--	--	5.2E-05	--	--	7.8E-07	4.4E-06	1.9E-05	--	--	--	--
Mercury and compounds	7439-97-6	Yes	0.60	--	--	--	--	--	--	--	--	--	--	--	2.5E-07	1.4E-06	6.3E-06	--	--	--	--
Molybdenum trioxide	1313-27-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel and compounds	7440020in	Yes	0.20	--	--	--	--	--	--	--	--	3.0E-04	1.8E-06	--	1.5E-06	8.4E-06	3.7E-05	--	--	--	--
Selenium and compounds	7782-49-2	Yes	2.00	--	--	--	--	--	--	--	--	--	--	--	8.3E-08	4.7E-07	2.1E-06	--	--	--	--
Silver and compounds	7440-22-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Thailium and compounds	7440-28-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium (fume or dust)	7440-62-2	Yes	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc and compounds	7440-66-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetaldehyde	75-07-0	Yes	470	2.6E-07	4.1E-09	1.0E-11	7.2E-10	3.8E-10	5.2E-10	--	--	--	--	--	1.3E-07	7.1E-07	3.1E-06	--	--	--	--
Acetone	67-64-1	Yes	62,000	9.0E-12	1.8E-13	5.4E-29	6.9E-15	1.3E-15	1.5E-15	--	--	--	--	--	--	--	--	--	--	--	--
Acetophenone	98-86-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	6.90	5.3E-26	7.5E-28	1.2E-25	4.1E-24	1.6E-24	2.0E-24	--	--	--	--	--	3.7E-07	2.1E-06	9.2E-06	--	--	--	--
Ammonia	7664-41-7	Yes	1,200	--	--	--	--	--	--	--	--	--	--	--	1.8E-07	1.0E-06	4.5E-06	--	--	--	--
Benzene	71-43-2	Yes	29.0	--	--	--	--	--	--	--	--	--	--	--	4.9E-07	2.8E-06	1.2E-05	3.6E-05	--	--	--
Carbon tetrachloride	56-23-5	Yes	1,900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorine	7782-50-5	Yes	170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Butyl benzyl phthalate	85-68-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene glycol monobutyl ether	111-76-2	Yes	29,000	--	--	--	--	--	--	1.4E-07	--	--	--	--	--	--	--	--	--	--	--
Dipropylene glycol monomethyl ether	34590-94-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl acetate	108-05-4	Yes	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	Yes	490	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Crotonaldehyde	4170-30-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibutyl phthalate	84-74-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	Yes	230	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	84-66-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethyl benzene	100-41-4	Yes	22,000	--	--	--	--	--	--	--	--	--	--	--	3.7E-11	2.1E-10	9.3E-10	2.6E-09	--	--	--
Formaldehyde	50-00-0	Yes	49.0	3.2E-07	5.2E-09	6.3E-12	1.7E-09	1.4E-09	1.8E-09	--	--	--	--	--	2.7E-06	1.5E-05	6.6E-05	--	1.9E-05	2.1E-05	2.1E-05
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	98-82-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	3,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	28,000	--	--	--	--	--	--	--	--	--	--	6.4E-08	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorides	FLUORIDES	Yes	240	--	--	--	--	--	--	--	--	5.4E-08	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	2.5E-08	1.4E-07	6.2E-07	--	--	--	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	Yes	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethyl benzene	95-63-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichloromethane (Methylene chloride)	75-09-2	Yes	2,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	5,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	Yes	5,800	3.4E-15	6.9E-17	4.8E-20	3.2E-19	7.9E-21	9.3E-21	--	--	--	--	--	--	--	--	--	2.1E-10	2.3E-10	2.3E-10
Propylene	115-07-1	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propionaldehyde	123-38-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	Yes	21,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.3E-12	--	--	--
Toluene	108-88-3	Yes	7,500	--	--	--	--	--	--	--	--	--	--	--	1.1E-09	6.0E-09	2.6E-08	1.1E-07	--	--	--
Xylene (mixture)	1330-20-7	Yes	8,700	--	--	--	--	--	--	--	--	--	--	--	3.7E-10	2.1E-09	9.1E-09	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8E-08	--	--	--
o-Xylene	95-47-6	Yes	8,700	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7.1E-09	--	--	--
Hydrogen fluoride	7664-39-3	Yes	16.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	2,100	--	--	--	--	--	--	--	--	--	--	--	6.7E-09	3.8E-08	1.7E-07	--	--	--	--
DPM	DPM	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PAHs (excluding Naphthalene)	PAHs	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	120-12-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benz[a]anthracene	56-55-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[a]pyrene	50-32-8	Yes	2.0E-03	--	--	--	--	--	--	--	--	--	--	--	1.3E-06	7.5E-06	3.4E-05	--	--	--	--
Benzo[b]fluoranthene	205-99-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[e]pyrene	192-97-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[g,h,i]perylene	191-24-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[j]fluoranthene	205-82-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo[k]fluoranthene	207-08-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methyl naphthalene	91-57-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	200	--	--	--	--	--	--	--	--	--	--	--	7.4E-09	4.2E-08	1.8E-07	6.8E-09	--	--	--
Perylene	198-55-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	129-00-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	35822-46-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Octachlorodibenzofuran (OCDF)	39001-02-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs	1336-36-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Decachlorobiphenyl	2051-24-3	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylcholanthrene	56-49-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7,12-Dimethylbenz[a]anthracene	57-97-6	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1-Methylphenanthrene	832-69-9	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-o-cresol (and salts)	534-52-1	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrogen cyanide	74-90-8	Yes	340	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
di-n-octylphthalateb	117-84-0	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	Yes	12,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-nitrophenol	100-02-7	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	75-69-4	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	No	[4]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	41.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TEU Risk Equivalent Emission Rate [b] (g/s per ug/m^3)				**5.7E-07**	**9.2E-09**	**1.6E-11**	**2.4E-09**	**1.7E-09**	**2.3E-09**	**1.4E-07**	**0**	**3.7E-04**	**5.4E-06**	**6.4E-08**	**1.6E-05**	**9.3E-05**	**4.1E-04**	**3.6E-05**	**1.9E-05**	**2.1E-05**	**2.1E-05**

NOTES:
g/s = grams per second.
TAC = toxic air contaminant.
ug/m^3 = micrograms per cubic meter.
TEU = toxic emission unit.

(a) TAC acute risk equivalent emission rate (g/s per ug/m^3) = (daily emissions estimate [g/s]) / (acute risk based concentration [ug/m^3])
Daily emissions estimate (g/s) = (3)
(b) TEU Risk Equivalent Emission Rate (g/s per ug/m^3) = ∑ (TAC acute risk equivalent emission rates [g/s per ug/m^3])

REFERENCES:
[1] Oregon Administrative Rule 340-245-8010 Table 2.
[2] Acute risk equivalent emission rates representative of individual model volume sources and not entire kiln.
[3] See Table 3-2, Proposed Daily Emission Rates.
[4] TAC does not have an acute based concentration listed in OAR 340-245-8010 Table 2.

Table 3-4
Model Source Parameters
Stimson Lumber Company Forest Grove Complex—Gaston, 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							
HBLR_SCR	Comingled boiler and fuel dryer exhaust scrubber stack	485,074.8	5,034,806.4	Vertical	67.1	12.80	1.52	11.03	20.11	322.0
HBLR_ESP	Comingled boiler exhaust ESP stack	485,098.6	5,034,785.7	Vertical	66.2	18.29	2.29	12.24	50.25	506.9
RF12_STK	Scrubber 5 controlling refiners	485,236.5	5,034,705.5	Vertical	65.2	13.72	0.76	4.11	1.87	323.7
PVUV_STK	Press vent exhaust stack	485,257.1	5,034,693.1	Vertical	66.2	13.72	2.74	6.42	37.95	313.7
FORM_STK	Forming line vacuum pump exhaust vent	485,218.9	5,034,778.2	Horizontal	65.8	15.42	0.20	14.84	0.49	337.0
HEADBOX	HBWW-Headbox Vent	485,211.5	5,034,780.6	Vertical	65.6	14.94	0.69	8.36	3.11	Ambient
S_CYC	Green chipper cyclone exhaust	485,100.7	5,034,851.7	Vertical	64.7	6.71	0.30	15.24	1.11	Ambient
FIRE	Emergency fire pump exhaust vent	485,140.6	5,034,754.1	Vertical	64.9	1.83	0.08	47.71	0.22	449.8
BGEN	Backup generator exhaust vent	485,144.8	5,034,745.0	Vertical	64.6	2.13	0.08	47.71	0.22	449.8
EGEN01	Proposed diesel emergency generator	485,145.0	5,034,796.6	Vertical	64.6	1.92	0.13	50.38	0.64	806.2

Discrete Volume Sources

Model ID	Model Source Description	UTM Coordinates [1]		On or Adjacent to a Building?	Base Elevation [2] (m)	Release Height (m)	Length of Side (m)	Initial Lateral Dimension [b] (m)	Initial Vertical Dimension (m)
		Easting	Northing						
KILN1_1	Kiln 1 (1 of 4)	485,272.4	5,034,975.8	Yes	67.5	10.71 [4]	3.66	0.85	9.97 [4]
KILN1_2	Kiln 1 (3 of 4)	485,276.7	5,034,972.2	Yes	67.5	10.71 [4]	3.66	0.85	9.97 [4]
KILN1_3	Kiln 1 (2 of 4)	485,280.9	5,034,968.4	Yes	67.5	10.71 [4]	3.66	0.85	9.97 [4]
KILN1_4	Kiln 1 (4 of 4)	485,285.2	5,034,964.7	Yes	67.5	10.71 [4]	3.66	0.85	9.97 [4]
KILN2_1	Kiln 2 (1 of 3)	485,268.0	5,034,969.0	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN2_2	Kiln 2 (2 of 3)	485,273.5	5,034,963.7	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN2_3	Kiln 2 (3 of 3)	485,279.0	5,034,958.5	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN3_1	Kiln 3 (1 of 3)	485,261.5	5,034,961.3	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN3_2	Kiln 3 (2 of 3)	485,267.0	5,034,956.0	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN3_3	Kiln 3 (3 of 3)	485,272.5	5,034,950.7	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN4_1	Kiln 4 (1 of 3)	485,255.0	5,034,954.0	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN4_2	Kiln 4 (2 of 3)	485,260.4	5,034,948.8	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN4_3	Kiln 4 (3 of 3)	485,265.9	5,034,943.5	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN5_1	Kiln 5 (1 of 3)	485,248.4	5,034,946.4	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN5_2	Kiln 5 (2 of 3)	485,253.9	5,034,941.1	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN5_3	Kiln 5 (3 of 3)	485,259.4	5,034,935.8	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN6_1	Kiln 6 (1 of 3)	485,242.0	5,034,939.0	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN6_2	Kiln 6 (2 of 3)	485,247.5	5,034,933.7	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
KILN6_3	Kiln 6 (3 of 3)	485,253.0	5,034,928.4	Yes	67.5	12.94 [4]	5.49	1.28	12.04 [4]
WHITE	Bay door adjacent to white chest	485,197.3	5,034,778.9	Yes	65.5	7.47 [6]	3.66	0.85	6.95 [c]
MACH	Machine chest vent	485,203.3	5,034,759.3	Yes	65.6	4.42 [6]	0.30	0.07	4.11 [c]
RF12_RV	Rotary valve stack	485,198.3	5,034,750.7	Yes	65.5	7.47 [6]	0.30	0.07	6.95 [c]
HPVUV_FUG	Press fugitive emissions building opening	485,239.5	5,034,750.1	Yes	65.8	9.45 [6]	4.70	1.09	8.79 [c]
FORM_FUG	Forming line fugitive emissions release	485,211.5	5,034,772.3	Yes	65.7	4.42 [6]	0.46	0.11	4.11 [c]
GAS	Gas storage tank vent	485,414.0	5,034,724.5	No	65.4	2.44 [1]	0.30	0.07	0.57 [d]
RESIN1	Resin Tank 1	485,179.0	5,034,749.5	Yes	65.2	7.47 [6]	2.07	0.48	6.95 [c]
RESIN2	Resin Tank 2	485,182.3	5,034,746.9	Yes	65.4	7.47 [6]	2.47	0.57	6.95 [c]
RESIN3	Resin Tank 3	485,185.8	5,034,744.3	Yes	65.8	7.47 [6]	2.47	0.57	6.95 [c]
PAINT	Building opening near paintline	485,330.2	5,034,742.4	Yes	65.7	4.66 [6]	7.05	1.64	4.22 [c]
WELD	Welding Emissions	485,289.9	5,034,686.7	Yes	65.7	4.04 [6]	0.61	0.14	3.76 [c]
BPOT	Roof opening above babbitt pots	485,107.9	5,034,870.9	Yes	64.9	7.16 [6]	0.61	0.14	6.66 [c]

Area Sources

Model ID	Model Source Description	UTM Coordinates [1]		Area Source Geometry	Base Elevation [2] (m)	Source Area [6] (m^2)	Source Diameter (m)	On or Adjacent to a Building?	Release Height AGL [7] (m)	Number of Vertices
		Easting	Northing							
SCR_HYDRO	Exposed area above boiler scrubber hydrosieve	485,132.2	5,034,760.8	Area	65.0	2.20	[5]	No	0	4 [7]
HYDRO	Exposed area above hydrosieves	485,202.9	5,034,704.2	Area	65.3	2.20	[5]	No	0	4 [7]
CLAR	WWTP-Secondary clarifier	485,616.0	5,034,432.2	Circular	61.7	89.4	5.33	No	0	[8]
PIT	WWTP-Sludge pit opening	485,620.2	5,034,442.6	Circular	61.3	3.60	1.07	No	0	[8]
S_POND	WWTP-Sludge pond	485,599.9	5,034,475.4	Polygon	63.2	317	[5]	No	0	9 [7]
R_POND	WWTP-Reuse pond	485,588.9	5,034,590.6	Polygon	62.7	3,340	[5]	No	0	15 [7]
SURGE	WWTP-Surge pond	485,630.3	5,034,606.2	Polygon	62.8	3,496	[5]	No	0	16 [7]
ABASE	WWTP-Aeration basin	485,571.8	5,034,425.4	Polygon	63.1	3,099	[5]	No	0	14 [7]
E_POND	WWTP-East pond	485,893.9	5,034,151.6	Polygon	62.1	10,784	[5]	No	0	18 [7]

NOTES:
K = kelvin.
m = meter.
m/s = meters per second.
m^3/s = cubic meters per second.
UTM = Universal Transverse Mercator.
AGL = above ground level.

[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) (3)
[c] Initial vertical dimension (m) = (building height [m] / (2.15) (3)
[d] Initial vertical dimension (m) = (vertical dimension [m] / (4.3) (3)

REFERENCES:
[1] Value based on information provided by Stimson Lumber Company.
[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 June 2022.
[4] Release height and initial vertical dimension were adjusted for thermal buoyancy using methods from Appendix 12, sub Appendix I, Plume-Rise Methodology for Slag Pits Based Upon Work by John Irwin (EPA; 2003). See Table 3-5, Kiln Thermal Buoyancy Effects Calculations.
[5] Source is not a circular area source type. Therefore, there's no diameter.
[6] 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.
[7] Area of source and number of vertices identified in AERMOD View software.
[8] Circular area source type, therefore, there are no vertices.

Table 3-5
Kiln Thermal Buoyancy Effects Calculations
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Parameter	EPA Memo Acronym	(Units)	Source Representation					
			KILN1	KILN2	KILN3	KILN4	KILN5	KILN6
PHYSICAL PARAMETERS								
Kiln Width [1]	--	(ft)	16.5	33.0	33.0	33.0	33.0	33.0
Kiln Length [1]	--	(ft)	73.0	73.0	73.0	73.0	73.0	73.0
Kiln Height [1]	--	(ft)	28.0	28.0	28.0	28.0	28.0	28.0
Kiln Flowrate [2]	--	(acfm)	6,250	12,500	12,500	12,500	12,500	12,500
Kiln Temperature [1]	--	(°F)	190	190	190	190	190	190
Ambient Temperature [3]	--	(°F)	52.9	52.9	52.9	52.9	52.9	52.9
Acceleration of Gravity Constant	g	(m/s^2)	9.81	9.81	9.81	9.81	9.81	9.81
EFFECTIVE RELEASE HEIGHT DERIVATION								
Kiln Width [a]	*w*	(m)	5.03	10.06	10.06	10.06	10.06	10.06
Kiln Length [a]	*l*	(m)	22.3	22.3	22.3	22.3	22.3	22.3
Kiln Height [a]	--	(m)	8.53	8.53	8.53	8.53	8.53	8.53
Kiln Flowrate [b]	*Q*	(m^3/s)	2.95	5.90	5.90	5.90	5.90	5.90
Kiln Temperature [c]	T_p	(K)	361	361	361	361	361	361
Ambient Temperature [c]	T_a	(K)	285	285	285	285	285	285
Effective Radius [d]	r_p	(m)	5.97	8.44	8.44	8.44	8.44	8.44
Kiln Buoyancy Flux [e]	F_b	(m^4/s^3)	1.94	3.89	3.89	3.89	3.89	3.89
Initial Vertical Velocity [f]	w_p	(m/s)	2.6E-02	2.6E-02	2.6E-02	2.6E-02	2.6E-02	2.6E-02
Froude Number [g]	*F*	--	5.3E-03	4.5E-03	4.5E-03	4.5E-03	4.5E-03	4.5E-03
Velocity Ratio [h]	*K*	--	98	98	98	98	98	98
Brunt Visalia Frequency [i]	*N*	--	0.052	0.052	0.052	0.052	0.052	0.052
Stable Plume Rise [j]	Δh	(m)	17.16	21.62	21.62	21.62	21.62	21.62
Effective Release Height [k]	**--**	**(m)**	**21.42**	**25.88**	**25.9**	**25.9**	**25.9**	**25.9**
DISPERSION MODEL INPUT								
Vertical Dimension [5]	**--**	**(m)**	**21.42**	**25.88**	**25.88**	**25.88**	**25.88**	**25.88**
Release Height [5]	**--**	**(m)**	**10.71**	**12.94**	**12.94**	**12.94**	**12.94**	**12.94**
Initial Vertical Dimension [7]	**--**	**(m)**	**9.97**	**12.04**	**12.04**	**12.04**	**12.04**	**12.04**

NOTES:

ft = feet.

acfm = actual cubic feet per minute.

°F = degrees Fahrenheit.

m/s^2 = meter per square second.

m = meter.

m^3/s = cubic meters per second.

K = kelvin.

m^4/s^3 = quartic meter per cubic second.

m/s = meter per second.

[a] Parameter (m) = (parameter [ft]) / (3.2808 ft/m)

[b] Kiln flowrate (m^3/s) = (kiln flowrate [acfm]) / (60 s/min) / (35.3147 ft^3/m^3)

[c] Temperature (K) = ([temperature {°F} - 32) x (5/9) + (273.15)

[d] Effective radius (m) = ([kiln width {m}] x [kiln length {m}] / [π]) $^{1/2}$

[e] Kiln buoyancy flux (m^4/s^3) = (acceleration of gravity [m/s^2]) x (kiln flowrate [m^3/s]) x ([kiln temperature {K}] - [ambient temperature {K}]) / (π) / (kiln temperature [K]) (4)

[f] Initial vertical velocity (m/s) = (kiln buoyancy flux [m^4/s^3]) x (kiln temperature [K]) / (acceleration of gravity [m/s^2]) / ([kiln temperature {K}] - [ambient temperature {K}]) / (effective radius [m]) ^{2} (5)

[g] Froude number = (initial vertical velocity [m/s]) / ([{kiln temperature ❘K❘} - {ambient temperature ❘K❘}] / [kiln temperature {K}] x [2] x [effective radius {m}] x [acceleration of gravity {m/s^2}]) $^{-1/2}$ (5)

[h] Velocity ratio = (wind speed (m/s) / (initial vertical velocity [m/s])

Wind speed (m/s) = 2.59 (3)

[i] Brunt vasaila frequency = ([acceleration of gravity {m/s^2}] / [ambient temperature {K}] x [temperature gradient {K/m}]) $^{1/2}$ (5)

Temperature gradient (K/m) = 0.08 (5)

[j] Stable plume rise (m) = (2.1) x ([effective radius {m}] x [wind speed {m/s}] ^{2} / [velocity ratio] ^{3} / [Froude number] ^{2} / [Brunt vasaila frequency] ^{2}) $^{1/3}$ (5)

Wind speed (m/s) = 2.59 (3)

[k] Effective release heigth (m) = (stable plume rise [m]) + (kiln height [m] / 2) (6)

REFERENCES:

[1] Information provided by Stimson Lumber Company

[2] Per Appendix D2 of Appendix 1 in the EPA "Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule" dated May, 2019, velocity measurement and total gas flow data indicate 12,500 acfm is representative of the total gas flow from batch kilns. Kiln 1 is one-track and is estimated to have half the airflow of the two-track batch kilns (kiln 2-6).

[3] Representative of 5-year average daily temperature and average wind speed from January 1 2018 through December 31, 2022. Value calculated using Hillsboro met station data.

[4] See Appendix 12, sub Appendix I, "Plume-Rise Methodology for Slag Pits Based Upon Work by John Irwin (EPA; 2003)," to the Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule dated May, 2019. Formula for initial vertical velocity rearranged to solve for buoyancy flux.

[5] See Appendix 12, sub Appendix I, "Plume-Rise Methodology for Slag Pits Based Upon Work by John Irwin (EPA; 2003)," to the Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule dated May, 2019.

[6] See section III of Appendix 12, "Development of Plume-Rise Adjustment Factors for Batch and Continuous Lumber Kilns," to the Residual Risk Assessment for the Plywood and Composite Wood Products Source Category in Support of the 2019 Risk and Technology Review Proposed Rule dated May, 2019.

[7] See "User's Guide for the AMS/EPA Regulatory Model (AERMOD)" dated June 2022. See Table 3-2. The initial vertical dimension for elevated sources on or adjacent to a building is equal to the release height divided by 2.15.

Table 3-6
Kiln Emissions Allocation
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Model ID	Model Source Description	Kiln Track (Single/Double)	Emissions Distribution per Kiln	Emissions Distribution per modeled source
Kiln 1		**Single**	**0.091** [(a)]	--
KILN1_1	Kiln 1 (1 of 4)	--	--	0.023 [(b)]
KILN1_2	Kiln 1 (3 of 4)	--	--	0.023 [(b)]
KILN1_3	Kiln 1 (2 of 4)	--	--	0.023 [(b)]
KILN1_4	Kiln 1 (4 of 4)	--	--	0.023 [(b)]
Kiln 2		**Double**	**0.182** [(c)]	--
KILN2_1	Kiln 2 (1 of 3)	--	--	0.061 [(d)]
KILN2_2	Kiln 2 (2 of 3)	--	--	0.061 [(d)]
KILN2_3	Kiln 2 (3 of 3)	--	--	0.061 [(d)]
Kiln 3		**Double**	**0.182** [(c)]	--
KILN3_1	Kiln 3 (1 of 3)	--	--	0.061 [(d)]
KILN3_2	Kiln 3 (2 of 3)	--	--	0.061 [(d)]
KILN3_3	Kiln 3 (3 of 3)	--	--	0.061 [(d)]
Kiln 4		**Double**	**0.182** [(c)]	--
KILN4_1	Kiln 4 (1 of 3)	--	--	0.061 [(d)]
KILN4_2	Kiln 4 (2 of 3)	--	--	0.061 [(d)]
KILN4_3	Kiln 4 (3 of 3)	--	--	0.061 [(d)]
Kiln 5		**Double**	**0.182** [(c)]	--
KILN5_1	Kiln 5 (1 of 3)	--	--	0.061 [(d)]
KILN5_2	Kiln 5 (2 of 3)	--	--	0.061 [(d)]
KILN5_3	Kiln 5 (3 of 3)	--	--	0.061 [(d)]
Kiln 6		**Double**	**0.182** [(c)]	--
KILN6_1	Kiln 6 (1 of 3)	--	--	0.061 [(d)]
KILN6_2	Kiln 6 (2 of 3)	--	--	0.061 [(d)]
KILN6_3	Kiln 6 (3 of 3)	--	--	0.061 [(d)]
Total Fraction			**1.00**	**1.00**

NOTES:

[(a)] Emissions Distribution per single track kiln = (tracks per kilns) / (total number of tracks)

Total number of tracks =	11	(1)
Tracks per kiln (single) =	1	(2)

[(b)] Emissions Distribution per model source (kiln 1) = (emissions distribution per single track kiln) / (number of volume sources)

Number of volume sources =	4

[(c)] Emissions Distribution per double track kiln = (tracks per kilns) / (total number of tracks)

Total number of tracks =	11	(1)
Tracks per kiln (double) =	2	(2)

[(d)] Emissions distribution per model source (kilns 2-6) = (emissions distribution per single double track kiln) / (number of volume sources)

Number of volume sources =	3

REFERENCES:

[(1)] Representative of the total number of tracks for all six kilns at the facility.

[(2)] Information provided by Stimson Lumber Company.

[(3)] Number of volume sources set by the dimensions of each kiln.

Table 4-3
Assessment of Missing Meteorological Data
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Quarter [1]	Meteorological Data Assessment per Year														
	2018			2019			2020			2021			2022		
	Total Hours [1]	Missing Hours [2]	Available [a] (%)	Total Hours [1]	Missing Hours [2]	Available [a] (%)	Total Hours [1]	Missing Hours [2]	Available [a] (%)	Total Hours [1]	Missing Hours [2]	Available [a] (%)	Total Hours [1]	Missing Hours [2]	Available [a] (%)
Q1	2,160	0	100.0%	2,160	18	99.2%	2,184	8	99.6%	2,160	94	95.6%	2,160	5	99.8%
Q2	2,184	1	100.0%	2,184	2	99.9%	2,184	6	99.7%	2,184	54	97.5%	2,184	14	99.4%
Q3	2,208	2	99.9%	2,208	21	99.0%	2,208	3	99.9%	2,208	27	98.8%	2,208	23	99.0%
Q4	2,208	18	99.2%	2,208	1	100.0%	2,208	47	97.9%	2,208	23	99.0%	2,208	21	99.0%

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

REFERENCES:
[1] Meteorological data obtained from the National Oceanic and Atmospheric Administration National Climatic Data Center Integrated Surface Data for the Portland-Hillsboro Airport located in Hillsboro, Oregon (WBAN: 94261).
[2] The number of missing hours was determined by generating a SFC QA excel file generated by AERMET version 22112.

Table 4-4
AERSURFACE Settings
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Parameter	Setting
Study radius for surface roughness	1.0 kilometer
Should continuous snow cover be assumed?	No
Is this an arid region?	No
Is this an airport site?	Yes
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

Table 4-5
Soil Moisture Condition Assessment
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Calendar Year	Total Precipitation [1] (in)	Climatic Significance [2] (in)	Calendar Year Soil Moisture [3] (in)
2018	32.8	Lower 30th Percentile	DRY
2019	32.3	Lower 30th Percentile	DRY
2020	40.3	Middle 40th Percentile	AVG
2021	46.7	Middle 40th Percentile	AVG
2022	43.6	Middle 40th Percentile	AVG

30-Year Climate Precipitation Data [4]	
Average Annual Precipitation [5]	44.4
Lower 30th Percentile Annual Precipitation [6]	37.5
Upper 70th Percentile Annual Precipitation [7]	50.8

REFERENCES:

[1] Climatological data obtained from Western Regional Climate Center for the Dilly meteorological station in Gaston, OR (Station ID: 352325). The Dilly station was chosen as it represents the closest station to the Portland-Hillsboro Airport (Hillsboro met station) that has 30-consecutive years of precipitation data needed for the 30-year climatological calculations. Although the Hillsboro met station was determined to be the most representative station for dispersion modeling, the station does not have 30-consecutive years of precipitation data available for the soil moisture condition assessment.

[2] Climatic significance represents annual precipitation compared to 30-year climatological period.

[3] Surface moisture conditions correspond to "Dry", "Average" or "Wet" soil content determined by comparing annual precipitation to 30-year climatological period. This method is consistent with the methodology set forth in the current version of the USEPA AERSURFACE User's Guide dated February, 2020.

[4] Represents 30-year period between January 1993 and December 2022.

[5] Represents average annual precipitation during 30-year climatological period.

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

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

Table 4-6
Summary of Downwash Structure Heights
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Downwash Structure Model ID	Base Elevation [1]		Number of Building Tiers	Tier Height [2]		Diameter [2]	
	(ft)	(m)		(ft)	(m)	(ft)	(m)
HBOARD	216.1	65.9	1	49.0	14.9	--	--
HBOARD	216.1	65.9	2	61.5	18.8	--	--
OFFICES	216.4	66.0	1	37.8	11.5	--	--
HB1	215.8	65.8	1	31.0	9.5	--	--
HB2	215.0	65.5	1	26.5	8.1	--	--
HB3	215.6	65.7	1	29.0	8.84	--	--
HB4	216.1	65.9	1	18.2	5.6	--	--
TANK1	214.6	65.4	1	60.0	18.3	32.3	9.8
TANK2	214.4	65.4	1	60.0	18.3	32.3	9.8
TANK3	215.1	65.6	1	32.3	9.8	32.6	9.9
BLD_1	214.8	65.5	1	27.9	8.5	--	--
BLD_2	212.1	64.6	1	35.8	10.9	--	--
BLD_3	213.7	65.1	1	16.1	4.9	--	--
BLD_4	211.3	64.4	1	13.7	4.2	--	--
BLD_10	224.6	68.5	1	28.7	8.8	--	--
BLD_11	211.9	64.6	1	53.1	16.2	--	--
BLD_12	213.8	65.2	1	18.0	5.5	--	--
BLD_13	213.7	65.1	1	25.0	7.6	--	--
BLD_17	213.0	64.9	1	29.5	9.0	--	--
BLD_18	215.3	65.6	1	10.8	3.3	--	--
BLD_23	211.6	64.5	1	47.0	14.3	--	--
BLD_24	212.9	64.9	1	31.9	9.7	--	--
BLD_25	213.4	65.0	1	24.7	7.5	--	--
BLD_26	212.5	64.8	1	27.1	8.3	--	--
BLD_22	214.9	65.5	1	49.0	14.9	--	--
BLD_27	217.2	66.2	1	32.0	9.8	--	--
BLD_28	213.5	65.1	1	30.3	9.2	--	--
BLD_21	221.1	67.4	1	29.0	8.8	--	--
BLD_29	221.3	67.5	1	28.0	8.5	--	--
BLD_30	219.5	66.9	1	20.0	6.1	--	--
BLD_30	219.5	66.9	2	25.0	7.6	--	--
BLD_30	219.5	66.9	3	30.0	9.1	--	--
BLD_30	219.5	66.9	4	35.0	10.7	--	--
BLD_31	218.7	66.7	1	20.0	6.1	--	--
BLD_31	218.7	66.7	2	25.0	7.6	--	--
BLD_31	218.7	66.7	3	30.0	9.1	--	--
BLD_31	218.7	66.7	4	35.0	10.7	--	--
BLD_32	219.7	67.0	1	24.8	7.6	--	--
BLD_33	221.6	67.5	1	24.5	7.5	--	--
BLD_34	215.8	65.8	1	20.0	6.1	--	--
BLD_34	215.8	65.8	2	25.0	7.6	--	--
BLD_34	215.8	65.8	3	30.0	9.1	--	--
BLD_34	215.8	65.8	4	35.0	10.7	--	--
BLD_35	217.7	66.4	1	20.0	6.1	--	--
BLD_35	217.7	66.4	2	25.0	7.6	--	--
BLD_35	217.7	66.4	3	30.0	9.1	--	--
BLD_35	217.7	66.4	4	35.0	10.7	--	--

REFERENCES:

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

[2] Information provided by Stimson Lumber Company.

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Table 5-1
Applicable Risk-Based Concentrations
Stimson Lumber Company Forest Grove Complex—Gaston, 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	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	7440-02-0	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
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 glycol monobutyl ether	111-76-2	Yes	HI3	--	82.0	--	360	--	360	29,000
Vinyl acetate	108-05-4	Yes	HI3	--	200	--	880	--	880	200
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	HI3	--	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	--	200	--	880	--	880	8,700
p-Xylene	106-42-3	Yes	HI3	--	200	--	880	--	880	8,700
o-Xylene	95-47-6	Yes	HI3	--	200	--	880	--	880	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 5-2
Maximum Predicted Risk Exposure Location per Significant TEU (Chronic Only)
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Modeled TEU	Cancer						Noncancer					
	Residential		Worker		Child		Residential		Worker		Child	
	Exposure Location [2] (Location of Maximum Risk)	Dispersion Factor (ug/m^3/[g/s])	Exposure Location [2] (Location of Maximum Risk)	Dispersion Factor (ug/m^3/[g/s])	Exposure Location [2] (Location of Maximum Risk)	Dispersion Factor (ug/m^3/[g/s])	Exposure Location [2] (Location of Maximum Risk)	Dispersion Factor (ug/m^3/[g/s])	Exposure Location [2] (Location of Maximum Risk)	Dispersion Factor (ug/m^3/[g/s])	Exposure Location [2] (Location of Maximum Risk)	Dispersion Factor (ug/m^3/[g/s])
HBLR_SCR	7,715	1.312	9,660	0.998	14,213	0.019	7,715	1.312	9,660	0.998	14,213	0.019
HBLR_ESP	7,715	0.107	9,660	0.052	14,213	0.006	7,715	0.107	9,660	0.052	14,213	0.006
RF12_STK	7,715	3.308	9,660	2.435	14,213	0.052	7,715	3.308	9,660	2.435	14,213	0.052
PVUV_STK	7,715	0.828	9,660	0.315	14,213	0.015	7,715	0.828	9,660	0.315	14,213	0.015
FORM_STK	7,715	4.980	9,660	3.562	14,213	0.065	7,715	4.980	9,660	3.562	14,213	0.065
HEADBOX	7,715	3.482	9,660	3.871	14,213	0.071	7,715	3.482	9,660	3.871	14,213	0.071
S_CYC	7,715	6.442	9,660	5.947	14,213	0.075	7,715	6.442	9,660	5.947	14,213	0.075
FIRE	7,715	5.636	9,660	5.866	14,213	0.071	7,715	5.636	9,660	5.866	14,213	0.071
BGEN	7,715	5.225	9,660	4.904	14,213	0.071	7,715	5.225	9,660	4.904	14,213	0.071
EGEN01	7,715	6.005	9,660	4.887	14,213	0.065	7,715	6.005	9,660	4.887	14,213	0.065
KILN1_1	7,715	65.657	9,660	9.949	14,213	0.075	7,715	65.657	9,660	9.949	14,213	0.075
KILN1_2	7,715	67.391	9,660	10.033	14,213	0.075	7,715	67.391	9,660	10.033	14,213	0.075
KILN1_3	7,715	69.075	9,660	10.117	14,213	0.075	7,715	69.075	9,660	10.117	14,213	0.075
KILN1_4	7,715	70.792	9,660	10.203	14,213	0.075	7,715	70.792	9,660	10.203	14,213	0.075
KILN2_1	7,715	47.865	9,660	8.492	14,213	0.073	7,715	47.865	9,660	8.492	14,213	0.073
KILN2_2	7,715	48.659	9,660	8.577	14,213	0.073	7,715	48.659	9,660	8.577	14,213	0.073
KILN2_3	7,715	49.277	9,660	8.664	14,213	0.073	7,715	49.277	9,660	8.664	14,213	0.073
KILN3_1	7,715	41.114	9,660	8.407	14,213	0.073	7,715	41.114	9,660	8.407	14,213	0.073
KILN3_2	7,715	41.218	9,660	8.487	14,213	0.073	7,715	41.218	9,660	8.487	14,213	0.073
KILN3_3	7,715	41.145	9,660	8.568	14,213	0.073	7,715	41.145	9,660	8.568	14,213	0.073
KILN4_1	7,715	35.004	9,660	8.301	14,213	0.073	7,715	35.004	9,660	8.301	14,213	0.073
KILN4_2	7,715	34.749	9,660	8.376	14,213	0.073	7,715	34.749	9,660	8.376	14,213	0.073
KILN4_3	7,715	34.361	9,660	8.451	14,213	0.073	7,715	34.361	9,660	8.451	14,213	0.073
KILN5_1	7,715	29.626	9,660	8.178	14,213	0.073	7,715	29.626	9,660	8.178	14,213	0.073
KILN5_2	7,715	29.200	9,660	8.246	14,213	0.073	7,715	29.200	9,660	8.246	14,213	0.073
KILN5_3	7,715	28.718	9,660	8.315	14,213	0.073	7,715	28.718	9,660	8.315	14,213	0.073
KILN6_1	7,715	25.347	9,660	8.040	14,213	0.072	7,715	25.347	9,660	8.040	14,213	0.072
KILN6_2	7,715	24.929	9,660	8.102	14,213	0.072	7,715	24.929	9,660	8.102	14,213	0.072
KILN6_3	7,715	24.490	9,660	8.165	14,213	0.072	7,715	24.490	9,660	8.165	14,213	0.072
WHITE	7,715	10.333	9,660	7.026	14,213	0.073	7,715	10.333	9,660	7.026	14,213	0.073
MACH	7,715	14.451	9,660	7.681	14,213	0.074	7,715	14.451	9,660	7.681	14,213	0.074
RF12_RV	7,715	9.122	9,660	6.508	14,213	0.073	7,715	9.122	9,660	6.508	14,213	0.073
HPVUV_FUG	7,715	8.564	9,660	6.484	14,213	0.072	7,715	8.564	9,660	6.484	14,213	0.072
FORM_FUG	7,715	16.009	9,660	8.194	14,213	0.075	7,715	16.009	9,660	8.194	14,213	0.075
GAS	7,715	41.747	9,660	15.040	14,213	0.074	7,715	41.747	9,660	15.040	14,213	0.074
RESIN1	7,715	8.469	9,660	6.116	14,213	0.073	7,715	8.469	9,660	6.116	14,213	0.073
RESIN2	7,715	8.523	9,660	6.156	14,213	0.073	7,715	8.523	9,660	6.156	14,213	0.073
RESIN3	7,715	8.621	9,660	6.214	14,213	0.073	7,715	8.621	9,660	6.214	14,213	0.073
PAINT	7,715	25.382	9,660	10.886	14,213	0.076	7,715	25.382	9,660	10.886	14,213	0.076
WELD	7,715	15.462	9,660	8.059	14,213	0.074	7,715	15.462	9,660	8.059	14,213	0.074
BPOT	7,715	11.731	9,660	6.964	14,213	0.074	7,715	11.731	9,660	6.964	14,213	0.074
SCR_HYDRO	7,715	4.249	9,660	2.701	14,213	0.022	7,715	4.249	9,660	2.701	14,213	0.022
HYDRO	7,715	3.907	9,660	2.896	14,213	0.021	7,715	3.907	9,660	2.896	14,213	0.021
CLAR	7,715	5.424	9,660	7.103	14,213	0.052	7,715	5.424	9,660	7.103	14,213	0.052
PIT	7,715	5.472	9,660	7.115	14,213	0.052	7,715	5.472	9,660	7.115	14,213	0.052
LSP	7,715	34.455	9,660	12.341	14,213	0.077	7,715	34.455	9,660	12.341	14,213	0.077
S_POND	7,715	6.309	9,660	9.080	14,213	0.052	7,715	6.309	9,660	9.080	14,213	0.052
R_POND	7,715	8.315	9,660	11.163	14,213	0.052	7,715	8.315	9,660	11.163	14,213	0.052
SURGE	7,715	7.676	9,660	14.152	14,213	0.053	7,715	7.676	9,660	14.152	14,213	0.053
ABASE	7,715	7.263	9,660	6.974	14,213	0.051	7,715	7.263	9,660	6.974	14,213	0.051
E_POND	7,715	1.802	9,660	8.272	14,213	0.049	7,715	1.802	9,660	8.272	14,213	0.049

NOTES:

TEU = toxic emission unit

REFERENCES:

[1] Exposure location represents the following receptor ID coordinates in the unit emission rate dispersion model with the highest predicted cancer or noncancer risk:

Receptor ID	UTM X (m)	UTM Y (m)
7,715	485,405.00	5,034,912.00
9,660	485,930.00	5,034,562.00
14,213	490,859.53	5,038,737.00

Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

Toxic Air Contaminant	CAS	Cancer									Noncancer									
		Residential			Worker			Child			Residential			Worker			Child			Acute
		Calculated Conc. (a) (ug/m^3)	RBC (2) (ug/m^3)	Excess Risk Per Million	Calculated Conc. (a) (ug/m^3)	RBC (2) (ug/m^3)	Excess Risk Per Million	Calculated Conc. (a) (ug/m^3)	RBC (2) (ug/m^3)	Excess Risk Per Million	Calculated Conc. (a) (ug/m^3)	RBC (2) (ug/m^3)	Hazard Index	Calculated Conc. (a) (ug/m^3)	RBC (ug/m^3)	Hazard Index	Calculated Conc. (a) (ug/m^3)	RBC (ug/m^3)	Hazard Index	Hazard Index (3)
Exposure Location (4)			7,715			9,660			14,213			7,715			9,660			14,213		--
Cumulative Facility-wide Risk (5)		--	--	16	--	--	0.3	--	--	<0.1	--	--	0.5	--	--	<0.1	--	--	<0.1	1.0
HBLR_SCR																				
Cumulative TEU Risk		--	--	0.63	--	--	0.019	--	--	2.0E-04	--	--	0.087	--	--	6.8E-03	--	--	1.3E-04	--
Dispersion Factor (ug/m^3/[g/s])			1.31			1.00			0.019			1.31			1.00			0.019		--
Antimony and compounds	7440-36-0	2.1E-06	(6)	--	1.6E-06	(7)	--	3.0E-08	(8)	--	2.1E-06	0.30	7.1E-06 (b)	1.6E-06	1.30	1.2E-06 (b)	3.0E-08	1.30	2.3E-08 (b)	--
Arsenic and compounds	7440-38-2	1.2E-05	2.4E-05	0.49 (b)	9.0E-06	6.2E-04	0.014 (b)	1.7E-07	1.3E-03	1.3E-04 (b)	1.2E-05	1.7E-04	0.069 (b)	9.0E-06	2.4E-03	3.7E-03 (b)	1.7E-07	2.4E-03	7.0E-05 (b)	--
Beryllium and compounds	7440-41-7	7.3E-08	4.2E-04	1.7E-04 (b)	5.6E-08	5.0E-03	1.1E-05 (b)	1.0E-09	0.011	9.5E-08 (b)	7.3E-08	7.0E-03	1.0E-05 (b)	5.6E-08	0.031	1.8E-06 (b)	1.0E-09	0.031	3.4E-08 (b)	--
Cadmium and compounds	7440-43-9	3.4E-06	5.6E-04	6.1E-03 (b)	2.6E-06	6.7E-03	3.9E-04 (b)	4.8E-08	0.014	3.4E-06 (b)	3.4E-06	5.0E-03	6.8E-04 (b)	2.6E-06	0.037	7.0E-05 (b)	4.8E-08	0.037	1.3E-06 (b)	--
Chromium VI	18540299p	2.5E-07	3.1E-05	8.0E-03 (b)	1.9E-07	1.0E-03	1.9E-04 (b)	3.5E-09	5.2E-04	6.8E-06 (b)	2.5E-07	0.083	3.0E-06 (b)	1.9E-07	0.88	2.2E-07 (b)	3.5E-09	0.88	4.0E-09 (b)	--
Cobalt and compounds	7440-48-4	2.1E-06	(6)	--	1.6E-06	(7)	--	2.9E-08	(8)	--	2.1E-06	0.10	2.1E-05 (b)	1.6E-06	0.44	3.6E-06 (b)	2.9E-08	0.44	6.7E-08 (b)	--
Copper and compounds	7440-50-8	1.9E-05	(6)	--	1.5E-05	(7)	--	2.7E-07	(8)	--	1.9E-05	(9)	--	1.5E-05	(10)	--	2.7E-07	(11)	--	--
Lead and compounds	7439-92-1	3.2E-05	(6)	--	2.4E-05	(7)	--	4.5E-07	(8)	--	3.2E-05	0.15	2.1E-04 (b)	2.4E-05	0.66	3.7E-05 (b)	4.5E-07	0.66	6.9E-07 (b)	--
Manganese and compounds	7439-96-5	2.7E-04	(6)	--	2.0E-04	(7)	--	3.8E-06	(8)	--	2.7E-04	0.090	2.9E-03 (b)	2.0E-04	0.40	5.0E-04 (b)	3.8E-06	0.40	9.4E-06 (b)	--
Mercury and compounds	7439-97-6	1.2E-06	(6)	--	8.9E-07	(7)	--	1.7E-08	(8)	--	1.2E-06	0.077	1.5E-05 (b)	8.9E-07	0.63	1.4E-06 (b)	1.7E-08	0.63	2.6E-08 (b)	--
Nickel and compounds	7440020in	7.8E-06	3.8E-03	2.1E-03 (b)	5.9E-06	0.046	1.3E-04 (b)	1.1E-07	0.10	1.1E-06 (b)	7.8E-06	0.014	5.6E-04 (b)	5.9E-06	0.062	9.6E-05 (b)	1.1E-07	0.062	1.8E-06 (b)	--
Selenium and compounds	7782-49-2	1.8E-06	(6)	--	1.4E-06	(7)	--	2.6E-08	(8)	--	1.8E-06	(9)	--	1.4E-06	(10)	--	2.6E-08	(11)	--	--
Vanadium (fume or dust)	7440-62-2	6.3E-07	(6)	--	4.8E-07	(7)	--	9.0E-09	(8)	--	6.3E-07	0.10	6.3E-06 (b)	4.8E-07	0.44	1.1E-06 (b)	9.0E-09	0.44	2.0E-08 (b)	--
Acetaldehyde	75-07-0	1.3E-03	0.45	2.9E-03 (b)	9.9E-04	5.50	1.8E-04 (b)	1.9E-05	12.0	1.5E-06 (b)	1.3E-03	140	9.3E-06 (b)	9.9E-04	620	1.6E-06 (b)	1.9E-05	620	3.0E-08 (b)	--
Acetone	67-64-1	6.0E-03	(6)	--	4.6E-03	(7)	--	8.5E-05	(8)	--	6.0E-03	31,000	1.9E-07 (b)	4.6E-03	140,000	3.3E-08 (b)	8.5E-05	140,000	6.1E-10 (b)	--
Acrolein	107-02-8	2.0E-03	(6)	--	1.5E-03	(7)	--	2.8E-05	(8)	--	2.0E-03	0.35	5.6E-03 (b)	1.5E-03	1.50	1.0E-03 (b)	2.8E-05	1.50	1.9E-05 (b)	--
Benzene	71-43-2	1.5E-03	0.13	0.011 (b)	1.1E-03	1.50	7.4E-04 (b)	2.1E-05	3.30	6.3E-06 (b)	1.5E-03	3.00	4.9E-04 (b)	1.1E-03	13.0	8.6E-05 (b)	2.1E-05	13.0	1.6E-06 (b)	--
Carbon tetrachloride	56-23-5	1.0E-05	0.17	6.2E-05 (b)	8.0E-06	2.00	4.0E-06 (b)	1.5E-07	4.30	3.5E-08 (b)	1.0E-05	100.0	1.0E-07 (b)	8.0E-06	440	1.8E-08 (b)	1.5E-07	440	3.4E-10 (b)	--
Chlorine	7782-50-5	8.4E-04	(6)	--	6.4E-04	(7)	--	1.2E-05	(8)	--	8.4E-04	0.15	5.6E-03 (b)	6.4E-04	0.66	9.7E-04 (b)	1.2E-05	0.66	1.8E-05 (b)	--
Vinyl acetate	108-05-4	4.5E-06	(6)	--	3.5E-06	(7)	--	6.5E-08	(8)	--	4.5E-06	200	2.3E-08 (b)	3.5E-06	880	3.9E-09 (b)	6.5E-08	880	7.3E-11 (b)	--
Chlorobenzene	108-90-7	1.8E-05	(6)	--	1.3E-05	(7)	--	2.5E-07	(8)	--	1.8E-05	50.0	3.5E-07 (b)	1.3E-05	220	6.1E-08 (b)	2.5E-07	220	1.1E-09 (b)	--
Chloroform	67-66-3	2.1E-05	(6)	--	1.6E-05	(7)	--	3.0E-07	(8)	--	2.1E-05	300	7.1E-08 (b)	1.6E-05	1,300	1.2E-08 (b)	3.0E-07	1,300	2.3E-10 (b)	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	1.8E-05	(6)	--	1.4E-05	(7)	--	2.5E-07	(8)	--	1.8E-05	4.00	4.5E-06 (b)	1.4E-05	18.0	7.5E-07 (b)	2.5E-07	18.0	1.4E-08 (b)	--
Ethyl benzene	100-41-4	1.3E-05	0.40	3.2E-05 (b)	9.9E-06	4.80	2.1E-06 (b)	1.8E-07	10.0	1.8E-08 (b)	1.3E-05	260	5.0E-08 (b)	9.9E-06	1,100	9.0E-09 (b)	1.8E-07	1,100	1.7E-10 (b)	--
Formaldehyde	50-00-0	1.6E-03	0.17	9.6E-03 (b)	1.2E-03	2.00	6.2E-04 (b)	2.3E-05	4.30	5.4E-06 (b)	1.6E-03	9.00	1.8E-04 (b)	1.2E-03	40.0	3.1E-05 (b)	2.3E-05	40.0	5.8E-07 (b)	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	9.0E-04	(6)	--	6.8E-04	(7)	--	1.3E-05	(8)	--	9.0E-04	3,000	3.0E-07 (b)	6.8E-04	13,000	5.3E-08 (b)	1.3E-05	13,000	9.8E-10 (b)	--
Isopropylbenzene (Cumene)	98-82-8	2.5E-05	(6)	--	1.9E-05	(7)	--	3.5E-07	(8)	--	2.5E-05	400	6.2E-08 (b)	1.9E-05	1,800	1.0E-08 (b)	3.5E-07	1,800	1.9E-10 (b)	--
Hexane	110-54-3	3.1E-04	(6)	--	2.3E-04	(7)	--	4.3E-06	(8)	--	3.1E-04	700	4.4E-07 (b)	2.3E-04	3,100	7.5E-08 (b)	4.3E-06	3,100	1.4E-09 (b)	--
Isopropyl alcohol	67-63-0	4.8E-03	(6)	--	3.6E-03	(7)	--	6.8E-05	(8)	--	4.8E-03	200	2.4E-05 (b)	3.6E-03	880	4.1E-06 (b)	6.8E-05	880	7.8E-08 (b)	--
Methanol	67-56-1	9.4E-04	(6)	--	7.1E-04	(7)	--	1.3E-05	(8)	--	9.4E-04	4,000	2.3E-07 (b)	7.1E-04	18,000	4.0E-08 (b)	1.3E-05	18,000	7.4E-10 (b)	--
Bromomethane (Methyl bromide)	74-83-9	1.9E-05	(6)	--	1.5E-05	(7)	--	2.7E-07	(8)	--	1.9E-05	5.00	3.8E-06 (b)	1.5E-05	22.0	6.6E-07 (b)	2.7E-07	22.0	1.2E-08 (b)	--
Chloromethane (Methyl chloride)	74-87-3	7.6E-05	(6)	--	5.8E-05	(7)	--	1.1E-06	(8)	--	7.6E-05	90.0	8.4E-07 (b)	5.8E-05	400	1.4E-07 (b)	1.1E-06	400	2.7E-09 (b)	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	6.1E-05	(6)	--	4.7E-05	(7)	--	8.7E-07	(8)	--	6.1E-05	5,000	1.2E-08 (b)	4.7E-05	22,000	2.1E-09 (b)	8.7E-07	22,000	4.0E-11 (b)	--
1,2,4-Trimethyl benzene	95-63-6	1.0E-05	(6)	--	7.9E-06	(7)	-- (b)	1.5E-07	(8)	-- (b)	1.0E-05	60.0	1.7E-07 (b)	7.9E-06	260	3.0E-08 (b)	1.5E-07	260	5.7E-10 (b)	--
Dichloromethane (Methylene chloride)	75-09-2	5.6E-04	59.0	9.5E-06 (b)	4.3E-04	1,200	3.5E-07 (b)	7.9E-06	620	1.3E-08 (b)	5.6E-04	600	9.3E-07 (b)	4.3E-04	2,600	1.6E-07 (b)	7.9E-06	2,600	3.1E-09 (b)	--
2-Butanone (Methyl ethyl ketone)	78-93-3	3.4E-04	(6)	--	2.6E-04	(7)	--	4.8E-06	(8)	--	3.4E-04	5,000	6.8E-08 (b)	2.6E-04	22,000	1.2E-08 (b)	4.8E-06	22,000	2.2E-10 (b)	--
Phenol	108-95-2	3.3E-03	(6)	--	2.5E-03	(7)	--	4.7E-05	(8)	--	3.3E-03	200	1.6E-05 (b)	2.5E-03	880	2.8E-06 (b)	4.7E-05	880	5.3E-08 (b)	--
Propionaldehyde	123-38-6	8.9E-04	(6)	--	6.8E-04	(7)	--	1.3E-05	(8)	--	8.9E-04	8.00	1.1E-04 (b)	6.8E-04	35.0	1.9E-05 (b)	1.3E-05	35.0	3.6E-07 (b)	--
Styrene	100-42-5	5.2E-04	(6)	--	3.9E-04	(7)	--	7.3E-06	(8)	--	5.2E-04	1,000	5.2E-07 (b)	3.9E-04	4,400	8.9E-08 (b)	7.3E-06	4,400	1.7E-09 (b)	--
Toluene	108-88-3	7.0E-04	(6)	--	5.4E-04	(7)	--	1.0E-05	(8)	--	7.0E-04	5,000	1.4E-07 (b)	5.4E-04	22,000	2.4E-08 (b)	1.0E-05	22,000	4.6E-10 (b)	--
Xylene (mixture)	1330-20-7	5.5E-06	(6)	--	4.2E-06	(7)	--	7.9E-08	(8)	--	5.5E-06	220	2.5E-08 (b)	4.2E-06	970	4.3E-09 (b)	7.9E-08	970	8.1E-11 (b)	--
Vinyl Chloride	75-01-4	2.0E-05	0.11	1.8E-04 (b)	1.5E-05	2.70	5.5E-06 (b)	2.8E-07	0.22	1.3E-06 (b)	2.0E-05	100.0	2.0E-07 (b)	1.5E-05	440	3.4E-08 (b)	2.8E-07	440	6.3E-10 (b)	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	2.1E-05	0.20	1.1E-04 (b)	1.6E-05	2.90	5.5E-06 (b)	3.0E-07	3.50	8.6E-08 (b)	2.1E-05	2.10	1.0E-05 (b)	1.6E-05	9.20	1.7E-06 (b)	3.0E-07	9.20	3.3E-08 (b)	--
m-Xylene	108-38-3	2.1E-04	(6)	--	1.6E-04	(7)	--	3.0E-06	(8)	--	2.1E-04	220	9.5E-07 (b)	1.6E-04	970	1.6E-07 (b)	3.0E-06	970	3.1E-09 (b)	--
p-Xylene	106-42-3	2.1E-04	(6)	--	1.6E-04	(7)	--	3.0E-06	(8)	--	2.1E-04	220	9.5E-07 (b)	1.6E-04	970	1.6E-07 (b)	3.0E-06	970	3.1E-09 (b)	--
o-Xylene	95-47-6	3.7E-06	(6)	--	2.8E-06	(7)	--	5.2E-08	(8)	--	3.7E-06	220	1.7E-08 (b)	2.8E-06	970	2.9E-09 (b)	5.2E-08	970	5.4E-11 (b)	--
Hydrogen fluoride	7664-39-3	2.7E-05	(6)	--	2.1E-05	(7)	--	3.8E-07	(8)	--	2.7E-05	2.10	1.3E-05 (b)	2.1E-05	19.0	1.1E-06 (b)	3.8E-07	19.0	2.0E-08 (b)	--
Hydrochloric acid	7647-01-0	1.4E-04	(6)	--	1.1E-04	(7)	--	2.1E-06	(8)	--	1.4E-04	20.0	7.2E-06 (b)	1.1E-04	88.0	1.2E-06 (b)	2.1E-06	88.0	2.3E-08 (b)	--
Benz[a]anthracene	56-55-3	8.6E-08	2.1E-04	4.1E-04 (b)	6.6E-08	0.015	4.4E-06 (b)	1.2E-09	7.8E-03	1.6E-07 (b)	8.6E-08	(9)	--	6.6E-08	(10)	--	1.2E-09	(11)	--	--
Benzo[a]pyrene	50-32-8	2.4E-06	4.3E-05	0.055 (b)	1.8E-06	3.0E-03	6.0E-04 (b)	3.4E-08	1.6E-03	2.1E-05 (b)	2.4E-06	2.0E-03	1.2E-03 (b)	1.8E-06	8.8E-03	2.0E-04 (b)	3.4E-08	8.8E-03	3.8E-06 (b)	--
Benzo[b]fluoranthene	205-99-2	1.5E-07	5.3E-05	2.8E-03 (b)	1.1E-07	3.8E-03	3.0E-05 (b)	2.1E-09	2.0E-03	1.1E-06 (b)	1.5E-07	(9)	--	1.1E-07	(10)	--	2.1E-09	(11)	--	--
Benzo[g,h,i]perylene	191-24-2	1.6E-07	4.7E-03	3.4E-05 (b)	1.2E-07	0.34	3.6E-07 (b)	2.3E-09	0.17	1.3E-08 (b)	1.6E-07	(9)	--	1.2E-07	(10)	--	2.3E-09	(11)	--	--
Benzo[j]fluoranthene	205-82-3	1.7E-07	1.4E-04	1.2E-03 (b)	1.3E-07	0.010	1.3E-05 (b)	2.4E-09	5.2E-03	4.5E-07 (b)	1.7E-07	(9)	--	1.3E-07	(10)	--	2.4E-09	(11)	--	--
Benzo[k]fluoranthene	207-08-9	5.5E-08	1.4E-03	3.9E-05 (b)	4.2E-08	0.10	4.2E-07 (b)	7.8E-10	0.052	1.5E-08 (b)	5.5E-08	(9)	--	4.2E-08	(10)	--	7.8E-10	(11)	--	--
Chrysene	218-01-9	8.4E-08	4.3E-04	2.0E-04 (b)	6.4E-08	0.030	2.1E-06 (b)	1.2E-09	0.016	7.5E-08 (b)	8.4E-08	(9)	--	6.4E-08	(10)	--	1.2E-09	(11)	--	--
Fluoranthene	206-44-0	1.8E-06	5.3E-04	3.3E-03 (b)	1.3E-06	0.038	3.5E-05 (b)	2.5E-08	0.020	1.3E-06 (b)	1.8E-06	(9)	--	1.3E-06	(10)	--	2.5E-08	(11)	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	1.1E-07	6.1E-04	1.8E-04 (b)	8.2E-08	0.043	1.9E-06 (b)	1.5E-09	0.022	7.0E-08 (b)	1.1E-07	(9)	--	8.2E-08	(10)	--	1.5E-09	(11)	--	--
Naphthalene	91-20-3	7.1E-04	0.029	0.025 (b)	5.4E-04	0.35	1.5E-03 (b)	1.0E-05	0.76	1.3E-05 (b)	7.1E-04	3.70	1.9E-04 (b)	5.4E-04	16.0	3.4E-05 (b)	1.0E-05	16.0	6.3E-07 (b)	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	1.0E-12	1.0E-09	1.0E-03 (b)	7.7E-13	4.2E-08	1.8E-05 (b)	1.4E-14	9.0E-08	1.6E-07 (b)	1.0E-12	1.3E-07	7.8E-06 (b)	7.7E-13	2.6E-05	3.0E-08 (b)	1.4E-14	2.6E-05	5.5E-10 (b)	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	1.4E-12	1.0E-09	1.4E-03 (b)	1.1E-12	4.2E-08	2.6E-05 (b)	2.0E-14	9.0E-08	2.2E-07 (b)	1.4E-12	1.3E-07	1.1E-05 (b)	1.1E-12	2.6E-05	4.1E-08 (b)	2.0E-14	2.6E-05	7.7E-10 (b)	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	9.2E-13	1.0E-08	9.2E-05 (b)	7.0E-13	4.2E-07	1.7E-06 (b)	1.3E-14	9.0E-07	1.5E-08 (b)	9.2E-13	1.3E-06	7.1E-07 (b)	7.0E-13	2.6E-04	2.7E-09 (b)	1.3E-14	2.6E-04	5.1E-11 (b)	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	2.2E-12	1.0E-08	2.2E-04 (b)	1.7E-12	4.2E-07	4.0E-06 (b)	3.2E-14	9.0E-07	3.5E-08 (b)	2.2E-12	1.3E-06	1.7E-06 (b)	1.7E-12	2.6E-04	6.5E-09 (b)	3.2E-14	2.6E-04	1.2E-10 (b)	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	2.3E-12	1.0E-08	2.3E-04 (b)	1.8E-12	4.2E-07	4.2E-06 (b)	3.3E-14	9.0E-07	3.7E-08 (b)	2.3E-12	1.3E-06	1.8E-06 (b)	1.8E-12	2.6E-04	6.9E-09 (b)	3.3E-14	2.6E-04	1.3E-10 (b)	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD	35822-46-9	1.0E-11	1.0E-07	1.0E-04 (b)	7.9E-12	4.2E-06	1.9E-06 (b)	1.5E-13	9.0E-06	1.6E-08 (b)	1.0E-11	1.3E-05	8.0E-07 (b)	7.9E-12	2.6E-03	3.0E-09 (b)	1.5E-13	2.6E-03	5.7E-11 (b)	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	2.6E-11	3.4E-06	7.7E-06 (b)	2.0E-11	1.4E-04	1.4E-07 (b)	3.7E-13	3.0E-04	1.2E-09 (b)	2.6E-11	4.2E-04	6.2E-08 (b)	2.0E-11	0.085	2.3E-10 (b)	3.7E-13	0.085	4.4E-12 (b)	--
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	8.5E-12	1.0E-08	8.5E-04 (b)	6.5E-12	4.2E-07	1.5E-05 (b)	1.2E-13	9.0E-07	1.3E-07 (b)	8.5E-12	1.3E-06	6.6E-06 (b)	6.5E-12	2.6E-04	2.5E-08 (b)	1.2E-13	2.6E-04	4.7E-10 (b)	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	4.2E-12	3.4E-08	1.2E-04 (b)	3.2E-12	1.4E-06	2.3E-06 (b)	6.0E-14	3.0E-06	2.0E-08 (b)	4.2E-12	4.2E-06	1.0E-06 (b)	3.2E-12	8.5E-04	3.8E-09 (b)	6.0E-14	8.5E-04	7.1E-11 (b)	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	6.5E-12	3.4E-09	1.9E-03 (b)	4.9E-12	1.4E-07	3.5E-05 (b)	9.2E-14	3.0E-07	3.1E-07 (b)	6.5E-12	4.2E-07	1.5E-05 (b)	4.9E-12	8.5E-05	5.8E-08 (b)	9.2E-14	8.5E-05	1.1E-09 (b)	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	3.8E-12	1.0E-08	3.8E-04 (b)	2.9E-12	4.2E-07	6.8E-06 (b)	5.4E-14	9.0E-07	6.0E-08 (b)	3.8E-12	1.3E-06	2.9E-06 (b)	2.9E-12	2.6E-04	1.1E-08 (b)	5.4E-14	2.6E-04	2.1E-10 (b)	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	3.4E-12	1.0E-08	3.4E-04 (b)	2.6E-12	4.2E-07	6.1E-06 (b)	4.8E-14	9.0E-07	5.3E-08 (b)	3.4E-12	1.3E-06	2.6E-06 (b)	2.6E-12	2.6E-04	9.8E-09 (b)	4.8E-14	2.6E-04	1.8E-10 (b)	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	7.1E-13	1.0E-08	7.1E-05 (b)	5.4E-13	4.2E-07	1.3E-06 (b)	1.0E-14	9.0E-07	1.1E-08 (b)	7.1E-13	1.3E-06	5.4E-07 (b)	5.4E-13	2.6E-04	2.1E-09 (b)	1.0E-14	2.6E-04	3.9E-11 (b)	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	2.8E-12	1.0E-08	2.8E-04 (b)	2.1E-12	4.2E-07	5.1E-06 (b)	4.0E-14	9.0E-07	4.5E-08 (b)	2.8E-12	1.3E-06	2.2E-06 (b)	2.1E-12	2.6E-04	8.3E-09 (b)	4.0E-14	2.6E-04	1.5E-10 (b)	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	6.1E-12	1.0E-07	6.1E-05 (b)	4.6E-12	4.2E-06	1.1E-06 (b)	8.6E-14	9.0E-06	9.6E-09 (b)	6.1E-12	1.3E-05	4.7E-07 (b)	4.6E-12	2.6E-03	1.8E-09 (b)	8.6E-14	2.6E-03	3.3E-11 (b)	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	8.5E-13	1.0E-07	8.5E-06 (b)	6.4E-13	4.2E-06	1.5E-07 (b)	1.2E-14	9.0E-06	1.3E-09 (b)	8.5E-13	1.3E-05	6.5E-08 (b)	6.4E-13	2.6E-03	2.5E-10 (b)	1.2E-14	2.6E-03	4.6E-12 (b)	--
Octachlorodibenzofuran (OCDF)	39001-02-0	5.3E-12	3.4E-06	1.6E-06 (b)	4.0E-12	1.4E-04	2.9E-08 (b)	7.5E-14	3.0E-04	2.5E-10 (b)	5.3E-12	4.2E-04	1.3E-08 (b)	4.0E-12	0.085	4.7E-11 (b)	7.5E-14	0.085	8.9E-13 (b)	--
Total PCBs	1336-36-3	8.1E-09	5.3E-04	1.5E-05 (b)	6.1E-09	9.2E-03	6.7E-07 (b)	1.1E-10	0.020	5.7E-09 (b)	8.1E-09	(9)	--	6.1E-09	(10)	--	1.1E-10	(11)	--	--
2,4-Dinitrotoluene	121-14-2	1.0E-06	0.011	9.1E-05 (b)	7.6E-07	0.13	5.9E-06 (b)	1.4E-08	0.29	4.9E-08 (b)	1.0E-06	(9)	--	7.6E-07	(10)	--	1.4E-08	(11)	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	4.9E-08	0.080	6.2E-07 (b)	3.8E-08	5.00	7.5E-09 (b)	7.0E-10	11.0	6.4E-11 (b)	4.9E-08	(9)	--	3.8E-08	(10)	--	7.0E-10	(11)	--	--
Hydrogen cyanide	74-90-8	2.2E-05	(6)	--	1.7E-05	(7)	--	3.1E-07	(8)	--	2.2E-05	0.80	2.7E-05 (b)	1.7E-05	3.50	4.7E-06 (b)	3.1E-07	3.50	8.8E-08 (b)	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	3.1E-05	0.038	8.2E-04 (b)	2.4E-05	0.46	5.1E-05 (b)	4.4E-07	1.00	4.4E-07 (b)	3.1E-05	7.00	4.4E-06 (b)	2.4E-05	31.0	7.6E-07 (b)	4.4E-07	31.0	1.4E-08 (b)	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	3.0E-04	0.091	3.3E-03 (b)	2.3E-04	1.10	2.0E-04 (b)	4.2E-06	2.40	1.8E-06 (b)	3.0E-04	60.0	4.9E-06 (b)	2.3E-04	260	8.7E-07 (b)	4.2E-06	260	1.6E-08 (b)	--
2,4,6-Trichlorophenol	88-06-2	2.1E-07	0.050	4.2E-06 (b)	1.6E-07	0.60	2.7E-07 (b)	3.0E-09	1.30	2.3E-09 (b)	2.1E-07	(9)	--	1.6E-07	(10)	--	3.0E-09	(11)	--	--
Pentachlorophenol	87-86-5	2.3E-07	0.20	1.1E-06 (b)	1.7E-07	2.40	7.2E-08 (b)	3.2E-09	5.10	6.3E-10 (b)	2.3E-07	(9)	--	1.7E-07	(10)	--	3.2E-09	(11)	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	2.6E-05	3.80	6.9E-06 (b)	2.0E-05	46.0	4.3E-07 (b)	3.7E-07	100.0	3.7E-09 (b)	2.6E-05	41.0	6.4E-07 (b)	2.0E-05	180	1.1E-07 (b)	3.7E-07	180	2.1E-09 (b)	--

Toxic Air Contaminant	CAS	Cancer									Noncancer									
		Residential			Worker			Child			Residential			Worker			Child			Acute
		Calculated Conc. [a] (ug/m^3)	RBC [2] (ug/m^3)	Excess Risk Per Million	Calculated Conc. [a] (ug/m^3)	RBC [2] (ug/m^3)	Excess Risk Per Million	Calculated Conc. [a] (ug/m^3)	RBC [2] (ug/m^3)	Excess Risk Per Million	Calculated Conc. [a] (ug/m^3)	RBC [2] (ug/m^3)	Hazard Index	Calculated Conc. [a] (ug/m^3)	RBC (ug/m^3)	Hazard Index	Calculated Conc. [a] (ug/m^3)	RBC (ug/m^3)	Hazard Index	Hazard Index [3]
HBLR_ESP																				
Cumulative TEU Risk		--	--	**0.25**	--	--	**4.3E-03**	--	--	**3.9E-04**	--	--	**0.029**	--	--	**2.0E-03**	--	--	**2.4E-04**	--
Dispersion Factor (ug/m^3/[g/s])		**0.11**			**0.052**			**6.4E-03**			**0.11**			**0.052**			**6.4E-03**			--
Antimony and compounds	7440-36-0	4.4E-07	[6]	--	2.1E-07	[7]	--	2.6E-08	[8]	--	4.4E-07	0.30	1.5E-06 [b]	2.1E-07	1.30	1.6E-07 [b]	2.6E-08	1.30	2.0E-08 [b]	--
Arsenic and compounds	7440-38-2	2.7E-06	2.4E-05	0.11 [b]	1.3E-06	6.2E-04	2.1E-03 [b]	1.6E-07	1.3E-03	1.2E-04 [b]	2.7E-06	1.7E-04	0.016 [b]	1.3E-06	2.4E-03	5.4E-04 [b]	1.6E-07	2.4E-03	6.7E-05 [b]	--
Beryllium and compounds	7440-41-7	4.1E-08	4.2E-04	9.6E-05 [b]	2.0E-08	5.0E-03	3.9E-06 [b]	2.4E-09	0.011	2.2E-07 [b]	4.1E-08	7.0E-03	5.8E-06 [b]	2.0E-08	0.031	6.3E-07 [b]	2.4E-09	0.031	7.8E-08 [b]	--
Cadmium and compounds	7440-43-9	4.6E-07	5.6E-04	8.2E-04 [b]	2.2E-07	6.7E-03	3.3E-05 [b]	2.7E-08	0.014	2.0E-06 [b]	4.6E-07	5.0E-03	9.2E-05 [b]	2.2E-07	0.037	6.0E-06 [b]	2.7E-08	0.037	7.4E-07 [b]	--
Chromium VI	18540299p	3.9E-07	3.1E-05	0.012 [b]	1.9E-07	1.0E-03	1.9E-04 [b]	2.3E-08	5.2E-04	4.4E-05 [b]	3.9E-07	0.083	4.7E-06 [b]	1.9E-07	0.88	2.1E-07 [b]	2.3E-08	0.88	2.6E-08 [b]	--
Cobalt and compounds	7440-48-4	7.1E-07	[6]	--	3.4E-07	[7]	--	4.2E-08	[8]	--	7.1E-07	0.10	7.1E-06 [b]	3.4E-07	0.44	7.8E-07 [b]	4.2E-08	0.44	9.5E-08 [b]	--
Copper and compounds	7440-50-8	5.4E-06	[6]	--	2.6E-06	[7]	--	3.2E-07	[8]	--	5.4E-06	[9]	--	2.6E-06	[10]	--	3.2E-07	[11]	--	--
Lead and compounds	7439-92-1	7.4E-06	[6]	--	3.6E-06	[7]	--	4.4E-07	[8]	--	7.4E-06	0.15	4.9E-05 [b]	3.6E-06	0.66	5.4E-06 [b]	4.4E-07	0.66	6.7E-07 [b]	--
Manganese and compounds	7439-96-5	1.4E-04	[6]	--	6.6E-05	[7]	--	8.1E-06	[8]	--	1.4E-04	0.090	1.5E-03 [b]	6.6E-05	0.40	1.6E-04 [b]	8.1E-06	0.40	2.0E-05 [b]	--
Mercury and compounds	7439-97-6	1.3E-06	[6]	--	6.1E-07	[7]	--	7.4E-08	[8]	--	1.3E-06	0.077	1.6E-05 [b]	6.1E-07	0.63	9.6E-07 [b]	7.4E-08	0.63	1.2E-07 [b]	--
Nickel and compounds	7440020in	4.0E-06	3.8E-03	1.0E-03 [b]	1.9E-06	0.046	4.2E-05 [b]	2.4E-07	0.10	2.4E-06 [b]	4.0E-06	0.014	2.8E-04 [b]	1.9E-06	0.062	3.1E-05 [b]	2.4E-07	0.062	3.8E-06 [b]	--
Selenium and compounds	7782-49-2	2.3E-06	[6]	--	1.1E-06	[7]	--	1.4E-07	[8]	--	2.3E-06	[9]	--	1.1E-06	[10]	--	1.4E-07	[11]	--	--
Vanadium (fume or dust)	7440-62-2	8.4E-07	[6]	--	4.1E-07	[7]	--	5.0E-08	[8]	--	8.4E-07	0.10	8.4E-06 [b]	4.1E-07	0.44	9.3E-07 [b]	5.0E-08	0.44	1.1E-07 [b]	--
Acetaldehyde	75-07-0	4.0E-04	0.45	8.9E-04 [b]	2.0E-04	5.50	3.5E-05 [b]	2.4E-05	12.0	2.0E-06 [b]	4.0E-04	140	2.9E-06 [b]	2.0E-04	620	3.1E-07 [b]	2.4E-05	620	3.9E-08 [b]	--
Acetone	67-64-1	7.5E-04	[6]	--	3.6E-04	[7]	--	4.5E-05	[8]	--	7.5E-04	31,000	2.4E-08 [b]	3.6E-04	140,000	2.6E-09 [b]	4.5E-05	140,000	3.2E-10 [b]	--
Acrolein	107-02-8	3.7E-04	[6]	--	1.8E-04	[7]	--	2.2E-05	[8]	--	3.7E-04	0.35	1.1E-03 [b]	1.8E-04	1.50	1.2E-04 [b]	2.2E-05	1.50	1.5E-05 [b]	--
Benzene	71-43-2	1.4E-03	0.13	0.011 [b]	6.8E-04	1.50	4.5E-04 [b]	8.3E-05	3.30	2.5E-05 [b]	1.4E-03	3.00	4.6E-04 [b]	6.8E-04	13.0	5.2E-05 [b]	8.3E-05	13.0	6.4E-06 [b]	--
Carbon tetrachloride	56-23-5	1.4E-05	0.17	8.3E-05 [b]	6.8E-06	2.00	3.4E-06 [b]	8.3E-07	4.30	1.9E-07 [b]	1.4E-05	100.0	1.4E-07 [b]	6.8E-06	440	1.5E-08 [b]	8.3E-07	440	1.9E-09 [b]	--
Chlorine	7782-50-5	1.1E-03	[6]	--	5.4E-04	[7]	--	6.7E-05	[8]	--	1.1E-03	0.15	7.5E-03 [b]	5.4E-04	0.66	8.2E-04 [b]	6.7E-05	0.66	1.0E-04 [b]	--
Chlorobenzene	108-90-7	2.4E-05	[6]	--	1.1E-05	[7]	--	1.4E-06	[8]	--	2.4E-05	50.0	4.7E-07 [b]	1.1E-05	220	5.2E-08 [b]	1.4E-06	220	6.4E-09 [b]	--
Chloroform	67-66-3	2.9E-05	[6]	--	1.4E-05	[7]	--	1.7E-06	[8]	--	2.9E-05	300	9.5E-08 [b]	1.4E-05	1,300	1.1E-08 [b]	1.7E-06	1,300	1.3E-09 [b]	--
1,2-Dichloropropane (Propylene dichloride)	78-87-5	2.4E-05	[6]	--	1.2E-05	[7]	--	1.4E-06	[8]	--	2.4E-05	4.00	6.0E-06 [b]	1.2E-05	18.0	6.4E-07 [b]	1.4E-06	18.0	7.9E-08 [b]	--
Ethyl benzene	100-41-4	1.7E-05	0.40	4.3E-05 [b]	8.4E-06	4.80	1.8E-06 [b]	1.0E-06	10.0	1.0E-07 [b]	1.7E-05	260	6.7E-08 [b]	8.4E-06	1,100	7.6E-09 [b]	1.0E-06	1,100	9.4E-10 [b]	--
Formaldehyde	50-00-0	1.5E-03	0.17	8.8E-03 [b]	7.2E-04	2.00	3.6E-04 [b]	8.9E-05	4.30	2.1E-05 [b]	1.5E-03	9.00	1.7E-04 [b]	7.2E-04	40.0	1.8E-05 [b]	8.9E-05	40.0	2.2E-06 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	6.3E-04	[6]	--	3.1E-04	[7]	--	3.8E-05	[8]	--	6.3E-04	3,000	2.1E-07 [b]	3.1E-04	13,000	2.4E-08 [b]	3.8E-05	13,000	2.9E-09 [b]	--
Isopropylbenzene (Cumene)	98-82-8	2.5E-05	[6]	--	1.2E-05	[7]	--	1.5E-06	[8]	--	2.5E-05	400	6.3E-08 [b]	1.2E-05	1,800	6.8E-09 [b]	1.5E-06	1,800	8.3E-10 [b]	--
Hexane	110-54-3	4.1E-04	[6]	--	2.0E-04	[7]	--	2.4E-05	[8]	--	4.1E-04	700	5.8E-07 [b]	2.0E-04	3,100	6.4E-08 [b]	2.4E-05	3,100	7.9E-09 [b]	--
Isopropyl alcohol	67-63-0	6.4E-03	[6]	--	3.1E-03	[7]	--	3.8E-04	[8]	--	6.4E-03	200	3.2E-05 [b]	3.1E-03	880	3.5E-06 [b]	3.8E-04	880	4.3E-07 [b]	--
Methanol	67-56-1	1.0E-03	[6]	--	5.0E-04	[7]	--	6.2E-05	[8]	--	1.0E-03	4,000	2.6E-07 [b]	5.0E-04	18,000	2.8E-08 [b]	6.2E-05	18,000	3.4E-09 [b]	--
Bromomethane (Methyl bromide)	74-83-9	1.6E-05	[6]	--	7.8E-06	[7]	--	9.5E-07	[8]	--	1.6E-05	5.00	3.2E-06 [b]	7.8E-06	22.0	3.5E-07 [b]	9.5E-07	22.0	4.3E-08 [b]	--
Chloromethane (Methyl chloride)	74-87-3	6.2E-05	[6]	--	3.0E-05	[7]	--	3.7E-06	[8]	--	6.2E-05	90.0	6.9E-07 [b]	3.0E-05	400	7.5E-08 [b]	3.7E-06	400	9.2E-09 [b]	--
1,1,1-Trichloroethane (Methyl chloroform)	71-55-6	8.2E-05	[6]	--	4.0E-05	[7]	--	4.9E-06	[8]	--	8.2E-05	5,000	1.6E-08 [b]	4.0E-05	22,000	1.8E-09 [b]	4.9E-06	22,000	2.2E-10 [b]	--
Dichloromethane (Methylene chloride)	75-09-2	5.7E-04	59.0	9.6E-06 [b]	2.7E-04	1,200	2.3E-07 [b]	3.4E-05	620	5.4E-08 [b]	5.7E-04	600	9.4E-07 [b]	2.7E-04	2,600	1.1E-07 [b]	3.4E-05	2,600	1.3E-08 [b]	--
2-Butanone (Methyl ethyl ketone)	78-93-3	9.9E-06	[6]	--	4.8E-06	[7]	--	5.9E-07	[8]	--	9.9E-06	5,000	2.0E-09 [b]	4.8E-06	22,000	2.2E-10 [b]	5.9E-07	22,000	2.7E-11 [b]	--
Phenol	108-95-2	2.3E-04	[6]	--	1.1E-04	[7]	--	1.4E-05	[8]	--	2.3E-04	200	1.1E-06 [b]	1.1E-04	880	1.3E-07 [b]	1.4E-05	880	1.5E-08 [b]	--
Propionaldehyde	123-38-6	4.4E-04	[6]	--	2.1E-04	[7]	--	2.6E-05	[8]	--	4.4E-04	8.00	5.5E-05 [b]	2.1E-04	35.0	6.1E-06 [b]	2.6E-05	35.0	7.5E-07 [b]	--
Styrene	100-42-5	6.7E-04	[6]	--	3.2E-04	[7]	--	4.0E-05	[8]	--	6.7E-04	1,000	6.7E-07 [b]	3.2E-04	4,400	7.3E-08 [b]	4.0E-05	4,400	9.0E-09 [b]	--
Toluene	108-88-3	1.6E-05	[6]	--	7.9E-06	[7]	--	9.6E-07	[8]	--	1.6E-05	5,000	3.2E-09 [b]	7.9E-06	22,000	3.6E-10 [b]	9.6E-07	22,000	4.4E-11 [b]	--
Xylene (mixture)	1330-20-7	7.4E-06	[6]	--	3.6E-06	[7]	--	4.4E-07	[8]	--	7.4E-06	220	3.4E-08 [b]	3.6E-06	970	3.7E-09 [b]	4.4E-07	970	4.5E-10 [b]	--
Vinyl Chloride	75-01-4	2.6E-05	0.11	2.4E-04 [b]	1.3E-05	2.70	4.7E-06 [b]	1.6E-06	0.22	7.1E-06 [b]	2.6E-05	100.0	2.6E-07 [b]	1.3E-05	440	2.9E-08 [b]	1.6E-06	440	3.5E-09 [b]	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	2.8E-05	0.20	1.4E-04 [b]	1.4E-05	2.90	4.7E-06 [b]	1.7E-06	3.50	4.8E-07 [b]	2.8E-05	2.10	1.3E-05 [b]	1.4E-05	9.20	1.5E-06 [b]	1.7E-06	9.20	1.8E-07 [b]	--
Hydrogen fluoride	7664-39-3	1.3E-04	[6]	--	6.2E-05	[7]	--	7.6E-06	[8]	--	1.3E-04	2.10	6.1E-05 [b]	6.2E-05	19.0	3.3E-06 [b]	7.6E-06	19.0	4.0E-07 [b]	--
Hydrochloric acid	7647-01-0	8.1E-05	[6]	--	3.9E-05	[7]	--	4.8E-06	[8]	--	8.1E-05	20.0	4.1E-06 [b]	3.9E-05	88.0	4.5E-07 [b]	4.8E-06	88.0	5.5E-08 [b]	--
Benz[a]anthracene	56-55-3	1.2E-07	2.1E-04	5.5E-04 [b]	5.6E-08	0.015	3.7E-06 [b]	6.9E-09	7.8E-03	8.8E-07 [b]	1.2E-07	[9]	--	5.6E-08	[10]	--	6.9E-09	[11]	--	--
Benzo[a]pyrene	50-32-8	3.2E-06	4.3E-05	0.073 [b]	1.5E-06	3.0E-03	5.1E-04 [b]	1.9E-07	1.6E-03	1.2E-04 [b]	3.2E-06	2.0E-03	1.6E-03 [b]	1.5E-06	8.8E-03	1.7E-04 [b]	1.9E-07	8.8E-03	2.1E-05 [b]	--
Benzo[b]fluoranthene	205-99-2	2.0E-07	5.3E-05	3.8E-03 [b]	9.8E-08	3.8E-03	2.6E-05 [b]	1.2E-08	2.0E-03	6.0E-06 [b]	2.0E-07	[9]	--	9.8E-08	[10]	--	1.2E-08	[11]	--	--
Benzo[g,h,i]perylene	191-24-2	2.1E-07	4.7E-03	4.6E-05 [b]	1.0E-07	0.34	3.1E-07 [b]	1.3E-08	0.17	7.5E-08 [b]	2.1E-07	[9]	--	1.0E-07	[10]	--	1.3E-08	[11]	--	--
Benzo[j]fluoranthene	205-82-3	2.2E-07	1.4E-04	1.6E-03 [b]	1.1E-07	0.010	1.1E-05 [b]	1.3E-08	5.2E-03	2.5E-06 [b]	2.2E-07	[9]	--	1.1E-07	[10]	--	1.3E-08	[11]	--	--
Benzo[k]fluoranthene	207-08-9	7.4E-08	1.4E-03	5.3E-05 [b]	3.6E-08	0.10	3.6E-07 [b]	4.4E-09	0.052	8.4E-08 [b]	7.4E-08	[9]	--	3.6E-08	[10]	--	4.4E-09	[11]	--	--
Chrysene	218-01-9	1.1E-07	4.3E-04	2.6E-04 [b]	5.4E-08	0.030	1.8E-06 [b]	6.7E-09	0.016	4.2E-07 [b]	1.1E-07	[9]	--	5.4E-08	[10]	--	6.7E-09	[11]	--	--
Fluoranthene	206-44-0	2.4E-06	5.3E-04	4.5E-03 [b]	1.2E-06	0.038	3.0E-05 [b]	1.4E-07	0.020	7.1E-06 [b]	2.4E-06	[9]	--	1.2E-06	[10]	--	1.4E-07	[11]	--	--
Indeno[1,2,3-cd]pyrene	193-39-5	1.5E-07	6.1E-04	2.4E-04 [b]	7.0E-08	0.043	1.6E-06 [b]	8.6E-09	0.022	3.9E-07 [b]	1.5E-07	[9]	--	7.0E-08	[10]	--	8.6E-09	[11]	--	--
Naphthalene	91-20-3	1.4E-04	0.029	4.9E-03 [b]	6.9E-05	0.35	2.0E-04 [b]	8.4E-06	0.76	1.1E-05 [b]	1.4E-04	3.70	3.8E-05 [b]	6.9E-05	16.0	4.3E-06 [b]	8.4E-06	16.0	5.3E-07 [b]	--
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1746-01-6	1.4E-12	1.0E-09	1.4E-03 [b]	6.6E-13	4.2E-08	1.6E-05 [b]	8.1E-14	9.0E-08	8.9E-07 [b]	1.4E-12	1.3E-07	1.0E-05 [b]	6.6E-13	2.6E-05	2.5E-08 [b]	8.1E-14	2.6E-05	3.1E-09 [b]	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	40321-76-4	1.9E-12	1.0E-09	1.9E-03 [b]	9.2E-13	4.2E-08	2.2E-05 [b]	1.1E-13	9.0E-08	1.2E-06 [b]	1.9E-12	1.3E-07	1.5E-05 [b]	9.2E-13	2.6E-05	3.5E-08 [b]	1.1E-13	2.6E-05	4.3E-09 [b]	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	39227-28-6	1.2E-12	1.0E-08	1.2E-04 [b]	6.0E-13	4.2E-07	1.4E-06 [b]	7.4E-14	9.0E-07	8.2E-08 [b]	1.2E-12	1.3E-06	9.5E-07 [b]	6.0E-13	2.6E-04	2.3E-09 [b]	7.4E-14	2.6E-04	2.8E-10 [b]	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	57653-85-7	3.0E-12	1.0E-08	3.0E-04 [b]	1.4E-12	4.2E-07	3.4E-06 [b]	1.8E-13	9.0E-07	2.0E-07 [b]	3.0E-12	1.3E-06	2.3E-06 [b]	1.4E-12	2.6E-04	5.5E-09 [b]	1.8E-13	2.6E-04	6.8E-10 [b]	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	19408-74-3	3.1E-12	1.0E-08	3.1E-04 [b]	1.5E-12	4.2E-07	3.6E-06 [b]	1.9E-13	9.0E-07	2.1E-07 [b]	3.1E-12	1.3E-06	2.4E-06 [b]	1.5E-12	2.6E-04	5.9E-09 [b]	1.9E-13	2.6E-04	7.2E-10 [b]	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD	35822-46-9	1.4E-11	1.0E-07	1.4E-04 [b]	6.7E-12	4.2E-06	1.6E-06 [b]	8.2E-13	9.0E-06	9.2E-08 [b]	1.4E-11	1.3E-05	1.1E-06 [b]	6.7E-12	2.6E-03	2.6E-09 [b]	8.2E-13	2.6E-03	3.2E-10 [b]	--
Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	3.5E-11	3.4E-06	1.0E-05 [b]	1.7E-11	1.4E-04	1.2E-07 [b]	2.1E-12	3.0E-04	6.9E-09 [b]	3.5E-11	4.2E-04	8.3E-08 [b]	1.7E-11	0.085	2.0E-10 [b]	2.1E-12	0.085	2.4E-11 [b]	--
2,3,7,8-Tetrachlorodibenzofuran (TcDF)	51207-31-9	1.1E-11	1.0E-08	1.1E-03 [b]	5.5E-12	4.2E-07	1.3E-05 [b]	6.8E-13	9.0E-07	7.5E-07 [b]	1.1E-11	1.3E-06	8.8E-06 [b]	5.5E-12	2.6E-04	2.1E-08 [b]	6.8E-13	2.6E-04	2.6E-09 [b]	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	57117-41-6	5.7E-12	3.4E-08	1.7E-04 [b]	2.8E-12	1.4E-06	2.0E-06 [b]	3.4E-13	3.0E-06	1.1E-07 [b]	5.7E-12	4.2E-06	1.4E-06 [b]	2.8E-12	8.5E-04	3.2E-09 [b]	3.4E-13	8.5E-04	4.0E-10 [b]	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	57117-31-4	8.7E-12	3.4E-09	2.5E-03 [b]	4.2E-12	1.4E-07	3.0E-05 [b]	5.1E-13	3.0E-07	1.7E-06 [b]	8.7E-12	4.2E-07	2.1E-05 [b]	4.2E-12	8.5E-05	4.9E-08 [b]	5.1E-13	8.5E-05	6.1E-09 [b]	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	70648-26-9	5.1E-12	1.0E-08	5.1E-04 [b]	2.5E-12	4.2E-07	5.8E-06 [b]	3.0E-13	9.0E-07	3.3E-07 [b]	5.1E-12	1.3E-06	3.9E-06 [b]	2.5E-12	2.6E-04	9.4E-09 [b]	3.0E-13	2.6E-04	1.2E-09 [b]	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	57117-44-9	4.5E-12	1.0E-08	4.5E-04 [b]	2.2E-12	4.2E-07	5.2E-06 [b]	2.7E-13	9.0E-07	3.0E-07 [b]	4.5E-12	1.3E-06	3.5E-06 [b]	2.2E-12	2.6E-04	8.4E-09 [b]	2.7E-13	2.6E-04	1.0E-09 [b]	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	72918-21-9	9.5E-13	1.0E-08	9.5E-05 [b]	4.6E-13	4.2E-07	1.1E-06 [b]	5.6E-14	9.0E-07	6.3E-08 [b]	9.5E-13	1.3E-06	7.3E-07 [b]	4.6E-13	2.6E-04	1.8E-09 [b]	5.6E-14	2.6E-04	2.2E-10 [b]	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	60851-34-5	3.8E-12	1.0E-08	3.8E-04 [b]	1.8E-12	4.2E-07	4.4E-06 [b]	2.2E-13	9.0E-07	2.5E-07 [b]	3.8E-12	1.3E-06	2.9E-06 [b]	1.8E-12	2.6E-04	7.1E-09 [b]	2.2E-13	2.6E-04	8.6E-10 [b]	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	67562-39-4	8.1E-12	1.0E-07	8.1E-05 [b]	3.9E-12	4.2E-06	9.4E-07 [b]	4.8E-13	9.0E-06	5.4E-08 [b]	8.1E-12	1.3E-05	6.2E-07 [b]	3.9E-12	2.6E-03	1.5E-09 [b]	4.8E-13	2.6E-03	1.9E-10 [b]	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	55673-89-7	1.1E-12	1.0E-07	1.1E-05 [b]	5.5E-13	4.2E-06	1.3E-07 [b]	6.7E-14	9.0E-06	7.5E-09 [b]	1.1E-12	1.3E-05	8.7E-08 [b]	5.5E-13	2.6E-03	2.1E-10 [b]	6.7E-14	2.6E-03	2.6E-11 [b]	--
Octachlorodibenzofuran (OCDF)	39001-02-0	7.1E-12	3.4E-06	2.1E-06 [b]	3.4E-12	1.4E-04	2.5E-08 [b]	4.2E-13	3.0E-04	1.4E-09 [b]	7.1E-12	4.2E-04	1.7E-08 [b]	3.4E-12	0.085	4.1E-11 [b]	4.2E-13	0.085	5.0E-12 [b]	--
Total PCBs	1336-36-3	1.1E-08	5.3E-04	2.0E-05 [b]	5.2E-09	9.2E-03	5.7E-07 [b]	6.4E-10	0.020	3.2E-08 [b]	1.1E-08	[9]	--	5.2E-09	[10]	--	6.4E-10	[11]	--	--
2,4-Dinitrotoluene	121-14-2	1.3E-06	0.011	1.2E-04 [b]	6.5E-07	0.13	5.0E-06 [b]	8.0E-08	0.29	2.7E-07 [b]	1.3E-06	[9]	--	6.5E-07	[10]	--	8.0E-08	[11]	--	--
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	6.6E-08	0.080	8.3E-07 [b]	3.2E-08	5.00	6.4E-09 [b]	3.9E-09	11.0	3.6E-10 [b]	6.6E-08	[9]	--	3.2E-08	[10]	--	3.9E-09	[11]	--	--
Hydrogen cyanide	74-90-8	2.9E-05	[6]	--	1.4E-05	[7]	--	1.7E-06	[8]	--	2.9E-05	0.80	3.6E-05 [b]	1.4E-05	3.50	4.0E-06 [b]	1.7E-06	3.50	4.9E-07 [b]	--
Ethylene dichloride (EDC, 1,2-dichloroethane)	107-06-2	4.2E-05	0.038	1.1E-03 [b]	2.0E-05	0.46	4.4E-05 [b]	2.5E-06	1.00	2.5E-06 [b]	4.2E-05	7.00	5.9E-06 [b]	2.0E-05	31.0	6.5E-07 [b]	2.5E-06	31.0	8.0E-08 [b]	--
p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	4.0E-04	0.091	4.4E-03 [b]	1.9E-04	1.10	1.7E-04 [b]	2.4E-05	2.40	9.8E-06 [b]	4.0E-04	60.0	6.6E-06 [b]	1.9E-04	260	7.4E-07 [b]	2.4E-05	260	9.1E-08 [b]	--
2,4,6-Trichlorophenol	88-06-2	2.8E-07	0.050	5.7E-06 [b]	1.4E-07	0.60	2.3E-07 [b]	1.7E-08	1.30	1.3E-08 [b]	2.8E-07	[9]	--	1.4E-07	[10]	--	1.7E-08	[11]	--	--
Pentachlorophenol	87-86-5	3.0E-07	0.20	1.5E-06 [b]	1.5E-07	2.40	6.1E-08 [b]	1.8E-08	5.10	3.5E-09 [b]	3.0E-07	[9]	--	1.5E-07	[10]	--	1.8E-08	[11]	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	3.5E-05	3.80	9.2E-06 [b]	1.7E-05	46.0	3.7E-07 [b]	2.1E-06	100.0	2.1E-08 [b]	3.5E-05	41.0	8.5E-07 [b]	1.7E-05	180	9.4E-08 [b]	2.1E-06	180	1.2E-08 [b]	--
KILN1_1																				
Cumulative TEU Risk		--	--	**0.52**	--	--	**6.5E-03**	--	--	**2.2E-05**	--	--	**0.014**	--	--	**4.9E-04**	--	--	**3.7E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**65.7**			**9.95**			**0.075**			**65.7**			**9.95**			**0.075**			--
Acetaldehyde	75-07-0	0.21	0.45	0.47 [b]	0.032	5.50	5.9E-03 [b]	2.4E-04	12.0	2.0E-05 [b]	0.21	140	1.5E-03 [b]	0.032	620	5.2E-05 [b]	2.4E-04	620	3.9E-07 [b]	--
Acrolein	107-02-8	3.8E-03	[6]	--	5.8E-04	[7]	--	4.3E-06	[8]	--	3.8E-03	0.35	0.011 [b]	5.8E-04	1.50	3.9E-04 [b]	4.3E-06	1.50	2.9E-06 [b]	--
Formaldehyde	50-00-0	8.5E-03	0.17	0.050 [b]	1.3E-03	2.00	6.5E-04 [b]	9.7E-06	4.30	2.3E-06 [b]	8.5E-03	9.00	9.5E-04 [b]	1.3E-03	40.0	3.2E-05 [b]	9.7E-06	40.0	2.4E-07 [b]	--
Methanol	67-56-1	0.29	[6]	--	0.043	[7]	--	3.3E-04	[8]	--	0.29	4,000	7.1E-05 [b]	0.043	18,000	2.4E-06 [b]	3.3E-04	18,000	1.8E-08 [b]	--
Propionaldehyde	123-38-6	3.7E-03	[6]	--	5.6E-04	[7]	--	4.2E-06	[8]	--	3.7E-03	8.00	4.6E-04 [b]	5.6E-04	35.0	1.6E-05 [b]	4.2E-06	35.0	1.2E-07 [b]	--
KILN1_2																				
Cumulative TEU Risk		--	--	**0.54**	--	--	**6.6E-03**	--	--	**2.2E-05**	--	--	**0.014**	--	--	**4.9E-04**	--	--	**3.7E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**67.4**			**10.0**			**0.075**			**67.4**			**10.0**			**0.075**			--
Acetaldehyde	75-07-0	0.22	0.45	0.48 [b]	0.032	5.50	5.9E-03 [b]	2.4E-04	12.0	2.0E-05 [b]	0.22	140	1.6E-03 [b]	0.032	620	5.2E-05 [b]	2.4E-04	620	3.9E-07 [b]	--
Acrolein	107-02-8	3.9E-03	[6]	--	5.8E-04	[7]	--	4.3E-06	[8]	--	3.9E-03	0.35	0.011 [b]	5.8E-04	1.50	3.9E-04 [b]	4.3E-06	1.50	2.9E-06 [b]	--
Formaldehyde	50-00-0	8.8E-03	0.17	0.052 [b]	1.3E-03	2.00	6.5E-04 [b]	9.7E-06	4.30	2.3E-06 [b]	8.8E-03	9.00	9.7E-04 [b]	1.3E-03	40.0	3.3E-05 [b]	9.7E-06	40.0	2.4E-07 [b]	--
Methanol	67-56-1	0.29	[6]	--	0.044	[7]	--	3.2E-04	[8]	--	0.29	4,000	7.3E-05 [b]	0.044	18,000	2.4E-06 [b]	3.2E-04	18,000	1.8E-08 [b]	--
Propionaldehyde	123-38-6	3.8E-03	[6]	--	5.6E-04	[7]	--	4.2E-06	[8]	--	3.8E-03	8.00	4.7E-04 [b]	5.6E-04	35.0	1.6E-05 [b]	4.2E-06	35.0	1.2E-07 [b]	--
KILN1_3																				
Cumulative TEU Risk		--	--	**0.55**	--	--	**6.6E-03**	--	--	**2.2E-05**	--	--	**0.015**	--	--	**5.0E-04**	--	--	**3.7E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**69.1**			**10.1**			**0.075**			**69.1**			**10.1**			**0.075**			--
Acetaldehyde	75-07-0	0.22	0.45	0.50 [b]	0.033	5.50	6.0E-03 [b]	2.4E-04	12.0	2.0E-05 [b]	0.22	140	1.6E-03 [b]	0.033	620	5.3E-05 [b]	2.4E-04	620	3.9E-07 [b]	--
Acrolein	107-02-8	4.0E-03	[6]	--	5.9E-04	[7]	--	4.3E-06	[8]	--	4.0E-03	0.35	0.011 [b]	5.9E-04	1.50	3.9E-04 [b]	4.3E-06	1.50	2.9E-06 [b]	--
Formaldehyde	50-00-0	9.0E-03	0.17	0.053 [b]	1.3E-03	2.00	6.6E-04 [b]	9.7E-06	4.30	2.3E-06 [b]	9.0E-03	9.00	1.0E-03 [b]	1.3E-03	40.0	3.3E-05 [b]	9.7E-06	40.0	2.4E-07 [b]	--
Methanol	67-56-1	0.30	[6]	--	0.044	[7]	--	3.2E-04	[8]	--	0.30	4,000	7.5E-05 [b]	0.044	18,000	2.4E-06 [b]	3.2E-04	18,000	1.8E-08 [b]	--
Propionaldehyde	123-38-6	3.9E-03	[6]	--	5.7E-04	[7]	--	4.2E-06	[8]	--	3.9E-03	8.00	4.9E-04 [b]	5.7E-04	35.0	1.6E-05 [b]	4.2E-06	35.0	1.2E-07 [b]	--

Toxic Air Contaminant	CAS	Cancer									Noncancer									
		Residential			Worker			Child			Residential			Worker			Child			Acute
		Calculated Conc. (a) (ug/m^3)	RBC (2) (ug/m^3)	Excess Risk Per Million	Calculated Conc. (a) (ug/m^3)	RBC (2) (ug/m^3)	Excess Risk Per Million	Calculated Conc. (a) (ug/m^3)	RBC (2) (ug/m^3)	Excess Risk Per Million	Calculated Conc. (a) (ug/m^3)	RBC (2) (ug/m^3)	Hazard Index	Calculated Conc. (a) (ug/m^3)	RBC (ug/m^3)	Hazard Index	Calculated Conc. (a) (ug/m^3)	RBC (ug/m^3)	Hazard Index	Hazard Index (3)
KILN1_4																				
Cumulative TEU Risk		--	--	**0.56**	--	--	**6.7E-03**	--	--	**2.2E-05**	--	--	**0.015**	--	--	**5.0E-04**	--	--	**3.7E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**70.8**			**10.2**			**0.075**			**70.8**			**10.2**			**0.075**			--
Acetaldehyde	75-07-0	0.23	0.45	0.51 (b)	0.033	5.50	6.0E-03 (b)	2.4E-04	12.0	2.0E-05 (b)	0.23	140	1.6E-03 (b)	0.033	620	5.3E-05 (b)	2.4E-04	620	3.9E-07 (b)	--
Acrolein	107-02-8	4.1E-03	(6)	--	5.9E-04	(7)	--	4.3E-06	(8)	--	4.1E-03	0.35	0.012 (b)	5.9E-04	1.50	4.0E-04 (b)	4.3E-06	1.50	2.9E-06 (b)	--
Formaldehyde	50-00-0	9.2E-03	0.17	0.054 (b)	1.3E-03	2.00	6.6E-04 (b)	9.7E-06	4.30	2.3E-06 (b)	9.2E-03	9.00	1.0E-03 (b)	1.3E-03	40.0	3.3E-05 (b)	9.7E-06	40.0	2.4E-07 (b)	--
Methanol	67-56-1	0.31	(6)	--	0.044	(7)	--	3.2E-04	(8)	--	0.31	4,000	7.7E-05 (b)	0.044	18,000	2.5E-06 (b)	3.2E-04	18,000	1.8E-08 (b)	--
Propionaldehyde	123-38-6	4.0E-03	(6)	--	5.7E-04	(7)	--	4.2E-06	(8)	--	4.0E-03	8.00	5.0E-04 (b)	5.7E-04	35.0	1.6E-05 (b)	4.2E-06	35.0	1.2E-07 (b)	--
KILN2_1																				
Cumulative TEU Risk		--	--	**1.02**	--	--	**0.015**	--	--	**5.9E-05**	--	--	**0.027**	--	--	**1.1E-03**	--	--	**9.6E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**47.9**			**8.49**			**0.073**			**47.9**			**8.49**			**0.073**			--
Acetaldehyde	75-07-0	0.41	0.45	0.92 (b)	0.073	5.50	0.013 (b)	6.3E-04	12.0	5.3E-05 (b)	0.41	140	3.0E-03 (b)	0.073	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	7.4E-03	(6)	--	7.4E-03	(7)	--	1.1E-05	(8)	--	7.4E-03	0.35	0.021 (b)	1.3E-03	1.50	8.8E-04 (b)	1.1E-05	1.50	7.6E-06 (b)	--
Formaldehyde	50-00-0	0.017	0.17	0.098 (b)	2.9E-03	2.00	1.5E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.017	9.00	1.8E-03 (b)	2.9E-03	40.0	7.4E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.55	(6)	--	0.098	(7)	--	8.5E-04	(8)	--	0.55	4,000	1.4E-04 (b)	0.098	18,000	5.5E-06 (b)	8.5E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	7.2E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	7.2E-03	8.00	9.0E-04 (b)	1.3E-03	35.0	3.6E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN2_2																				
Cumulative TEU Risk		--	--	**1.03**	--	--	**0.015**	--	--	**5.8E-05**	--	--	**0.027**	--	--	**1.1E-03**	--	--	**9.6E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**48.7**			**8.58**			**0.073**			**48.7**			**8.58**			**0.073**			--
Acetaldehyde	75-07-0	0.42	0.45	0.93 (b)	0.074	5.50	0.013 (b)	6.3E-04	12.0	5.3E-05 (b)	0.42	140	3.0E-03 (b)	0.074	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	7.5E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	7.5E-03	0.35	0.022 (b)	1.3E-03	1.50	8.9E-04 (b)	1.1E-05	1.50	7.6E-06 (b)	--
Formaldehyde	50-00-0	0.017	0.17	0.099 (b)	3.0E-03	2.00	1.5E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.017	9.00	1.9E-03 (b)	3.0E-03	40.0	7.4E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.56	(6)	--	0.099	(7)	--	8.5E-04	(8)	--	0.56	4,000	1.4E-04 (b)	0.099	18,000	5.5E-06 (b)	8.5E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	7.3E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	7.3E-03	8.00	9.1E-04 (b)	1.3E-03	35.0	3.7E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN2_3																				
Cumulative TEU Risk		--	--	**1.05**	--	--	**0.015**	--	--	**5.8E-05**	--	--	**0.028**	--	--	**1.1E-03**	--	--	**9.6E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**49.3**			**8.66**			**0.073**			**49.3**			**8.66**			**0.073**			--
Acetaldehyde	75-07-0	0.43	0.45	0.95 (b)	0.075	5.50	0.014 (b)	6.3E-04	12.0	5.3E-05 (b)	0.43	140	3.0E-03 (b)	0.075	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	7.6E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	7.6E-03	0.35	0.022 (b)	1.3E-03	1.50	9.0E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	0.017	0.17	0.10 (b)	3.0E-03	2.00	1.5E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.017	9.00	1.9E-03 (b)	3.0E-03	40.0	7.5E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.57	(6)	--	0.10	(7)	--	8.5E-04	(8)	--	0.57	4,000	1.4E-04 (b)	0.10	18,000	5.6E-06 (b)	8.5E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	7.4E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	7.4E-03	8.00	9.2E-04 (b)	1.3E-03	35.0	3.7E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN3_1																				
Cumulative TEU Risk		--	--	**0.87**	--	--	**0.015**	--	--	**5.8E-05**	--	--	**0.023**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**41.1**			**8.41**			**0.073**			**41.1**			**8.41**			**0.073**			--
Acetaldehyde	75-07-0	0.36	0.45	0.79 (b)	0.073	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.36	140	2.5E-03 (b)	0.073	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	6.4E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	6.4E-03	0.35	0.018 (b)	1.3E-03	1.50	8.7E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	0.014	0.17	0.084 (b)	2.9E-03	2.00	1.5E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.014	9.00	1.6E-03 (b)	2.9E-03	40.0	7.3E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.48	(6)	--	0.097	(7)	--	8.5E-04	(8)	--	0.48	4,000	1.2E-04 (b)	0.097	18,000	5.4E-06 (b)	8.5E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	6.2E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	6.2E-03	8.00	7.7E-04 (b)	1.3E-03	35.0	3.6E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN3_2																				
Cumulative TEU Risk		--	--	**0.88**	--	--	**0.015**	--	--	**5.8E-05**	--	--	**0.023**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**41.2**			**8.49**			**0.073**			**41.2**			**8.49**			**0.073**			--
Acetaldehyde	75-07-0	0.36	0.45	0.79 (b)	0.073	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.36	140	2.5E-03 (b)	0.073	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	6.4E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	6.4E-03	0.35	0.018 (b)	1.3E-03	1.50	8.8E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	0.014	0.17	0.084 (b)	2.9E-03	2.00	1.5E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.014	9.00	1.6E-03 (b)	2.9E-03	40.0	7.4E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.48	(6)	--	0.098	(7)	--	8.4E-04	(8)	--	0.48	4,000	1.2E-04 (b)	0.098	18,000	5.5E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	6.2E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	6.2E-03	8.00	7.7E-04 (b)	1.3E-03	35.0	3.6E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN3_3																				
Cumulative TEU Risk		--	--	**0.87**	--	--	**0.015**	--	--	**5.8E-05**	--	--	**0.023**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**41.1**			**8.57**			**0.073**			**41.1**			**8.57**			**0.073**			--
Acetaldehyde	75-07-0	0.36	0.45	0.79 (b)	0.074	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.36	140	2.5E-03 (b)	0.074	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	6.4E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	6.4E-03	0.35	0.018 (b)	1.3E-03	1.50	8.9E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	0.014	0.17	0.084 (b)	3.0E-03	2.00	1.5E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.014	9.00	1.6E-03 (b)	3.0E-03	40.0	7.4E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.48	(6)	--	0.099	(7)	--	8.4E-04	(8)	--	0.48	4,000	1.2E-04 (b)	0.099	18,000	5.5E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	6.2E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	6.2E-03	8.00	7.7E-04 (b)	1.3E-03	35.0	3.7E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN4_1																				
Cumulative TEU Risk		--	--	**0.74**	--	--	**0.014**	--	--	**5.8E-05**	--	--	**0.020**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**35.0**			**8.30**			**0.073**			**35.0**			**8.30**			**0.073**			--
Acetaldehyde	75-07-0	0.30	0.45	0.67 (b)	0.072	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.30	140	2.2E-03 (b)	0.072	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	5.4E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	5.4E-03	0.35	0.016 (b)	1.3E-03	1.50	8.6E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	0.012	0.17	0.071 (b)	2.9E-03	2.00	1.4E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.012	9.00	1.3E-03 (b)	2.9E-03	40.0	7.2E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.41	(6)	--	0.096	(7)	--	8.4E-04	(8)	--	0.41	4,000	1.0E-04 (b)	0.096	18,000	5.3E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	5.3E-03	(6)	--	1.2E-03	(7)	--	1.1E-05	(8)	--	5.3E-03	8.00	6.6E-04 (b)	1.2E-03	35.0	3.6E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN4_2																				
Cumulative TEU Risk		--	--	**0.74**	--	--	**0.015**	--	--	**5.8E-05**	--	--	**0.020**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**34.7**			**8.38**			**0.073**			**34.7**			**8.38**			**0.073**			--
Acetaldehyde	75-07-0	0.30	0.45	0.67 (b)	0.072	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.30	140	2.1E-03 (b)	0.072	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	5.4E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	5.4E-03	0.35	0.015 (b)	1.3E-03	1.50	8.7E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	0.012	0.17	0.071 (b)	2.9E-03	2.00	1.5E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.012	9.00	1.3E-03 (b)	2.9E-03	40.0	7.3E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.40	(6)	--	0.097	(7)	--	8.4E-04	(8)	--	0.40	4,000	1.0E-04 (b)	0.097	18,000	5.4E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	5.2E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	5.2E-03	8.00	6.5E-04 (b)	1.3E-03	35.0	3.6E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN4_3																				
Cumulative TEU Risk		--	--	**0.73**	--	--	**0.015**	--	--	**5.8E-05**	--	--	**0.019**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**34.4**			**8.45**			**0.073**			**34.4**			**8.45**			**0.073**			--
Acetaldehyde	75-07-0	0.30	0.45	0.66 (b)	0.073	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.30	140	2.1E-03 (b)	0.073	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	5.3E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	5.3E-03	0.35	0.015 (b)	1.3E-03	1.50	8.7E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	0.012	0.17	0.070 (b)	2.9E-03	2.00	1.5E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.012	9.00	1.3E-03 (b)	2.9E-03	40.0	7.3E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.40	(6)	--	0.098	(7)	--	8.4E-04	(8)	--	0.40	4,000	1.0E-04 (b)	0.098	18,000	5.4E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	5.2E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	5.2E-03	8.00	6.4E-04 (b)	1.3E-03	35.0	3.6E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN5_1																				
Cumulative TEU Risk		--	--	**0.63**	--	--	**0.014**	--	--	**5.8E-05**	--	--	**0.017**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**29.6**			**8.18**			**0.073**			**29.6**			**8.18**			**0.073**			--
Acetaldehyde	75-07-0	0.26	0.45	0.57 (b)	0.071	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.26	140	1.8E-03 (b)	0.071	620	1.1E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	4.6E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	4.6E-03	0.35	0.013 (b)	1.3E-03	1.50	8.5E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	0.010	0.17	0.060 (b)	2.8E-03	2.00	1.4E-03 (b)	2.5E-05	4.30	5.9E-06 (b)	0.010	9.00	1.1E-03 (b)	2.8E-03	40.0	7.1E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.34	(6)	--	0.095	(7)	--	8.4E-04	(8)	--	0.34	4,000	8.6E-05 (b)	0.095	18,000	5.3E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	4.4E-03	(6)	--	1.2E-03	(7)	--	1.1E-05	(8)	--	4.4E-03	8.00	5.6E-04 (b)	1.2E-03	35.0	3.5E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN5_2																				
Cumulative TEU Risk		--	--	**0.62**	--	--	**0.014**	--	--	**5.8E-05**	--	--	**0.016**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**29.2**			**8.25**			**0.073**			**29.2**			**8.25**			**0.073**			--
Acetaldehyde	75-07-0	0.25	0.45	0.56 (b)	0.071	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.25	140	1.8E-03 (b)	0.071	620	1.1E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	4.5E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	4.5E-03	0.35	0.013 (b)	1.3E-03	1.50	8.5E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	0.010	0.17	0.060 (b)	2.9E-03	2.00	1.4E-03 (b)	2.5E-05	4.30	5.8E-06 (b)	0.010	9.00	1.1E-03 (b)	2.9E-03	40.0	7.1E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.34	(6)	--	0.096	(7)	--	8.4E-04	(8)	--	0.34	4,000	8.5E-05 (b)	0.096	18,000	5.3E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	4.4E-03	(6)	--	1.2E-03	(7)	--	1.1E-05	(8)	--	4.4E-03	8.00	5.5E-04 (b)	1.2E-03	35.0	3.5E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN5_3																				
Cumulative TEU Risk		--	--	**0.61**	--	--	**0.014**	--	--	**5.8E-05**	--	--	**0.016**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**28.7**			**8.31**			**0.073**			**28.7**			**8.31**			**0.073**			--
Acetaldehyde	75-07-0	0.25	0.45	0.55 (b)	0.072	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.25	140	1.8E-03 (b)	0.072	620	1.2E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	4.5E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	4.5E-03	0.35	0.013 (b)	1.3E-03	1.50	8.6E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	1.0E-02	0.17	0.059 (b)	2.9E-03	2.00	1.4E-03 (b)	2.5E-05	4.30	5.8E-06 (b)	1.0E-02	9.00	1.1E-03 (b)	2.9E-03	40.0	7.2E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.33	(6)	--	0.096	(7)	--	8.4E-04	(8)	--	0.33	4,000	8.3E-05 (b)	0.096	18,000	5.4E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	4.3E-03	(6)	--	1.2E-03	(7)	--	1.1E-05	(8)	--	4.3E-03	8.00	5.4E-04 (b)	1.2E-03	35.0	3.6E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--

Toxic Air Contaminant	CAS	Cancer: Residential Calculated Conc. (a) (ug/m^3)	Cancer: Residential RBC (2) (ug/m^3)	Cancer: Residential Excess Risk Per Million	Cancer: Worker Calculated Conc. (a) (ug/m^3)	Cancer: Worker RBC (2) (ug/m^3)	Cancer: Worker Excess Risk Per Million	Cancer: Child Calculated Conc. (a) (ug/m^3)	Cancer: Child RBC (2) (ug/m^3)	Cancer: Child Excess Risk Per Million	Noncancer: Residential Calculated Conc. (a) (ug/m^3)	Noncancer: Residential RBC (2) (ug/m^3)	Noncancer: Residential Hazard Index	Noncancer: Worker Calculated Conc. (a) (ug/m^3)	Noncancer: Worker RBC (ug/m^3)	Noncancer: Worker Hazard Index	Noncancer: Child Calculated Conc. (a) (ug/m^3)	Noncancer: Child RBC (ug/m^3)	Noncancer: Child Hazard Index	Acute Hazard Index (3)
KILN6_1																				
Cumulative TEU Risk		--	--	**0.54**	--	--	**0.014**	--	--	**5.8E-05**	--	--	**0.014**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**25.3**			**8.04**			**0.072**			**25.3**			**8.04**			**0.072**			--
Acetaldehyde	75-07-0	0.22	0.45	0.49 (b)	0.069	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.22	140	1.6E-03 (b)	0.069	620	1.1E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	3.9E-03	(6)	--	1.2E-03	(7)	--	1.1E-05	(8)	--	3.9E-03	0.35	0.011 (b)	1.2E-03	1.50	8.3E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	8.8E-03	0.17	0.052 (b)	2.8E-03	2.00	1.4E-03 (b)	2.5E-05	4.30	5.8E-06 (b)	8.8E-03	9.00	9.8E-04 (b)	2.8E-03	40.0	7.0E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.29	(6)	--	0.093	(7)	--	8.4E-04	(8)	--	0.29	4,000	7.3E-05 (b)	0.093	18,000	5.2E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	3.8E-03	(6)	--	1.2E-03	(7)	--	1.1E-05	(8)	--	3.8E-03	8.00	4.8E-04 (b)	1.2E-03	35.0	3.4E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN6_2																				
Cumulative TEU Risk		--	--	**0.53**	--	--	**0.014**	--	--	**5.8E-05**	--	--	**0.014**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**24.9**			**8.10**			**0.072**			**24.9**			**8.10**			**0.072**			--
Acetaldehyde	75-07-0	0.22	0.45	0.48 (b)	0.070	5.50	0.013 (b)	6.3E-04	12.0	5.2E-05 (b)	0.22	140	1.5E-03 (b)	0.070	620	1.1E-04 (b)	6.3E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	3.9E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	3.9E-03	0.35	0.011 (b)	1.3E-03	1.50	8.4E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	8.6E-03	0.17	0.051 (b)	2.8E-03	2.00	1.4E-03 (b)	2.5E-05	4.30	5.8E-06 (b)	8.6E-03	9.00	9.6E-04 (b)	2.8E-03	40.0	7.0E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.29	(6)	--	0.094	(7)	--	8.4E-04	(8)	--	0.29	4,000	7.2E-05 (b)	0.094	18,000	5.2E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	3.7E-03	(6)	--	1.2E-03	(7)	--	1.1E-05	(8)	--	3.7E-03	8.00	4.7E-04 (b)	1.2E-03	35.0	3.5E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
KILN6_3																				
Cumulative TEU Risk		--	--	**0.52**	--	--	**0.014**	--	--	**5.8E-05**	--	--	**0.014**	--	--	**1.1E-03**	--	--	**9.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**24.5**			**8.16**			**0.072**			**24.5**			**8.16**			**0.072**			--
Acetaldehyde	75-07-0	0.21	0.45	0.47 (b)	0.071	5.50	0.013 (b)	6.2E-04	12.0	5.2E-05 (b)	0.21	140	1.5E-03 (b)	0.071	620	1.1E-04 (b)	6.2E-04	620	1.0E-06 (b)	--
Acrolein	107-02-8	3.8E-03	(6)	--	1.3E-03	(7)	--	1.1E-05	(8)	--	3.8E-03	0.35	0.011 (b)	1.3E-03	1.50	8.4E-04 (b)	1.1E-05	1.50	7.5E-06 (b)	--
Formaldehyde	50-00-0	8.5E-03	0.17	0.050 (b)	2.8E-03	2.00	1.4E-03 (b)	2.5E-05	4.30	5.8E-06 (b)	8.5E-03	9.00	9.4E-04 (b)	2.8E-03	40.0	7.1E-05 (b)	2.5E-05	40.0	6.3E-07 (b)	--
Methanol	67-56-1	0.28	(6)	--	0.095	(7)	--	8.4E-04	(8)	--	0.28	4,000	7.1E-05 (b)	0.095	18,000	5.3E-06 (b)	8.4E-04	18,000	4.7E-08 (b)	--
Propionaldehyde	123-38-6	3.7E-03	(6)	--	1.2E-03	(7)	--	1.1E-05	(8)	--	3.7E-03	8.00	4.6E-04 (b)	1.2E-03	35.0	3.5E-05 (b)	1.1E-05	35.0	3.1E-07 (b)	--
RF12_STK																				
Cumulative TEU Risk		--	--	**0.14**	--	--	**8.5E-03**	--	--	**8.4E-05**	--	--	**0.016**	--	--	**2.7E-03**	--	--	**5.8E-05**	--
Dispersion Factor (ug/m^3/[g/s])		**3.31**			**2.44**			**0.052**			**3.31**			**2.44**			**0.052**			--
Acetaldehyde	75-07-0	0.047	0.45	0.10 (b)	0.035	5.50	6.3E-03 (b)	7.5E-04	12.0	6.2E-05 (b)	0.047	140	3.4E-04 (b)	0.035	620	5.6E-05 (b)	7.5E-04	620	1.2E-06 (b)	--
Acetone	67-64-1	5.7E-03	(6)	--	4.2E-03	(7)	--	9.0E-05	(8)	--	5.7E-03	31,000	1.8E-07 (b)	4.2E-03	140,000	3.0E-08 (b)	9.0E-05	140,000	6.4E-10 (b)	--
Acrolein	107-02-8	5.2E-03	(6)	--	3.8E-03	(7)	--	8.2E-05	(8)	--	5.2E-03	0.35	0.015 (b)	3.8E-03	1.50	2.5E-03 (b)	8.2E-05	1.50	5.5E-05 (b)	--
Formaldehyde	50-00-0	6.0E-03	0.17	0.036 (b)	4.5E-03	2.00	2.2E-03 (b)	9.5E-05	4.30	2.2E-05 (b)	6.0E-03	9.00	6.7E-04 (b)	4.5E-03	40.0	1.1E-04 (b)	9.5E-05	40.0	2.4E-06 (b)	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	4.2E-04	(6)	--	3.1E-04	(7)	--	6.7E-06	(8)	--	4.2E-04	3,000	1.4E-07 (b)	3.1E-04	13,000	2.4E-08 (b)	6.7E-06	13,000	5.1E-10 (b)	--
Methanol	67-56-1	5.4E-03	(6)	--	4.0E-03	(7)	--	8.5E-05	(8)	--	5.4E-03	4,000	1.3E-06 (b)	4.0E-03	18,000	2.2E-07 (b)	8.5E-05	18,000	4.7E-09 (b)	--
2-Butanone (Methyl ethyl ketone)	78-93-3	2.4E-04	(6)	--	1.8E-04	(7)	--	3.8E-06	(8)	--	2.4E-04	5,000	4.8E-08 (b)	1.8E-04	22,000	8.0E-09 (b)	3.8E-06	22,000	1.7E-10 (b)	--
Propionaldehyde	123-38-6	6.5E-04	(6)	--	4.8E-04	(7)	--	1.0E-05	(8)	--	6.5E-04	8.00	8.1E-05 (b)	4.8E-04	35.0	1.4E-05 (b)	1.0E-05	35.0	2.9E-07 (b)	--
Styrene	100-42-5	3.1E-04	(6)	--	2.3E-04	(7)	--	4.9E-06	(8)	--	3.1E-04	1,000	3.1E-07 (b)	2.3E-04	4,400	5.2E-08 (b)	4.9E-06	4,400	1.1E-09 (b)	--
PVUV_STK																				
Cumulative TEU Risk		--	--	**0.034**	--	--	**1.1E-03**	--	--	**2.4E-05**	--	--	**5.4E-04**	--	--	**4.6E-05**	--	--	**2.2E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**0.83**			**0.31**			**0.015**			**0.83**			**0.31**			**0.015**			--
Acetaldehyde	75-07-0	4.1E-03	0.45	9.1E-03 (b)	1.5E-03	5.50	2.8E-04 (b)	7.3E-05	12.0	6.1E-06 (b)	4.1E-03	140	2.9E-05 (b)	1.5E-03	620	2.5E-06 (b)	7.3E-05	620	1.2E-07 (b)	--
Acetone	67-64-1	4.8E-03	(6)	--	1.8E-03	(7)	--	8.6E-05	(8)	--	4.8E-03	31,000	1.6E-07 (b)	1.8E-03	140,000	1.3E-08 (b)	8.6E-05	140,000	6.1E-10 (b)	--
Formaldehyde	50-00-0	4.2E-03	0.17	0.025 (b)	1.6E-03	2.00	8.0E-04 (b)	7.5E-05	4.30	1.7E-05 (b)	4.2E-03	9.00	4.7E-04 (b)	1.6E-03	40.0	4.0E-05 (b)	7.5E-05	40.0	1.9E-06 (b)	--
Methanol	67-56-1	0.19	(6)	--	0.070	(7)	--	3.3E-03	(8)	--	0.19	4,000	4.6E-05 (b)	0.070	18,000	3.9E-06 (b)	3.3E-03	18,000	1.8E-07 (b)	--
FORM_STK																				
Cumulative TEU Risk		--	--	**0.085**	--	--	**5.1E-03**	--	--	**4.3E-05**	--	--	**5.5E-03**	--	--	**9.1E-04**	--	--	**1.7E-05**	--
Dispersion Factor (ug/m^3/[g/s])		**4.98**			**3.56**			**0.065**			**4.98**			**3.56**			**0.065**			--
Acetaldehyde	75-07-0	0.019	0.45	0.042 (b)	0.013	5.50	2.4E-03 (b)	2.4E-04	12.0	2.0E-05 (b)	0.019	140	1.3E-04 (b)	0.013	620	2.2E-05 (b)	2.4E-04	620	3.9E-07 (b)	--
Acetone	67-64-1	8.2E-03	(6)	--	5.9E-03	(7)	--	1.1E-04	(8)	--	8.2E-03	31,000	2.7E-07 (b)	5.9E-03	140,000	4.2E-08 (b)	1.1E-04	140,000	7.7E-10 (b)	--
Acrolein	107-02-8	1.6E-03	(6)	--	1.1E-03	(7)	--	2.1E-05	(8)	--	1.6E-03	0.35	4.5E-03 (b)	1.1E-03	1.50	7.6E-04 (b)	2.1E-05	1.50	1.4E-05 (b)	--
Formaldehyde	50-00-0	7.4E-03	0.17	0.044 (b)	5.3E-03	2.00	2.7E-03 (b)	9.6E-05	4.30	2.2E-05 (b)	7.4E-03	9.00	8.2E-04 (b)	5.3E-03	40.0	1.3E-04 (b)	9.6E-05	40.0	2.4E-06 (b)	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	5.9E-04	(6)	--	4.2E-04	(7)	--	7.7E-06	(8)	--	5.9E-04	3,000	2.0E-07 (b)	4.2E-04	13,000	3.2E-08 (b)	7.7E-06	13,000	5.9E-10 (b)	--
Methanol	67-56-1	0.042	(6)	--	0.030	(7)	--	5.5E-04	(8)	--	0.042	4,000	1.1E-05 (b)	0.030	18,000	1.7E-06 (b)	5.5E-04	18,000	3.1E-08 (b)	--
2-Butanone (Methyl ethyl ketone)	78-93-3	1.2E-03	(6)	--	8.3E-04	(7)	--	1.5E-05	(8)	--	1.2E-03	5,000	2.3E-07 (b)	8.3E-04	22,000	3.8E-08 (b)	1.5E-05	22,000	6.9E-10 (b)	--
Toluene	108-88-3	1.2E-03	(6)	--	8.3E-04	(7)	--	1.5E-05	(8)	--	1.2E-03	5,000	2.3E-07 (b)	8.3E-04	22,000	3.8E-08 (b)	1.5E-05	22,000	6.9E-10 (b)	--
HEADBOX																				
Cumulative TEU Risk		--	--	**0.012**	--	--	**1.1E-03**	--	--	**9.1E-06**	--	--	**1.2E-04**	--	--	**2.9E-05**	--	--	**5.3E-07**	--
Dispersion Factor (ug/m^3/[g/s])		**3.48**			**3.87**			**0.071**			**3.48**			**3.87**			**0.071**			--
Acetaldehyde	75-07-0	3.6E-03	0.45	7.9E-03 (b)	3.9E-03	5.50	7.2E-04 (b)	7.2E-05	12.0	6.0E-06 (b)	3.6E-03	140	2.5E-05 (b)	3.9E-03	620	6.4E-06 (b)	7.2E-05	620	1.2E-07 (b)	--
Acetone	67-64-1	9.4E-04	(6)	--	1.0E-03	(7)	--	1.9E-05	(8)	--	9.4E-04	31,000	3.0E-08 (b)	1.0E-03	140,000	7.4E-09 (b)	1.9E-05	140,000	1.4E-10 (b)	--
Acrolein	107-02-8	3.5E-23	(6)	--	3.9E-23	(7)	--	7.1E-25	(8)	--	3.5E-23	0.35	1.0E-22 (b)	3.9E-23	1.50	2.6E-23 (b)	7.1E-25	1.50	4.7E-25 (b)	--
Formaldehyde	50-00-0	6.6E-04	0.17	3.9E-03 (b)	7.4E-04	2.00	3.7E-04 (b)	1.3E-05	4.30	3.1E-06 (b)	6.6E-04	9.00	7.4E-05 (b)	7.4E-04	40.0	1.8E-05 (b)	1.3E-05	40.0	3.4E-07 (b)	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	1.2E-03	(6)	--	1.4E-03	(7)	--	2.5E-05	(8)	--	1.2E-03	3,000	4.1E-07 (b)	1.4E-03	13,000	1.0E-07 (b)	2.5E-05	13,000	1.9E-09 (b)	--
Phenol	108-95-2	7.4E-06	(6)	--	8.2E-06	(7)	--	1.5E-07	(8)	--	7.4E-06	200	3.7E-08 (b)	8.2E-06	880	9.4E-09 (b)	1.5E-07	880	1.7E-10 (b)	--
Propionaldehyde	123-38-6	1.3E-04	(6)	--	1.5E-04	(7)	--	2.7E-06	(8)	--	1.3E-04	8.00	1.6E-05 (b)	1.5E-04	35.0	4.2E-06 (b)	2.7E-06	35.0	7.6E-08 (b)	--
S_CYC																				
Cumulative TEU Risk		--	--	**0**	--	--	**0**	--	--	**0**	--	--	**1.5E-06**	--	--	**3.0E-07**	--	--	**3.8E-09**	--
Dispersion Factor (ug/m^3/[g/s])		**6.44**			**5.95**			**0.075**			**6.44**			**5.95**			**0.075**			--
Methanol	67-56-1	5.9E-03	(6)	--	5.5E-03	(7)	--	6.8E-05	(8)	--	5.9E-03	4,000	1.5E-06 (b)	5.5E-03	18,000	3.0E-07 (b)	6.8E-05	18,000	3.8E-09 (b)	--
FIRE																				
Cumulative TEU Risk		--	--	**0.074**	--	--	**2.7E-03**	--	--	**2.8E-05**	--	--	**1.0E-03**	--	--	**1.5E-04**	--	--	**1.8E-06**	--
Dispersion Factor (ug/m^3/[g/s])		**5.64**			**5.87**			**0.071**			**5.64**			**5.87**			**0.071**			--
Antimony and compounds	7440-36-0	1.9E-08	(6)	--	1.9E-08	(7)	--	2.3E-10	(8)	--	1.9E-08	0.30	6.2E-08 (b)	1.9E-08	1.30	1.5E-08 (b)	2.3E-10	1.30	1.8E-10 (b)	--
Arsenic and compounds	7440-38-2	9.3E-08	2.4E-05	3.9E-03 (b)	9.7E-08	6.2E-04	1.6E-04 (b)	1.2E-09	1.3E-03	9.0E-07 (b)	9.3E-08	1.7E-04	5.5E-04 (b)	9.7E-08	2.4E-03	4.1E-05 (b)	1.2E-09	2.4E-03	4.9E-07 (b)	--
Barium and compounds	7440-39-3	2.2E-08	(6)	--	2.3E-08	(7)	--	2.7E-10	(8)	--	2.2E-08	(9)	--	2.3E-08	(10)	--	2.7E-10	(11)	--	--
Beryllium and compounds	7440-41-7	2.8E-10	4.2E-04	6.6E-07 (b)	2.9E-10	5.0E-03	5.8E-08 (b)	3.5E-12	0.011	3.2E-10 (b)	2.8E-10	7.0E-03	4.0E-08 (b)	2.9E-10	0.031	9.4E-09 (b)	3.5E-12	0.031	1.1E-10 (b)	--
Cadmium and compounds	7440-43-9	8.8E-08	5.6E-04	1.6E-04 (b)	9.1E-08	6.7E-03	1.4E-05 (b)	1.1E-09	0.014	7.8E-08 (b)	8.8E-08	5.0E-03	1.8E-05 (b)	9.1E-08	0.037	2.5E-06 (b)	1.1E-09	0.037	3.0E-08 (b)	--
Chromium VI	18540299p	5.8E-09	3.1E-05	1.9E-04 (b)	6.1E-09	1.0E-03	6.1E-06 (b)	7.3E-11	5.2E-04	1.4E-07 (b)	5.8E-09	0.083	7.0E-08 (b)	6.1E-09	0.88	6.9E-09 (b)	7.3E-11	0.88	8.3E-11 (b)	--
Cobalt and compounds	7440-48-4	9.2E-10	(6)	--	9.6E-10	(7)	--	1.2E-11	(8)	--	9.2E-10	0.10	9.2E-09 (b)	9.6E-10	0.44	2.2E-09 (b)	1.2E-11	0.44	2.6E-11 (b)	--
Copper and compounds	7440-50-8	2.4E-07	(6)	--	2.5E-07	(7)	--	3.0E-09	(8)	--	2.4E-07	(9)	--	2.5E-07	(10)	--	3.0E-09	(11)	--	--
Lead and compounds	7439-92-1	4.8E-07	(6)	--	5.0E-07	(7)	--	6.1E-09	(8)	--	4.8E-07	0.15	3.2E-06 (b)	5.0E-07	0.66	7.6E-07 (b)	6.1E-09	0.66	9.2E-09 (b)	--
Phosphorus and compounds	504	4.9E-07	(6)	--	5.1E-07	(7)	--	6.2E-09	(8)	--	4.9E-07	(9)	--	5.1E-07	(10)	--	6.2E-09	(11)	--	--
Manganese and compounds	7439-96-5	1.8E-07	(6)	--	1.9E-07	(7)	--	2.3E-09	(8)	--	1.8E-07	0.090	2.0E-06 (b)	1.9E-07	0.40	4.7E-07 (b)	2.3E-09	0.40	5.7E-09 (b)	--
Mercury and compounds	7439-97-6	1.2E-07	(6)	--	1.2E-07	(7)	--	1.5E-09	(8)	--	1.2E-07	0.077	1.5E-06 (b)	1.2E-07	0.63	1.9E-07 (b)	1.5E-09	0.63	2.3E-09 (b)	--
Nickel and compounds	7440020in	2.3E-07	3.8E-03	6.0E-05 (b)	2.4E-07	0.046	5.2E-06 (b)	2.9E-09	0.10	2.9E-08 (b)	2.3E-07	0.014	1.6E-05 (b)	2.4E-07	0.062	3.8E-06 (b)	2.9E-09	0.062	4.6E-08 (b)	--
Selenium and compounds	7782-49-2	1.3E-07	(6)	--	1.3E-07	(7)	--	1.6E-09	(8)	--	1.3E-07	(9)	--	1.3E-07	(10)	--	1.6E-09	(11)	--	--
Silver and compounds	7440-22-4	2.8E-09	(6)	--	2.9E-09	(7)	--	3.5E-11	(8)	--	2.8E-09	(9)	--	2.9E-09	(10)	--	3.5E-11	(11)	--	--
Thailium and compounds	7440-28-0	1.4E-08	(6)	--	1.5E-08	(7)	--	1.8E-10	(8)	--	1.4E-08	(9)	--	1.5E-08	(10)	--	1.8E-10	(11)	--	--
Zinc and compounds	7440-66-6	3.1E-07	(6)	--	3.2E-07	(7)	--	3.8E-09	(8)	--	3.1E-07	(9)	--	3.2E-07	(10)	--	3.8E-09	(11)	--	--
Acetaldehyde	75-07-0	4.6E-05	0.45	1.0E-04 (b)	4.8E-05	5.50	8.7E-06 (b)	5.7E-07	12.0	4.8E-08 (b)	4.6E-05	140	3.3E-07 (b)	4.8E-05	620	7.7E-08 (b)	5.7E-07	620	9.2E-10 (b)	--
Acrolein	107-02-8	2.0E-06	(6)	--	2.1E-06	(7)	--	2.5E-08	(8)	--	2.0E-06	0.35	5.7E-06 (b)	2.1E-06	1.50	1.4E-06 (b)	2.5E-08	1.50	1.7E-08 (b)	--
Ammonia	7664-41-7	1.7E-04	(6)	--	1.8E-04	(7)	--	2.1E-06	(8)	--	1.7E-04	500	3.4E-07 (b)	1.8E-04	2,200	8.0E-08 (b)	2.1E-06	2,200	9.6E-10 (b)	--
Benzene	71-43-2	1.1E-05	0.13	8.4E-05 (b)	1.1E-05	1.50	7.5E-06 (b)	1.4E-07	3.30	4.1E-08 (b)	1.1E-05	3.00	3.6E-06 (b)	1.1E-05	13.0	8.7E-07 (b)	1.4E-07	13.0	1.0E-08 (b)	--
Chlorobenzene	108-90-7	1.2E-08	(6)	--	1.2E-08	(7)	--	1.5E-10	(8)	--	1.2E-08	50.0	2.3E-10 (b)	1.2E-08	220	5.5E-11 (b)	1.5E-10	220	6.7E-13 (b)	--
Ethyl benzene	100-41-4	6.4E-07	0.40	1.6E-06 (b)	6.6E-07	4.80	1.4E-07 (b)	8.0E-09	10.0	8.0E-10 (b)	6.4E-07	260	2.4E-09 (b)	6.6E-07	1,100	6.0E-10 (b)	8.0E-09	1,100	7.3E-12 (b)	--
Formaldehyde	50-00-0	1.0E-04	0.17	5.9E-04 (b)	1.0E-04	2.00	5.2E-05 (b)	1.3E-06	4.30	2.9E-07 (b)	1.0E-04	9.00	1.1E-05 (b)	1.0E-04	40.0	2.6E-06 (b)	1.3E-06	40.0	3.2E-08 (b)	--
Hexane	110-54-3	1.6E-06	(6)	--	1.6E-06	(7)	--	2.0E-08	(8)	--	1.6E-06	700	2.2E-09 (b)	1.6E-06	3,100	5.3E-10 (b)	2.0E-08	3,100	6.4E-12 (b)	--
1,3-Butadiene	106-99-0	1.3E-05	0.033	3.8E-04 (b)	1.3E-05	0.40	3.3E-05 (b)	1.6E-07	0.86	1.9E-07 (b)	1.3E-05	2.00	6.3E-06 (b)	1.3E-05	8.80	1.5E-06 (b)	1.6E-07	8.80	1.8E-08 (b)	--
Propylene	115-07-1	2.7E-05	(6)	--	2.9E-05	(7)	--	3.4E-07	(8)	--	2.7E-05	3,000	9.1E-09 (b)	2.9E-05	13,000	2.2E-09 (b)	3.4E-07	13,000	2.6E-11 (b)	--
Toluene	108-88-3	6.2E-06	(6)	--	6.4E-06	(7)	--	7.7E-08	(8)	--	6.2E-06	5,000	1.2E-09 (b)	6.4E-06	22,000	2.9E-10 (b)	7.7E-08	22,000	3.5E-12 (b)	--
Xylene (mixture)	1330-20-7	2.5E-06	(6)	--	2.6E-06	(7)	--	3.1E-08	(8)	--	2.5E-06	220	1.1E-08 (b)	2.6E-06	970	2.7E-09 (b)	3.1E-08	970	3.2E-11 (b)	--
Hydrochloric acid	7647-01-0	1.1E-05	(6)	--	1.1E-05	(7)	--	1.4E-07	(8)	--	1.1E-05	20.0	5.4E-07 (b)	1.1E-05	88.0	1.3E-07 (b)	1.4E-07	88.0	1.5E-09 (b)	--
DPM	200	2.0E-03	0.10	0.020 (b)	2.0E-03	1.20	1.7E-03 (b)	2.5E-05	2.60	9.4E-06 (b)	2.0E-03	5.00	3.9E-04 (b)	2.0E-03	22.0	9.3E-05 (b)	2.5E-05	22.0	1.1E-06 (b)	--
PAHs (excluding Naphthalene)	401	2.1E-06	4.3E-05	0.049 (b)	2.2E-06	3.0E-03	7.3E-04 (b)	2.7E-08	1.6E-03	1.7E-05 (b)	2.1E-06	(9)	--	2.2E-06	(10)	--	2.7E-08	(11)	--	--
Benzo[a]pyrene	50-32-8	2.1E-09	4.3E-05	4.8E-05 (b)	2.1E-09	3.0E-03	7.1E-07 (b)	2.6E-11	1.6E-03	1.6E-08 (b)	2.1E-09	2.0E-03	1.0E-06 (b)	2.1E-09	8.8E-03	2.4E-07 (b)	2.6E-11	8.8E-03	2.9E-09 (b)	--
Naphthalene	91-20-3	1.2E-06	0.029	4.0E-05 (b)	1.2E-06	0.35	3.4E-06 (b)	1.4E-08	0.76	1.9E-08 (b)	1.2E-06	3.70	3.1E-07 (b)	1.2E-06	16.0	7.5E-08 (b)	1.4E-08	16.0	9.0E-10 (b)	--

Toxic Air Contaminant	CAS	Cancer									Noncancer									
		Residential			Worker			Child			Residential			Worker			Child			Acute
		Calculated Conc. [a] (ug/m³)	RBC [2] (ug/m³)	Excess Risk Per Million	Calculated Conc. [a] (ug/m³)	RBC [2] (ug/m³)	Excess Risk Per Million	Calculated Conc. [a] (ug/m³)	RBC [2] (ug/m³)	Excess Risk Per Million	Calculated Conc. [a] (ug/m³)	RBC [2] (ug/m³)	Hazard Index	Calculated Conc. [a] (ug/m³)	RBC (ug/m³)	Hazard Index	Calculated Conc. [a] (ug/m³)	RBC (ug/m³)	Hazard Index	Hazard Index [3]
BGEN																				
Cumulative TEU Risk		--	--	**0.31**	--	--	**6.8E-03**	--	--	**1.2E-04**	--	--	**3.8E-03**	--	--	**3.7E-04**	--	--	**5.3E-06**	--
Dispersion Factor (ug/m³/[g/s])		**5.22**			**4.90**			**0.071**			**5.22**			**4.90**			**0.071**			--
Antimony and compounds	7440-36-0	9.8E-08	[6]	--	9.2E-08	[7]	--	1.3E-09	[8]	--	9.8E-08	0.30	3.3E-07 [b]	9.2E-08	1.30	7.0E-08 [b]	1.3E-09	1.30	1.0E-09 [b]	--
Arsenic and compounds	7440-38-2	4.9E-07	2.4E-05	0.020 [b]	4.6E-07	6.2E-04	7.4E-04 [b]	6.6E-09	1.3E-03	5.1E-06 [b]	4.9E-07	1.7E-04	2.9E-03 [b]	4.6E-07	2.4E-03	1.9E-04 [b]	6.6E-09	2.4E-03	2.8E-06 [b]	--
Barium and compounds	7440-39-3	1.1E-07	[6]	--	1.1E-07	[7]	--	1.6E-09	[8]	--	1.1E-07	[9]	--	1.1E-07	[10]	--	1.6E-09	[11]	--	--
Beryllium and compounds	7440-41-7	1.5E-09	4.2E-04	3.5E-06 [b]	1.4E-09	5.0E-03	2.7E-07 [b]	2.0E-11	0.011	1.8E-09 [b]	1.5E-09	7.0E-03	2.1E-07 [b]	1.4E-09	0.031	4.4E-08 [b]	2.0E-11	0.031	6.4E-10 [b]	--
Cadmium and compounds	7440-43-9	4.6E-07	5.6E-04	8.2E-04 [b]	4.3E-07	6.7E-03	6.4E-05 [b]	6.2E-09	0.014	4.4E-07 [b]	4.6E-07	5.0E-03	9.2E-05 [b]	4.3E-07	0.037	1.2E-05 [b]	6.2E-09	0.037	1.7E-07 [b]	--
Chromium VI	18540299p	3.1E-08	3.1E-05	9.9E-04 [b]	2.9E-08	1.0E-03	2.9E-05 [b]	4.1E-10	5.2E-04	8.0E-07 [b]	3.1E-08	0.083	3.7E-07 [b]	2.9E-08	0.88	3.3E-08 [b]	4.1E-10	0.88	4.7E-10 [b]	--
Cobalt and compounds	7440-48-4	4.8E-09	[6]	--	4.5E-09	[7]	--	6.5E-11	[8]	--	4.8E-09	0.10	4.8E-08 [b]	4.5E-09	0.44	1.0E-08 [b]	6.5E-11	0.44	1.5E-10 [b]	--
Copper and compounds	7440-50-8	1.3E-06	[6]	--	1.2E-06	[7]	--	1.7E-08	[8]	--	1.3E-06	[9]	--	1.2E-06	[10]	--	1.7E-08	[11]	--	--
Lead and compounds	7439-92-1	2.5E-06	[6]	--	2.4E-06	[7]	--	3.4E-08	[8]	--	2.5E-06	0.15	1.7E-05 [b]	2.4E-06	0.66	3.6E-06 [b]	3.4E-08	0.66	5.2E-08 [b]	--
Phosphorus and compounds	504	2.6E-06	[6]	--	2.4E-06	[7]	--	3.5E-08	[8]	--	2.6E-06	[9]	--	2.4E-06	[10]	--	3.5E-08	[11]	--	--
Manganese and compounds	7439-96-5	9.5E-07	[6]	--	8.9E-07	[7]	--	1.3E-08	[8]	--	9.5E-07	0.090	1.1E-05 [b]	8.9E-07	0.40	2.2E-06 [b]	1.3E-08	0.40	3.2E-08 [b]	--
Mercury and compounds	7439-97-6	6.1E-07	[6]	--	5.8E-07	[7]	--	8.3E-09	[8]	--	6.1E-07	0.077	8.0E-06 [b]	5.8E-07	0.63	9.1E-07 [b]	8.3E-09	0.63	1.3E-08 [b]	--
Nickel and compounds	7440020in	1.2E-06	3.8E-03	3.1E-04 [b]	1.1E-06	0.046	2.4E-05 [b]	1.6E-08	0.10	1.6E-07 [b]	1.2E-06	0.014	8.5E-05 [b]	1.1E-06	0.062	1.8E-05 [b]	1.6E-08	0.062	2.6E-07 [b]	--
Selenium and compounds	7782-49-2	6.8E-07	[6]	--	6.3E-07	[7]	--	9.1E-09	[8]	--	6.8E-07	[9]	--	6.3E-07	[10]	--	9.1E-09	[11]	--	--
Silver and compounds	7440-22-4	1.5E-08	[6]	--	1.4E-08	[7]	--	2.0E-10	[8]	--	1.5E-08	[9]	--	1.4E-08	[10]	--	2.0E-10	[11]	--	--
Thailium and compounds	7440-28-0	7.4E-08	[6]	--	6.9E-08	[7]	--	1.0E-09	[8]	--	7.4E-08	[9]	--	6.9E-08	[10]	--	1.0E-09	[11]	--	--
Zinc and compounds	7440-66-6	1.6E-06	[6]	--	1.5E-06	[7]	--	2.2E-08	[8]	--	1.6E-06	[9]	--	1.5E-06	[10]	--	2.2E-08	[11]	--	--
Acetaldehyde	75-07-0	2.4E-04	0.45	5.3E-04 [b]	2.3E-04	5.50	4.1E-05 [b]	3.2E-06	12.0	2.7E-07 [b]	2.4E-04	140	1.7E-06 [b]	2.3E-04	620	3.6E-07 [b]	3.2E-06	620	5.2E-09 [b]	--
Acrolein	107-02-8	1.0E-05	[6]	--	9.8E-06	[7]	--	1.4E-07	[8]	--	1.0E-05	0.35	3.0E-05 [b]	9.8E-06	1.50	6.5E-06 [b]	1.4E-07	1.50	9.4E-08 [b]	--
Ammonia	7664-41-7	8.9E-04	[6]	--	8.4E-04	[7]	--	1.2E-05	[8]	--	8.9E-04	500	1.8E-06 [b]	8.4E-04	2,200	3.8E-07 [b]	1.2E-05	2,200	5.5E-09 [b]	--
Benzene	71-43-2	5.7E-05	0.13	4.4E-04 [b]	5.4E-05	1.50	3.6E-05 [b]	7.7E-07	3.30	2.3E-07 [b]	5.7E-05	3.00	1.9E-05 [b]	5.4E-05	13.0	4.1E-06 [b]	7.7E-07	13.0	5.9E-08 [b]	--
Chlorobenzene	108-90-7	6.1E-08	[6]	--	5.8E-08	[7]	--	8.3E-10	[8]	--	6.1E-08	50.0	1.2E-09 [b]	5.8E-08	220	2.6E-10 [b]	8.3E-10	220	3.8E-12 [b]	--
Ethyl benzene	100-41-4	3.3E-06	0.40	8.4E-06 [b]	3.1E-06	4.80	6.5E-07 [b]	4.5E-08	10.0	4.5E-09 [b]	3.3E-06	260	1.3E-08 [b]	3.1E-06	1,100	2.9E-09 [b]	4.5E-08	1,100	4.1E-11 [b]	--
Formaldehyde	50-00-0	5.3E-04	0.17	3.1E-03 [b]	5.0E-04	2.00	2.5E-04 [b]	7.2E-06	4.30	1.7E-06 [b]	5.3E-04	9.00	5.9E-05 [b]	5.0E-04	40.0	1.2E-05 [b]	7.2E-06	40.0	1.8E-07 [b]	--
Hexane	110-54-3	8.3E-06	[6]	--	7.7E-06	[7]	--	1.1E-07	[8]	--	8.3E-06	700	1.2E-08 [b]	7.7E-06	3,100	2.5E-09 [b]	1.1E-07	3,100	3.6E-11 [b]	--
1,3-Butadiene	106-99-0	6.7E-05	0.033	2.0E-03 [b]	6.3E-05	0.40	1.6E-04 [b]	9.0E-07	0.86	1.0E-06 [b]	6.7E-05	2.00	3.3E-05 [b]	6.3E-05	8.80	7.1E-06 [b]	9.0E-07	8.80	1.0E-07 [b]	--
Propylene	115-07-1	1.4E-04	[6]	--	1.4E-04	[7]	--	1.9E-06	[8]	--	1.4E-04	3,000	4.8E-08 [b]	1.4E-04	13,000	1.0E-08 [b]	1.9E-06	13,000	1.5E-10 [b]	--
Toluene	108-88-3	3.2E-05	[6]	--	3.0E-05	[7]	--	4.4E-07	[8]	--	3.2E-05	5,000	6.5E-09 [b]	3.0E-05	22,000	1.4E-09 [b]	4.4E-07	22,000	2.0E-11 [b]	--
Xylene (mixture)	1330-20-7	1.3E-05	[6]	--	1.2E-05	[7]	--	1.8E-07	[8]	--	1.3E-05	220	5.9E-08 [b]	1.2E-05	970	1.3E-08 [b]	1.8E-07	970	1.8E-10 [b]	--
Hydrochloric acid	7647-01-0	5.7E-05	[6]	--	5.4E-05	[7]	--	7.7E-07	[8]	--	5.7E-05	20.0	2.9E-06 [b]	5.4E-05	88.0	6.1E-07 [b]	7.7E-07	88.0	8.8E-09 [b]	--
DPM	200	2.5E-03	0.10	0.025 [b]	2.4E-03	1.20	2.0E-03 [b]	3.4E-05	2.60	1.3E-05 [b]	2.5E-03	5.00	5.1E-04 [b]	2.4E-03	22.0	1.1E-04 [b]	3.4E-05	22.0	1.6E-06 [b]	--
PAHs (excluding Naphthalene)	401	1.1E-05	4.3E-05	0.26 [b]	1.0E-05	3.0E-03	3.5E-03 [b]	1.5E-07	1.6E-03	9.4E-05 [b]	1.1E-05	[9]	--	1.0E-05	[10]	--	1.5E-07	[11]	--	--
Benzo[a]pyrene	50-32-8	1.1E-08	4.3E-05	2.5E-04 [b]	1.0E-08	3.0E-03	3.4E-06 [b]	1.5E-10	1.6E-03	9.1E-08 [b]	1.1E-08	2.0E-03	5.4E-06 [b]	1.0E-08	8.8E-03	1.2E-06 [b]	1.5E-10	8.8E-03	1.7E-08 [b]	--
Naphthalene	91-20-3	6.0E-06	0.029	2.1E-04 [b]	5.7E-06	0.35	1.6E-05 [b]	8.2E-08	0.76	1.1E-07 [b]	6.0E-06	3.70	1.6E-06 [b]	5.7E-06	16.0	3.5E-07 [b]	8.2E-08	16.0	5.1E-09 [b]	--
EGEN01																				
Cumulative TEU Risk		--	--	**0.16**	--	--	**4.7E-03**	--	--	**5.3E-05**	--	--	**2.2E-03**	--	--	**2.5E-04**	--	--	**3.4E-06**	--
Dispersion Factor (ug/m³/[g/s])		**6.00**			**4.89**			**0.065**			**6.00**			**4.89**			**0.065**			--
Antimony and compounds	7440-36-0	4.1E-08	[6]	--	3.3E-08	[7]	--	4.4E-10	[8]	--	4.1E-08	0.30	1.4E-07 [b]	3.3E-08	1.30	2.6E-08 [b]	4.4E-10	1.30	3.4E-10 [b]	--
Arsenic and compounds	7440-38-2	2.1E-07	2.4E-05	8.6E-03 [b]	1.7E-07	6.2E-04	2.7E-04 [b]	2.2E-09	1.3E-03	1.7E-06 [b]	2.1E-07	1.7E-04	1.2E-03 [b]	1.7E-07	2.4E-03	7.0E-05 [b]	2.2E-09	2.4E-03	9.3E-07 [b]	--
Barium and compounds	7440-39-3	4.8E-08	[6]	--	3.9E-08	[7]	--	5.2E-10	[8]	--	4.8E-08	[9]	--	3.9E-08	[10]	--	5.2E-10	[11]	--	--
Beryllium and compounds	7440-41-7	6.1E-10	4.2E-04	1.5E-06 [b]	5.0E-10	5.0E-03	1.0E-07 [b]	6.6E-12	0.011	6.0E-10 [b]	6.1E-10	7.0E-03	8.8E-08 [b]	5.0E-10	0.031	1.6E-08 [b]	6.6E-12	0.031	2.1E-10 [b]	--
Cadmium and compounds	7440-43-9	1.9E-07	5.6E-04	3.4E-04 [b]	1.6E-07	6.7E-03	2.3E-05 [b]	2.1E-09	0.014	1.5E-07 [b]	1.9E-07	5.0E-03	3.9E-05 [b]	1.6E-07	0.037	4.2E-06 [b]	2.1E-09	0.037	5.6E-08 [b]	--
Chromium VI	18540299p	1.3E-08	3.1E-05	4.2E-04 [b]	1.0E-08	1.0E-03	1.0E-05 [b]	1.4E-10	5.2E-04	2.7E-07 [b]	1.3E-08	0.083	1.6E-07 [b]	1.0E-08	0.88	1.2E-08 [b]	1.4E-10	0.88	1.6E-10 [b]	--
Cobalt and compounds	7440-48-4	2.0E-09	[6]	--	1.6E-09	[7]	--	2.2E-11	[8]	--	2.0E-09	0.10	2.0E-08 [b]	1.6E-09	0.44	3.7E-09 [b]	2.2E-11	0.44	5.0E-11 [b]	--
Copper and compounds	7440-50-8	5.3E-07	[6]	--	4.3E-07	[7]	--	5.7E-09	[8]	--	5.3E-07	[9]	--	4.3E-07	[10]	--	5.7E-09	[11]	--	--
Lead and compounds	7439-92-1	1.1E-06	[6]	--	8.7E-07	[7]	--	1.2E-08	[8]	--	1.1E-06	0.15	7.1E-06 [b]	8.7E-07	0.66	1.3E-06 [b]	1.2E-08	0.66	1.7E-08 [b]	--
Phosphorus and compounds	504	1.1E-06	[6]	--	8.8E-07	[7]	--	1.2E-08	[8]	--	1.1E-06	[9]	--	8.8E-07	[10]	--	1.2E-08	[11]	--	--
Manganese and compounds	7439-96-5	4.0E-07	[6]	--	3.2E-07	[7]	--	4.3E-09	[8]	--	4.0E-07	0.090	4.4E-06 [b]	3.2E-07	0.40	8.1E-07 [b]	4.3E-09	0.40	1.1E-08 [b]	--
Mercury and compounds	7439-97-6	2.6E-07	[6]	--	2.1E-07	[7]	--	2.8E-09	[8]	--	2.6E-07	0.077	3.3E-06 [b]	2.1E-07	0.63	3.3E-07 [b]	2.8E-09	0.63	4.4E-09 [b]	--
Nickel and compounds	7440020in	5.0E-07	3.8E-03	1.3E-04 [b]	4.1E-07	0.046	8.9E-06 [b]	5.4E-09	0.10	5.4E-08 [b]	5.0E-07	0.014	3.6E-05 [b]	4.1E-07	0.062	6.6E-06 [b]	5.4E-09	0.062	8.7E-08 [b]	--
Selenium and compounds	7782-49-2	2.8E-07	[6]	--	2.3E-07	[7]	--	3.1E-09	[8]	--	2.8E-07	[9]	--	2.3E-07	[10]	--	3.1E-09	[11]	--	--
Silver and compounds	7440-22-4	6.2E-09	[6]	--	5.0E-09	[7]	--	6.7E-11	[8]	--	6.2E-09	[9]	--	5.0E-09	[10]	--	6.7E-11	[11]	--	--
Thailium and compounds	7440-28-0	3.1E-08	[6]	--	2.5E-08	[7]	--	3.3E-10	[8]	--	3.1E-08	[9]	--	2.5E-08	[10]	--	3.3E-10	[11]	--	--
Zinc and compounds	7440-66-6	6.7E-07	[6]	--	5.5E-07	[7]	--	7.3E-09	[8]	--	6.7E-07	[9]	--	5.5E-07	[10]	--	7.3E-09	[11]	--	--
Acetaldehyde	75-07-0	1.0E-04	0.45	2.2E-04 [b]	8.2E-05	5.50	1.5E-05 [b]	1.1E-06	12.0	9.1E-08 [b]	1.0E-04	140	7.2E-07 [b]	8.2E-05	620	1.3E-07 [b]	1.1E-06	620	1.8E-09 [b]	--
Acrolein	107-02-8	4.4E-06	[6]	--	3.6E-06	[7]	--	4.7E-08	[8]	--	4.4E-06	0.35	1.2E-05 [b]	3.6E-06	1.50	2.4E-06 [b]	4.7E-08	1.50	3.1E-08 [b]	--
Ammonia	7664-41-7	3.7E-04	[6]	--	3.0E-04	[7]	--	4.0E-06	[8]	--	3.7E-04	500	7.5E-07 [b]	3.0E-04	2,200	1.4E-07 [b]	4.0E-06	2,200	1.8E-09 [b]	--
Benzene	71-43-2	2.4E-05	0.13	1.8E-04 [b]	2.0E-05	1.50	1.3E-05 [b]	2.6E-07	3.30	7.8E-08 [b]	2.4E-05	3.00	8.0E-06 [b]	2.0E-05	13.0	1.5E-06 [b]	2.6E-07	13.0	2.0E-08 [b]	--
Chlorobenzene	108-90-7	2.6E-08	[6]	--	2.1E-08	[7]	--	2.8E-10	[8]	--	2.6E-08	50.0	5.1E-10 [b]	2.1E-08	220	9.5E-11 [b]	2.8E-10	220	1.3E-12 [b]	--
Ethyl benzene	100-41-4	1.4E-06	0.40	3.5E-06 [b]	1.1E-06	4.80	2.4E-07 [b]	1.5E-08	10.0	1.5E-09 [b]	1.4E-06	260	5.4E-09 [b]	1.1E-06	1,100	1.0E-09 [b]	1.5E-08	1,100	1.4E-11 [b]	--
Formaldehyde	50-00-0	2.2E-04	0.17	1.3E-03 [b]	1.8E-04	2.00	9.0E-05 [b]	2.4E-06	4.30	5.6E-07 [b]	2.2E-04	9.00	2.5E-05 [b]	1.8E-04	40.0	4.5E-06 [b]	2.4E-06	40.0	6.0E-08 [b]	--
Hexane	110-54-3	3.5E-06	[6]	--	2.8E-06	[7]	--	3.7E-08	[8]	--	3.5E-06	700	4.9E-09 [b]	2.8E-06	3,100	9.1E-10 [b]	3.7E-08	3,100	1.2E-11 [b]	--
1,3-Butadiene	106-99-0	2.8E-05	0.033	8.5E-04 [b]	2.3E-05	0.40	5.7E-05 [b]	3.0E-07	0.86	3.5E-07 [b]	2.8E-05	2.00	1.4E-05 [b]	2.3E-05	8.80	2.6E-06 [b]	3.0E-07	8.80	3.4E-08 [b]	--
Propylene	115-07-1	6.0E-05	[6]	--	4.9E-05	[7]	--	6.5E-07	[8]	--	6.0E-05	3,000	2.0E-08 [b]	4.9E-05	13,000	3.8E-09 [b]	6.5E-07	13,000	5.0E-11 [b]	--
Toluene	108-88-3	1.4E-05	[6]	--	1.1E-05	[7]	--	1.5E-07	[8]	--	1.4E-05	5,000	2.7E-09 [b]	1.1E-05	22,000	5.0E-10 [b]	1.5E-07	22,000	6.6E-12 [b]	--
Xylene (mixture)	1330-20-7	5.5E-06	[6]	--	4.4E-06	[7]	--	5.9E-08	[8]	--	5.5E-06	220	2.5E-08 [b]	4.4E-06	970	4.6E-09 [b]	5.9E-08	970	6.1E-11 [b]	--
Hydrochloric acid	7647-01-0	2.4E-05	[6]	--	2.0E-05	[7]	--	2.6E-07	[8]	--	2.4E-05	20.0	1.2E-06 [b]	2.0E-05	88.0	2.2E-07 [b]	2.6E-07	88.0	2.9E-09 [b]	--
DPM	200	4.3E-03	0.10	0.043 [b]	3.5E-03	1.20	2.9E-03 [b]	4.6E-05	2.60	1.8E-05 [b]	4.3E-03	5.00	8.6E-04 [b]	3.5E-03	22.0	1.6E-04 [b]	4.6E-05	22.0	2.1E-06 [b]	--
PAHs (excluding Naphthalene)	401	4.7E-06	4.3E-05	0.11 [b]	3.8E-06	3.0E-03	1.3E-03 [b]	5.0E-08	1.6E-03	3.1E-05 [b]	4.7E-06	[9]	--	3.8E-06	[10]	--	5.0E-08	[11]	--	--
Benzo[a]pyrene	50-32-8	4.6E-09	4.3E-05	1.1E-04 [b]	3.7E-09	3.0E-03	1.2E-06 [b]	5.0E-11	1.6E-03	3.1E-08 [b]	4.6E-09	2.0E-03	2.3E-06 [b]	3.7E-09	8.8E-03	4.2E-07 [b]	5.0E-11	8.8E-03	5.6E-09 [b]	--
Naphthalene	91-20-3	2.5E-06	0.029	8.7E-05 [b]	2.1E-06	0.35	5.9E-06 [b]	2.7E-08	0.76	3.6E-08 [b]	2.5E-06	3.70	6.9E-07 [b]	2.1E-06	16.0	1.3E-07 [b]	2.7E-08	16.0	1.7E-09 [b]	--
WHITE																				
Cumulative TEU Risk		--	--	**0.019**	--	--	**1.1E-03**	--	--	**5.4E-06**	--	--	**3.0E-04**	--	--	**4.5E-05**	--	--	**4.7E-07**	--
Dispersion Factor (ug/m³/[g/s])		**10.3**			**7.03**			**0.073**			**10.3**			**7.03**			**0.073**			--
Acetaldehyde	75-07-0	2.4E-03	0.45	5.3E-03 [b]	1.6E-03	5.50	3.0E-04 [b]	1.7E-05	12.0	1.4E-06 [b]	2.4E-03	140	1.7E-05 [b]	1.6E-03	620	2.6E-06 [b]	1.7E-05	620	2.7E-08 [b]	--
Acetone	67-64-1	9.1E-04	[6]	--	6.2E-04	[7]	--	6.5E-06	[8]	--	9.1E-04	31,000	2.9E-08 [b]	6.2E-04	140,000	4.4E-09 [b]	6.5E-06	140,000	4.6E-11 [b]	--
Acrolein	107-02-8	1.7E-23	[6]	--	1.2E-23	[7]	--	1.2E-25	[8]	--	1.7E-23	0.35	5.0E-23 [b]	1.2E-23	1.50	7.9E-24 [b]	1.2E-25	1.50	8.3E-26 [b]	--
Formaldehyde	50-00-0	2.4E-03	0.17	0.014 [b]	1.6E-03	2.00	8.1E-04 [b]	1.7E-05	4.30	3.9E-06 [b]	2.4E-03	9.00	2.7E-04 [b]	1.6E-03	40.0	4.1E-05 [b]	1.7E-05	40.0	4.2E-07 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.4E-04	[6]	--	1.6E-04	[7]	--	1.7E-06	[8]	--	2.4E-04	3,000	7.9E-08 [b]	1.6E-04	13,000	1.2E-08 [b]	1.7E-06	13,000	1.3E-10 [b]	--
Phenol	108-95-2	3.7E-05	[6]	--	2.5E-05	[7]	--	2.6E-07	[8]	--	3.7E-05	200	1.8E-07 [b]	2.5E-05	880	2.9E-08 [b]	2.6E-07	880	3.0E-10 [b]	--
Propionaldehyde	123-38-6	1.0E-04	[6]	--	6.8E-05	[7]	--	7.1E-07	[8]	--	1.0E-04	8.00	1.2E-05 [b]	6.8E-05	35.0	1.9E-06 [b]	7.1E-07	35.0	2.0E-08 [b]	--
MACH																				
Cumulative TEU Risk		--	--	**0.18**	--	--	**8.1E-03**	--	--	**3.6E-05**	--	--	**0.019**	--	--	**2.4E-03**	--	--	**2.3E-05**	--
Dispersion Factor (ug/m³/[g/s])		**14.5**			**7.68**			**0.074**			**14.5**			**7.68**			**0.074**			--
Acetaldehyde	75-07-0	0.052	0.45	0.11 [b]	0.027	5.50	5.0E-03 [b]	2.7E-04	12.0	2.2E-05 [b]	0.052	140	3.7E-04 [b]	0.027	620	4.4E-05 [b]	2.7E-04	620	4.3E-07 [b]	--
Acetone	67-64-1	0.017	[6]	--	9.3E-03	[7]	--	9.0E-05	[8]	--	0.017	31,000	5.6E-07 [b]	9.3E-03	140,000	6.6E-08 [b]	9.0E-05	140,000	6.4E-10 [b]	--
Acrolein	107-02-8	6.2E-03	[6]	--	3.3E-03	[7]	--	3.2E-05	[8]	--	6.2E-03	0.35	0.018 [b]	3.3E-03	1.50	2.2E-03 [b]	3.2E-05	1.50	2.1E-05 [b]	--
Formaldehyde	50-00-0	0.012	0.17	0.069 [b]	6.2E-03	2.00	3.1E-03 [b]	6.0E-05	4.30	1.4E-05 [b]	0.012	9.00	1.3E-03 [b]	6.2E-03	40.0	1.6E-04 [b]	6.0E-05	40.0	1.5E-06 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	0.014	[6]	--	7.5E-03	[7]	--	7.3E-05	[8]	--	0.014	3,000	4.7E-06 [b]	7.5E-03	13,000	5.8E-07 [b]	7.3E-05	13,000	5.6E-09 [b]	--
Phenol	108-95-2	6.7E-05	[6]	--	3.5E-05	[7]	--	3.4E-07	[8]	--	6.7E-05	200	3.3E-07 [b]	3.5E-05	880	4.0E-08 [b]	3.4E-07	880	3.9E-10 [b]	--
Propionaldehyde	123-38-6	1.8E-03	[6]	--	9.8E-04	[7]	--	9.5E-06	[8]	--	1.8E-03	8.00	2.3E-04 [b]	9.8E-04	35.0	2.8E-05 [b]	9.5E-06	35.0	2.7E-07 [b]	--
RF12_RV																				
Cumulative TEU Risk		--	--	**0.023**	--	--	**1.4E-03**	--	--	**7.2E-06**	--	--	**2.3E-04**	--	--	**3.8E-05**	--	--	**4.2E-07**	--
Dispersion Factor (ug/m³/[g/s])		**9.12**			**6.51**			**0.073**			**9.12**			**6.51**			**0.073**			--
Acetaldehyde	75-07-0	6.1E-03	0.45	0.014 [b]	4.3E-03	5.50	7.9E-04 [b]	4.9E-05	12.0	4.0E-06 [b]	6.1E-03	140	4.3E-05 [b]	4.3E-03	620	7.0E-06 [b]	4.9E-05	620	7.8E-08 [b]	--
Acetone	67-64-1	0.020	[6]	--	0.014	[7]	--	1.6E-04	[8]	--	0.020	31,000	6.4E-07 [b]	0.014	140,000	1.0E-07 [b]	1.6E-04	140,000	1.1E-09 [b]	--
Formaldehyde	50-00-0	1.7E-03	0.17	9.9E-03 [b]	1.2E-03	2.00	6.0E-04 [b]	1.3E-05	4.30	3.1E-06 [b]	1.7E-03	9.00	1.9E-04 [b]	1.2E-03	40.0	3.0E-05 [b]	1.3E-05	40.0	3.4E-07 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	1.2E-03	[6]	--	8.7E-04	[7]	--	9.7E-06	[8]	--	1.2E-03	3,000	4.1E-07 [b]	8.7E-04	13,000	6.7E-08 [b]	9.7E-06	13,000	7.5E-10 [b]	--
Methanol	67-56-1	5.9E-03	[6]	--	4.2E-03	[7]	--	4.8E-05	[8]	--	5.9E-03	4,000	1.5E-06 [b]	4.2E-03	18,000	2.4E-07 [b]	4.8E-05	18,000	2.6E-09 [b]	--
2-Butanone (Methyl ethyl ketone)	78-93-3	1.2E-03	[6]	--	8.4E-04	[7]	--	9.4E-06	[8]	--	1.2E-03	5,000	2.4E-07 [b]	8.4E-04	22,000	3.8E-08 [b]	9.4E-06	22,000	4.3E-10 [b]	--
Styrene	100-42-5	8.6E-04	[6]	--	6.1E-04	[7]	--	6.9E-06	[8]	--	8.6E-04	1,000	8.6E-07 [b]	6.1E-04	4,400	1.4E-07 [b]	6.9E-06	4,400	1.6E-09 [b]	--
HPVUV_FUG																				
Cumulative TEU Risk		--	--	**0.018**	--	--	**1.2E-03**	--	--	**6.0E-06**	--	--	**2.8E-04**	--	--	**4.8E-05**	--	--	**5.4E-07**	--
Dispersion Factor (ug/m³/[g/s])		**8.56**			**6.48**			**0.072**			**8.56**			**6.48**			**0.072**			--
Acetaldehyde	75-07-0	2.5E-03	0.45	5.5E-03 [b]	1.9E-03	5.50	3.4E-04 [b]	2.1E-05	12.0	1.7E-06 [b]	2.5E-03	140	1.8E-05 [b]	1.9E-03	620	3.0E-06 [b]	2.1E-05	620	3.4E-08 [b]	--
Acetone	67-64-1	8.5E-04	[6]	--	6.5E-04	[7]	--	7.2E-06	[8]	--	8.5E-04	31,000	2.8E-08 [b]	6.5E-04	140,000	4.6E-09 [b]	7.2E-06	140,000	5.1E-11 [b]	--
Formaldehyde	50-00-0	2.2E-03	0.17	0.013 [b]	1.6E-03	2.00	8.2E-04 [b]	1.8E-05	4.30	4.3E-06 [b]	2.2E-03	9.00	2.4E-04 [b]	1.6E-03	40.0	4.1E-05 [b]	1.8E-05	40.0	4.6E-07 [b]	--
Methanol	67-56-1	0.037	[6]	--	0.028	[7]	--	3.1E-04	[8]	--	0.037	4,000	9.3E-06 [b]	0.028	18,000	1.6E-06 [b]	3.1E-04	18,000	1.7E-08 [b]	--
Phenol	108-95-2	1.6E-03	[6]	--	1.2E-03	[7]	--	1.3E-05	[8]	--	1.6E-03	200	7.8E-06 [b]	1.2E-03	880	1.3E-06 [b]	1.3E-05	880	1.5E-08 [b]	--
Toluene	108-88-3	1.7E-04	[6]	--	1.3E-04	[7]	--	1.4E-06	[8]	--	1.7E-04	5,000	3.4E-08 [b]	1.3E-04	22,000	5.9E-09 [b]	1.4E-06	22,000	6.5E-11 [b]	--
Xylene (mixture)	1330-20-7	8.2E-04	[6]	--	6.2E-04	[7]	--	6.9E-06	[8]	--	8.2E-04	220	3.7E-06 [b]	6.2E-04	970	6.4E-07 [b]	6.9E-06	970	7.1E-09 [b]	--
o-Xylene	95-47-6	5.6E-04	[6]	--	4.2E-04	[7]	--	4.7E-06	[8]	--	5.6E-04	220	2.5E-06 [b]	4.2E-04	970	4.4E-07 [b]	4.7E-06	970	4.8E-09 [b]	--
FORM_FUG																				
Cumulative TEU Risk		--	--	**0.027**	--	--	**1.2E-03**	--	--	**4.9E-06**	--	--	**1.8E-03**	--	--	**2.1E-04**	--	--	**1.9E-06**	--
Dispersion Factor (ug/m³/[g/s])		**16.0**			**8.19**			**0.075**			**16.0**			**8.19**			**0.075**			--
Acetaldehyde	75-07-0	6.0E-03	0.45	0.013 [b]	3.1E-03	5.50	5.6E-04 [b]	2.8E-05	12.0	2.3E-06 [b]	6.0E-03	140	4.3E-05 [b]	3.1E-03	620	5.0E-06 [b]	2.8E-05	620	4.5E-08 [b]	--
Acetone	67-64-1	2.6E-03	[6]	--	1.4E-03	[7]	--	1.2E-05	[8]	--	2.6E-03	31,000	8.5E-08 [b]	1.4E-03	140,000	9.7E-09 [b]	1.2E-05	140,000	8.8E-11 [b]	--
Acrolein	107-02-8	5.1E-04	[6]	--	2.6E-04	[7]	--	2.4E-06	[8]	--	5.1E-04	0.35	1.5E-03 [b]	2.6E-04	1.50	1.7E-04 [b]	2.4E-06	1.50	1.6E-06 [b]	--
Formaldehyde	50-00-0	2.4E-03	0.17	0.014 [b]	1.2E-03	2.00	6.1E-04 [b]	1.1E-05	4.30	2.6E-06 [b]	2.4E-03	9.00	2.6E-04 [b]	1.2E-03	40.0	3.0E-05 [b]	1.1E-05	40.0	2.8E-07 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	1.9E-04	[6]	--	9.7E-05	[7]	--	8.8E-07	[8]	--	1.9E-04	3,000	6.3E-08 [b]	9.7E-05	13,000	7.5E-09 [b]	8.8E-07	13,000	6.8E-11 [b]	--
Methanol	67-56-1	0.014	[6]	--	7.0E-03	[7]	--	6.3E-05	[8]	--	0.014	4,000	3.4E-06 [b]	7.0E-03	18,000	3.9E-07 [b]	6.3E-05	18,000	3.5E-09 [b]	--
2-Butanone (Methyl ethyl ketone)	78-93-3	3.7E-04	[6]	--	1.9E-04	[7]	--	1.7E-06	[8]	--	3.7E-04	5,000	7.5E-08 [b]	1.9E-04	22,000	8.7E-09 [b]	1.7E-06	22,000	7.9E-11 [b]	--
Toluene	108-88-3	3.8E-04	[6]	--	1.9E-04	[7]	--	1.7E-06	[8]	--	3.8E-04	5,000	7.5E-08 [b]	1.9E-04	22,000	8.7E-09 [b]	1.7E-06	22,000	7.9E-11 [b]	--
GAS																				
Cumulative TEU Risk		--	--	**0.017**	--	--	**5.3E-04**	--	--	**1.2E-06**	--	--	**7.3E-04**	--	--	**6.1E-05**	--	--	**3.0E-07**	--
Dispersion Factor (ug/m³/[g/s])		**41.7**			**15.0**			**0.074**			**41.7**			**15.0**			**0.074**			--
Benzene	71-43-2	2.2E-03	0.13	0.017 [b]	7.8E-04	1.50	5.2E-04 [b]	3.9E-06	3.30	1.2E-06 [b]	2.2E-03	3.00	7.2E-04 [b]	7.8E-04	13.0	6.0E-05 [b]	3.9E-06	13.0	3.0E-07 [b]	--
Ethyl benzene	100-41-4	9.6E-05	0.40	2.4E-04 [b]	3.5E-05	4.80	7.2E-06 [b]	1.7E-07	10.0	1.7E-08 [b]	9.6E-05	260	3.7E-07 [b]	3.5E-05	1,100	3.1E-08 [b]	1.7E-07	1,100	1.5E-10 [b]	--
Isopropylbenzene (Cumene)	98-82-8	5.0E-06	[6]	--	1.8E-06	[7]	--	8.9E-09	[8]	--	5.0E-06	400	1.3E-08 [b]	1.8E-06	1,800	1.0E-09 [b]	8.9E-09	1,800	5.0E-12 [b]	--
1,3,5-Trimethylbenzene	108-67-8	3.0E-05	[6]	--	1.1E-05	[7]	--	5.3E-08	[8]	--	3.0E-05	60.0	5.0E-07 [b]	1.1E-05	260	4.1E-08 [b]	5.3E-08	260	2.0E-10 [b]	--
1,2,3-Trimethylbenzene	526-73-8	1.7E-05	[6]	--	6.2E-06	[7]	--	3.1E-08	[8]	--	1.7E-05	60.0	2.9E-07 [b]	6.2E-06	260	2.4E-08 [b]	3.1E-08	260	1.2E-10 [b]	--
Cyclohexane	110-82-7	3.6E-03	[6]	--	1.3E-03	[7]	--	6.4E-06	[8]	--	3.6E-03	6,000	6.0E-07 [b]	1.3E-03	26,000	5.0E-08 [b]	6.4E-06	26,000	2.5E-10 [b]	--
1,2,4-Trimethyl benzene	95-63-6	6.5E-05	[6]	--	2.3E-05	[7]	--	1.1E-07	[8]	--	6.5E-05	60.0	1.1E-06 [b]	2.3E-05	260	9.0E-08 [b]	1.1E-07	260	4.4E-10 [b]	--
Styrene	100-42-5	2.8E-07	[6]	--	9.9E-08	[7]	--	4.9E-10	[8]	--	2.8E-07	1,000	2.8E-10 [b]	9.9E-08	4,400	2.3E-11 [b]	4.9E-10	4,400	1.1E-13 [b]	--
Toluene	108-88-3	1.5E-03	[6]	--	5.5E-04	[7]	--	2.7E-06	[8]	--	1.5E-03	5,000	3.1E-07 [b]	5.5E-04	22,000	2.5E-08 [b]	2.7E-06	22,000	1.2E-10 [b]	--
p-Xylene	106-42-3	2.7E-04	[6]	--	9.6E-05	[7]	--	4.7E-07	[8]	--	2.7E-04	220	1.2E-06 [b]	9.6E-05	970	9.9E-08 [b]	4.7E-07	970	4.9E-10 [b]	--
o-Xylene	95-47-6	9.8E-05	[6]	--	3.5E-05	[7]	--	1.7E-07	[8]	--	9.8E-05	220	4.5E-07 [b]	3.5E-05	970	3.7E-08 [b]	1.7E-07	970	1.8E-10 [b]	--
Naphthalene	91-20-3	1.6E-06	0.029	5.5E-05 [b]	5.7E-07	0.35	1.6E-06 [b]	2.8E-09	0.76	3.7E-09 [b]	1.6E-06	3.70	4.3E-07 [b]	5.7E-07	16.0	3.6E-08 [b]	2.8E-09	16.0	1.8E-10 [b]	--

Toxic Air Contaminant	CAS	Cancer									Noncancer									
		Residential			Worker			Child			Residential			Worker			Child			Acute
		Calculated Conc. [a] (ug/m^3)	RBC [2] (ug/m^3)	Excess Risk Per Million	Calculated Conc. [a] (ug/m^3)	RBC [2] (ug/m^3)	Excess Risk Per Million	Calculated Conc. [a] (ug/m^3)	RBC [2] (ug/m^3)	Excess Risk Per Million	Calculated Conc. [a] (ug/m^3)	RBC [2] (ug/m^3)	Hazard Index	Calculated Conc. [a] (ug/m^3)	RBC (ug/m^3)	Hazard Index	Calculated Conc. [a] (ug/m^3)	RBC (ug/m^3)	Hazard Index	Hazard Index [3]
RESIN1																				
Cumulative TEU Risk		--	--	**5.7E-03**	--	--	**3.5E-04**	--	--	**1.9E-06**	--	--	**1.1E-04**	--	--	**1.8E-05**	--	--	**2.1E-07**	--
Dispersion Factor (ug/m^3/[g/s])			**8.47**			**6.12**			**0.073**			**8.47**			**6.12**			**0.073**		--
Formaldehyde	50-00-0	9.7E-04	0.17	5.7E-03 [b]	7.0E-04	2.00	3.5E-04 [b]	8.4E-06	4.30	1.9E-06 [b]	9.7E-04	9.00	1.1E-04 [b]	7.0E-04	40.0	1.8E-05 [b]	8.4E-06	40.0	2.1E-07 [b]	--
Phenol	108-95-2	2.2E-07	[6]	--	1.6E-07	[7]	--	1.9E-09	[8]	--	2.2E-07	200	1.1E-09 [b]	1.6E-07	880	1.8E-10 [b]	1.9E-09	880	2.2E-12 [b]	--
RESIN2																				
Cumulative TEU Risk		--	--	**5.8E-03**	--	--	**3.5E-04**	--	--	**1.9E-06**	--	--	**1.1E-04**	--	--	**1.8E-05**	--	--	**2.1E-07**	--
Dispersion Factor (ug/m^3/[g/s])			**8.52**			**6.16**			**0.073**			**8.52**			**6.16**			**0.073**		--
Formaldehyde	50-00-0	9.8E-04	0.17	5.8E-03 [b]	7.1E-04	2.00	3.5E-04 [b]	8.4E-06	4.30	1.9E-06 [b]	9.8E-04	9.00	1.1E-04 [b]	7.1E-04	40.0	1.8E-05 [b]	8.4E-06	40.0	2.1E-07 [b]	--
Phenol	108-95-2	2.2E-07	[6]	--	1.6E-07	[7]	--	1.9E-09	[8]	--	2.2E-07	200	1.1E-09 [b]	1.6E-07	880	1.8E-10 [b]	1.9E-09	880	2.2E-12 [b]	--
RESIN3																				
Cumulative TEU Risk		--	--	**5.8E-03**	--	--	**3.6E-04**	--	--	**1.9E-06**	--	--	**1.1E-04**	--	--	**1.8E-05**	--	--	**2.1E-07**	--
Dispersion Factor (ug/m^3/[g/s])			**8.62**			**6.21**			**0.073**			**8.62**			**6.21**			**0.073**		--
Formaldehyde	50-00-0	9.9E-04	0.17	5.8E-03 [b]	7.1E-04	2.00	3.6E-04 [b]	8.4E-06	4.30	1.9E-06 [b]	9.9E-04	9.00	1.1E-04 [b]	7.1E-04	40.0	1.8E-05 [b]	8.4E-06	40.0	2.1E-07 [b]	--
Phenol	108-95-2	2.2E-07	[6]	--	1.6E-07	[7]	--	1.9E-09	[8]	--	2.2E-07	200	1.1E-09 [b]	1.6E-07	880	1.8E-10 [b]	1.9E-09	880	2.2E-12 [b]	--
PAINT																				
Cumulative TEU Risk		--	--	**0**	--	--	**0**	--	--	**0**	--	--	**4.4E-04**	--	--	**4.3E-05**	--	--	**3.0E-07**	--
Dispersion Factor (ug/m^3/[g/s])			**25.4**			**10.9**			**0.076**			**25.4**			**10.9**			**0.076**		--
Ethylene glycol monobutyl ether	111-76-2	0.036	[6]	--	0.016	[7]	--	1.1E-04	[8]	--	0.036	82.0	4.4E-04 [b]	0.016	360	4.3E-05 [b]	1.1E-04	360	3.0E-07 [b]	--
WELD																				
Cumulative TEU Risk		--	--	**0.016**	--	--	**2.8E-04**	--	--	**4.5E-06**	--	--	**1.0E-03**	--	--	**1.2E-04**	--	--	**1.1E-06**	--
Dispersion Factor (ug/m^3/[g/s])			**15.5**			**8.06**			**0.074**			**15.5**			**8.06**			**0.074**		--
Chromium VI	18540299p	4.8E-07	3.1E-05	0.015 [b]	2.5E-07	1.0E-03	2.5E-04 [b]	2.3E-09	5.2E-04	4.4E-06 [b]	4.8E-07	0.083	5.7E-06 [b]	2.5E-07	0.88	2.8E-07 [b]	2.3E-09	0.88	2.6E-09 [b]	--
Cobalt and compounds	7440-48-4	5.8E-08	[6]	--	3.0E-08	[7]	--	2.8E-10	[8]	--	5.8E-08	0.10	5.8E-07 [b]	3.0E-08	0.44	6.8E-08 [b]	2.8E-10	0.44	6.3E-10 [b]	--
Aluminum and compounds	7429-90-5	3.4E-04	[6]	--	1.8E-04	[7]	--	1.6E-06	[8]	--	3.4E-04	5.00	6.7E-05 [b]	1.8E-04	22.0	8.0E-06 [b]	1.6E-06	22.0	7.3E-08 [b]	--
Copper and compounds	7440-50-8	3.5E-07	[6]	--	1.8E-07	[7]	--	1.7E-09	[8]	--	3.5E-07	[9]	-- [b]	1.8E-07	[10]	-- [b]	1.7E-09	[11]	-- [b]	--
Manganese and compounds	7439-96-5	6.4E-05	[6]	--	3.3E-05	[7]	--	3.0E-07	[8]	--	6.4E-05	0.090	7.1E-04 [b]	3.3E-05	0.40	8.3E-05 [b]	3.0E-07	0.40	7.6E-07 [b]	--
Nickel and compounds	7440020in	3.0E-06	3.8E-03	7.8E-04 [b]	1.5E-06	0.046	3.4E-05 [b]	1.4E-08	0.10	1.4E-07 [b]	3.0E-06	0.014	2.1E-04 [b]	1.5E-06	0.062	2.5E-05 [b]	1.4E-08	0.062	2.3E-07 [b]	--
Fluorides	FLUORIDES	5.3E-05	[6]	--	2.8E-05	[7]	--	2.5E-07	[8]	--	5.3E-05	2.30	2.3E-05 [b]	2.8E-05	20.0	1.4E-06 [b]	2.5E-07	20.0	1.3E-08 [b]	--
BPOT																				
Cumulative TEU Risk		--	--	**1.0E-04**	--	--	**4.9E-06**	--	--	**2.4E-08**	--	--	**4.0E-05**	--	--	**5.4E-06**	--	--	**5.7E-08**	--
Dispersion Factor (ug/m^3/[g/s])			**11.7**			**6.96**			**0.074**			**11.7**			**6.96**			**0.074**		--
Antimony and compounds	7440-36-0	3.8E-06	[6]	--	2.3E-06	[7]	--	2.4E-08	[8]	--	3.8E-06	0.30	1.3E-05 [b]	2.3E-06	1.30	1.7E-06 [b]	2.4E-08	1.30	1.9E-08 [b]	--
Copper and compounds	7440-50-8	3.8E-06	[6]	--	2.3E-06	[7]	--	2.4E-08	[8]	--	3.8E-06	[9]	-- [b]	2.3E-06	[10]	-- [b]	2.4E-08	[11]	-- [b]	--
Nickel and compounds	7440020in	3.8E-07	3.8E-03	1.0E-04 [b]	2.3E-07	0.046	4.9E-06 [b]	2.4E-09	0.10	2.4E-08 [b]	3.8E-07	0.014	2.7E-05 [b]	2.3E-07	0.062	3.6E-06 [b]	2.4E-09	0.062	3.9E-08 [b]	--
SCR_HYDRO																				
Cumulative TEU Risk		--	--	**1.6E-04**	--	--	**8.6E-06**	--	--	**3.2E-08**	--	--	**1.3E-03**	--	--	**1.9E-04**	--	--	**1.5E-06**	--
Dispersion Factor (ug/m^3/[g/s])			**4.25**			**2.70**			**0.022**			**4.25**			**2.70**			**0.022**		--
Acetaldehyde	75-07-0	6.5E-05	0.45	1.4E-04 [b]	4.1E-05	5.50	7.5E-06 [b]	3.3E-07	12.0	2.8E-08 [b]	6.5E-05	140	4.6E-07 [b]	4.1E-05	620	6.7E-08 [b]	3.3E-07	620	5.4E-10 [b]	--
Acetone	67-64-1	1.7E-04	[6]	--	1.1E-04	[7]	--	8.6E-07	[8]	--	1.7E-04	31,000	5.4E-09 [b]	1.1E-04	140,000	7.6E-10 [b]	8.6E-07	140,000	6.1E-12 [b]	--
Acrolein	107-02-8	4.4E-04	[6]	--	2.8E-04	[7]	--	2.3E-06	[8]	--	4.4E-04	0.35	1.3E-03 [b]	2.8E-04	1.50	1.9E-04 [b]	2.3E-06	1.50	1.5E-06 [b]	--
Formaldehyde	50-00-0	3.3E-06	0.17	1.9E-05 [b]	2.1E-06	2.00	1.0E-06 [b]	1.7E-08	4.30	3.9E-09 [b]	3.3E-06	9.00	3.6E-07 [b]	2.1E-06	40.0	5.2E-08 [b]	1.7E-08	40.0	4.2E-10 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	1.5E-05	[6]	--	9.5E-06	[7]	--	7.7E-08	[8]	--	1.5E-05	3,000	5.0E-09 [b]	9.5E-06	13,000	7.3E-10 [b]	7.7E-08	13,000	5.9E-12 [b]	--
Phenol	108-95-2	9.5E-07	[6]	--	6.1E-07	[7]	--	4.9E-09	[8]	--	9.5E-07	200	4.8E-09 [b]	6.1E-07	880	6.9E-10 [b]	4.9E-09	880	5.6E-12 [b]	--
Propionaldehyde	123-38-6	1.9E-04	[6]	--	1.2E-04	[7]	--	9.9E-07	[8]	--	1.9E-04	8.00	2.4E-05 [b]	1.2E-04	35.0	3.5E-06 [b]	9.9E-07	35.0	2.8E-08 [b]	--
HYDRO																				
Cumulative TEU Risk		--	--	**0.016**	--	--	**9.7E-04**	--	--	**3.3E-06**	--	--	**1.1E-04**	--	--	**1.9E-05**	--	--	**1.4E-07**	--
Dispersion Factor (ug/m^3/[g/s])			**3.91**			**2.90**			**0.021**			**3.91**			**2.90**			**0.021**		--
Acetaldehyde	75-07-0	6.3E-03	0.45	0.014 [b]	4.7E-03	5.50	8.5E-04 [b]	3.4E-05	12.0	2.9E-06 [b]	6.3E-03	140	4.5E-05 [b]	4.7E-03	620	7.5E-06 [b]	3.4E-05	620	5.6E-08 [b]	--
Acetone	67-64-1	7.5E-04	[6]	--	5.6E-04	[7]	--	4.1E-06	[8]	--	7.5E-04	31,000	2.4E-08 [b]	5.6E-04	140,000	4.0E-09 [b]	4.1E-06	140,000	2.9E-11 [b]	--
Acrolein	107-02-8	6.3E-23	[6]	--	4.7E-23	[7]	--	3.4E-25	[8]	--	6.3E-23	0.35	1.8E-22 [b]	4.7E-23	1.50	3.1E-23 [b]	3.4E-25	1.50	2.3E-25 [b]	--
Formaldehyde	50-00-0	3.4E-04	0.17	2.0E-03 [b]	2.5E-04	2.00	1.3E-04 [b]	1.9E-06	4.30	4.4E-07 [b]	3.4E-04	9.00	3.8E-05 [b]	2.5E-04	40.0	6.3E-06 [b]	1.9E-06	40.0	4.7E-08 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.8E-03	[6]	--	2.1E-03	[7]	--	1.6E-05	[8]	--	2.8E-03	3,000	9.5E-07 [b]	2.1E-03	13,000	1.6E-07 [b]	1.6E-05	13,000	1.2E-09 [b]	--
Phenol	108-95-2	8.9E-06	[6]	--	6.6E-06	[7]	--	4.9E-08	[8]	--	8.9E-06	200	4.5E-08 [b]	6.6E-06	880	7.5E-09 [b]	4.9E-08	880	5.6E-11 [b]	--
Propionaldehyde	123-38-6	2.3E-04	[6]	--	1.7E-04	[7]	--	1.3E-06	[8]	--	2.3E-04	8.00	2.9E-05 [b]	1.7E-04	35.0	4.9E-06 [b]	1.3E-06	35.0	3.6E-08 [b]	--
CLAR																				
Cumulative TEU Risk		--	--	**3.1E-05**	--	--	**3.4E-06**	--	--	**1.1E-08**	--	--	**2.6E-07**	--	--	**7.7E-08**	--	--	**5.6E-10**	--
Dispersion Factor (ug/m^3/[g/s])			**5.42**			**7.10**			**0.052**			**5.42**			**7.10**			**0.052**		--
Acetaldehyde	75-07-0	1.0E-05	0.45	2.3E-05 [b]	1.4E-05	5.50	2.5E-06 [b]	9.9E-08	12.0	8.2E-09 [b]	1.0E-05	140	7.4E-08 [b]	1.4E-05	620	2.2E-08 [b]	9.9E-08	620	1.6E-10 [b]	--
Acetone	67-64-1	5.9E-08	[6]	--	7.7E-08	[7]	--	5.6E-10	[8]	--	5.9E-08	31,000	1.9E-12 [b]	7.7E-08	140,000	5.5E-13 [b]	5.6E-10	140,000	4.0E-15 [b]	--
Acrolein	107-02-8	2.8E-26	[6]	--	3.7E-26	[7]	--	2.7E-28	[8]	--	2.8E-26	0.35	8.0E-26 [b]	3.7E-26	1.50	2.5E-26 [b]	2.7E-28	1.50	1.8E-28 [b]	--
Formaldehyde	50-00-0	1.4E-06	0.17	8.1E-06 [b]	1.8E-06	2.00	9.0E-07 [b]	1.3E-08	4.30	3.1E-09 [b]	1.4E-06	9.00	1.5E-07 [b]	1.8E-06	40.0	4.5E-08 [b]	1.3E-08	40.0	3.3E-10 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.4E-07	[6]	--	3.1E-07	[7]	--	2.2E-09	[8]	--	2.4E-07	3,000	7.8E-11 [b]	3.1E-07	13,000	2.4E-11 [b]	2.2E-09	13,000	1.7E-13 [b]	--
Phenol	108-95-2	2.2E-12	[6]	--	2.8E-12	[7]	--	2.1E-14	[8]	--	2.2E-12	200	1.1E-14 [b]	2.8E-12	880	3.2E-15 [b]	2.1E-14	880	2.4E-17 [b]	--
Propionaldehyde	123-38-6	2.7E-07	[6]	--	3.5E-07	[7]	--	2.5E-09	[8]	--	2.7E-07	8.00	3.3E-08 [b]	3.5E-07	35.0	1.0E-08 [b]	2.5E-09	35.0	7.3E-11 [b]	--
PIT																				
Cumulative TEU Risk		--	--	**6.8E-08**	--	--	**7.3E-09**	--	--	**2.5E-11**	--	--	**4.5E-10**	--	--	**1.3E-10**	--	--	**9.6E-13**	--
Dispersion Factor (ug/m^3/[g/s])			**5.47**			**7.12**			**0.052**			**5.47**			**7.12**			**0.052**		--
Acetaldehyde	75-07-0	2.6E-08	0.45	5.8E-08 [b]	3.4E-08	5.50	6.2E-09 [b]	2.5E-10	12.0	2.1E-11 [b]	2.6E-08	140	1.9E-10 [b]	3.4E-08	620	5.5E-11 [b]	2.5E-10	620	4.0E-13 [b]	--
Acetone	67-64-1	1.8E-23	[6]	--	2.4E-23	[7]	--	1.8E-25	[8]	--	1.8E-23	31,000	5.9E-28 [b]	2.4E-23	140,000	1.7E-28 [b]	1.8E-25	140,000	1.3E-30 [b]	--
Acrolein	107-02-8	4.7E-24	[6]	--	6.1E-24	[7]	--	4.5E-26	[8]	--	4.7E-24	0.35	1.3E-23 [b]	6.1E-24	1.50	4.1E-24 [b]	4.5E-26	1.50	3.0E-26 [b]	--
Formaldehyde	50-00-0	1.7E-09	0.17	9.9E-09 [b]	2.2E-09	2.00	1.1E-09 [b]	1.6E-11	4.30	3.7E-12 [b]	1.7E-09	9.00	1.9E-10 [b]	2.2E-09	40.0	5.5E-11 [b]	1.6E-11	40.0	4.0E-13 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	1.4E-09	[6]	--	1.9E-09	[7]	--	1.4E-11	[8]	--	1.4E-09	3,000	4.8E-13 [b]	1.9E-09	13,000	1.4E-13 [b]	1.4E-11	13,000	1.0E-15 [b]	--
Phenol	108-95-2	1.5E-15	[6]	--	2.0E-15	[7]	--	1.5E-17	[8]	--	1.5E-15	200	7.6E-18 [b]	2.0E-15	880	2.3E-18 [b]	1.5E-17	880	1.7E-20 [b]	--
Propionaldehyde	123-38-6	5.7E-10	[6]	--	7.4E-10	[7]	--	5.4E-12	[8]	--	5.7E-10	8.00	7.1E-11 [b]	7.4E-10	35.0	2.1E-11 [b]	5.4E-12	35.0	1.5E-13 [b]	--
S_POND																				
Cumulative TEU Risk		--	--	**7.8E-06**	--	--	**9.3E-07**	--	--	**2.5E-09**	--	--	**7.8E-08**	--	--	**2.5E-08**	--	--	**1.5E-10**	--
Dispersion Factor (ug/m^3/[g/s])			**6.31**			**9.08**			**0.052**			**6.31**			**9.08**			**0.052**		--
Acetaldehyde	75-07-0	2.1E-06	0.45	4.8E-06 [b]	3.1E-06	5.50	5.6E-07 [b]	1.8E-08	12.0	1.5E-09 [b]	2.1E-06	140	1.5E-08 [b]	3.1E-06	620	5.0E-09 [b]	1.8E-08	620	2.8E-11 [b]	--
Acetone	67-64-1	2.7E-09	[6]	--	3.9E-09	[7]	--	2.2E-11	[8]	--	2.7E-09	31,000	8.7E-14 [b]	3.9E-09	140,000	2.8E-14 [b]	2.2E-11	140,000	1.6E-16 [b]	--
Acrolein	107-02-8	1.8E-22	[6]	--	2.6E-22	[7]	--	1.5E-24	[8]	--	1.8E-22	0.35	5.1E-22 [b]	2.6E-22	1.50	1.7E-22 [b]	1.5E-24	1.50	9.9E-25 [b]	--
Formaldehyde	50-00-0	5.1E-07	0.17	3.0E-06 [b]	7.4E-07	2.00	3.7E-07 [b]	4.2E-09	4.30	9.8E-10 [b]	5.1E-07	9.00	5.7E-08 [b]	7.4E-07	40.0	1.8E-08 [b]	4.2E-09	40.0	1.1E-10 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	1.9E-08	[6]	--	2.7E-08	[7]	--	1.6E-10	[8]	--	1.9E-08	3,000	6.3E-12 [b]	2.7E-08	13,000	2.1E-12 [b]	1.6E-10	13,000	1.2E-14 [b]	--
Phenol	108-95-2	1.2E-14	[6]	--	1.7E-14	[7]	--	9.5E-17	[8]	--	1.2E-14	200	5.8E-17 [b]	1.7E-14	880	1.9E-17 [b]	9.5E-17	880	1.1E-19 [b]	--
Propionaldehyde	123-38-6	4.9E-08	[6]	--	7.0E-08	[7]	--	4.0E-10	[8]	--	4.9E-08	8.00	6.1E-09 [b]	7.0E-08	35.0	2.0E-09 [b]	4.0E-10	35.0	1.1E-11 [b]	--
R_POND																				
Cumulative TEU Risk		--	--	**6.6E-06**	--	--	**7.3E-07**	--	--	**1.6E-09**	--	--	**7.6E-08**	--	--	**2.3E-08**	--	--	**1.1E-10**	--
Dispersion Factor (ug/m^3/[g/s])			**8.31**			**11.2**			**0.052**			**8.31**			**11.2**			**0.052**		--
Acetaldehyde	75-07-0	1.5E-06	0.45	3.3E-06 [b]	2.0E-06	5.50	3.6E-07 [b]	9.3E-09	12.0	7.7E-10 [b]	1.5E-06	140	1.1E-08 [b]	2.0E-06	620	3.2E-09 [b]	9.3E-09	620	1.5E-11 [b]	--
Acetone	67-64-1	6.7E-10	[6]	--	9.0E-10	[7]	--	4.2E-12	[8]	--	6.7E-10	31,000	2.2E-14 [b]	9.0E-10	140,000	6.4E-15 [b]	4.2E-12	140,000	3.0E-17 [b]	--
Acrolein	107-02-8	9.1E-23	[6]	--	1.2E-22	[7]	--	5.7E-25	[8]	--	9.1E-23	0.35	2.6E-22 [b]	1.2E-22	1.50	8.2E-23 [b]	5.7E-25	1.50	3.8E-25 [b]	--
Formaldehyde	50-00-0	5.5E-07	0.17	3.3E-06 [b]	7.4E-07	2.00	3.7E-07 [b]	3.5E-09	4.30	8.1E-10 [b]	5.5E-07	9.00	6.2E-08 [b]	7.4E-07	40.0	1.9E-08 [b]	3.5E-09	40.0	8.7E-11 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	7.6E-09	[6]	--	1.0E-08	[7]	--	4.8E-11	[8]	--	7.6E-09	3,000	2.5E-12 [b]	1.0E-08	13,000	7.8E-13 [b]	4.8E-11	13,000	3.7E-15 [b]	--
Phenol	108-95-2	3.8E-16	[6]	--	5.1E-16	[7]	--	2.4E-18	[8]	--	3.8E-16	200	1.9E-18 [b]	5.1E-16	880	5.8E-19 [b]	2.4E-18	880	2.7E-21 [b]	--
Propionaldehyde	123-38-6	3.1E-08	[6]	--	4.2E-08	[7]	--	2.0E-10	[8]	--	3.1E-08	8.00	3.9E-09 [b]	4.2E-08	35.0	1.2E-09 [b]	2.0E-10	35.0	5.6E-12 [b]	--
E_POND																				
Cumulative TEU Risk		--	--	**1.9E-06**	--	--	**7.2E-07**	--	--	**2.0E-09**	--	--	**2.1E-08**	--	--	**2.2E-08**	--	--	**1.3E-10**	--
Dispersion Factor (ug/m^3/[g/s])			**1.80**			**8.27**			**0.049**			**1.80**			**8.27**			**0.049**		--
Acetaldehyde	75-07-0	4.4E-07	0.45	9.7E-07 [b]	2.0E-06	5.50	3.7E-07 [b]	1.2E-08	12.0	9.9E-10 [b]	4.4E-07	140	3.1E-09 [b]	2.0E-06	620	3.2E-09 [b]	1.2E-08	620	1.9E-11 [b]	--
Acetone	67-64-1	1.6E-10	[6]	--	7.5E-10	[7]	--	4.4E-12	[8]	--	1.6E-10	31,000	5.3E-15 [b]	7.5E-10	140,000	5.4E-15 [b]	4.4E-12	140,000	3.1E-17 [b]	--
Acrolein	107-02-8	2.5E-23	[6]	--	1.2E-22	[7]	--	6.8E-25	[8]	--	2.5E-23	0.35	7.2E-23 [b]	1.2E-22	1.50	7.7E-23 [b]	6.8E-25	1.50	4.5E-25 [b]	--
Formaldehyde	50-00-0	1.5E-07	0.17	9.1E-07 [b]	7.1E-07	2.00	3.6E-07 [b]	4.2E-09	4.30	9.7E-10 [b]	1.5E-07	9.00	1.7E-08 [b]	7.1E-07	40.0	1.8E-08 [b]	4.2E-09	40.0	1.0E-10 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.1E-09	[6]	--	9.6E-09	[7]	--	5.6E-11	[8]	--	2.1E-09	3,000	7.0E-13 [b]	9.6E-09	13,000	7.4E-13 [b]	5.6E-11	13,000	4.3E-15 [b]	--
Phenol	108-95-2	9.7E-17	[6]	--	4.5E-16	[7]	--	2.6E-18	[8]	--	9.7E-17	200	4.9E-19 [b]	4.5E-16	880	5.1E-19 [b]	2.6E-18	880	3.0E-21 [b]	--
Propionaldehyde	123-38-6	9.2E-09	[6]	--	4.2E-08	[7]	--	2.5E-10	[8]	--	9.2E-09	8.00	1.1E-09 [b]	4.2E-08	35.0	1.2E-09 [b]	2.5E-10	35.0	7.1E-12 [b]	--
SURGE																				
Cumulative TEU Risk		--	--	**0.100**	--	--	**0.015**	--	--	**2.6E-05**	--	--	**1.2E-03**	--	--	**5.0E-04**	--	--	**1.9E-06**	--
Dispersion Factor (ug/m^3/[g/s])			**7.68**			**14.2**			**0.053**			**7.68**			**14.2**			**0.053**		--
Acetaldehyde	75-07-0	0.022	0.45	0.049 [b]	0.041	5.50	7.5E-03 [b]	1.5E-04	12.0	1.3E-05 [b]	0.022	140	1.6E-04 [b]	0.041	620	6.6E-05 [b]	1.5E-04	620	2.5E-07 [b]	--
Acetone	67-64-1	8.6E-04	[6]	--	1.6E-03	[7]	--	5.9E-06	[8]	--	8.6E-04	31,000	2.8E-08 [b]	1.6E-03	140,000	1.1E-08 [b]	5.9E-06	140,000	4.2E-11 [b]	--
Acrolein	107-02-8	1.0E-22	[6]	--	1.8E-22	[7]	--	6.8E-25	[8]	--	1.0E-22	0.35	2.9E-22 [b]	1.8E-22	1.50	1.2E-22 [b]	6.8E-25	1.50	4.6E-25 [b]	--
Formaldehyde	50-00-0	8.5E-03	0.17	0.050 [b]	0.016	2.00	7.9E-03 [b]	5.8E-05	4.30	1.4E-05 [b]	8.5E-03	9.00	9.5E-04 [b]	0.016	40.0	3.9E-04 [b]	5.8E-05	40.0	1.5E-06 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	8.6E-04	[6]	--	1.6E-03	[7]	--	5.9E-06	[8]	--	8.6E-04	3,000	2.9E-07 [b]	1.6E-03	13,000	1.2E-07 [b]	5.9E-06	13,000	4.5E-10 [b]	--
Phenol	108-95-2	6.7E-07	[6]	--	1.2E-06	[7]	--	4.6E-09	[8]	--	6.7E-07	200	3.4E-09 [b]	1.2E-06	880	1.4E-09 [b]	4.6E-09	880	5.2E-12 [b]	--
Propionaldehyde	123-38-6	7.4E-04	[6]	--	1.4E-03	[7]	--	5.1E-06	[8]	--	7.4E-04	8.00	9.3E-05 [b]	1.4E-03	35.0	3.9E-05 [b]	5.1E-06	35.0	1.5E-07 [b]	--
ABASE																				
Cumulative TEU Risk		--	--	**2.6E-03**	--	--	**2.1E-04**	--	--	**7.0E-07**	--	--	**2.1E-05**	--	--	**4.6E-06**	--	--	**3.4E-08**	--
Dispersion Factor (ug/m^3/[g/s])			**7.26**			**6.97**			**0.051**			**7.26**			**6.97**			**0.051**		--
Acetaldehyde	75-07-0	8.8E-04	0.45	2.0E-03 [b]	8.4E-04	5.50	1.5E-04 [b]	6.2E-06	12.0	5.2E-07 [b]	8.8E-04	140	6.3E-06 [b]	8.4E-04	620	1.4E-06 [b]	6.2E-06	620	1.0E-08 [b]	--
Acetone	67-64-1	4.1E-06	[6]	--	3.9E-06	[7]	--	2.9E-08	[8]	--	4.1E-06	31,000	1.3E-10 [b]	3.9E-06	140,000	2.8E-11 [b]	2.9E-08	140,000	2.1E-13 [b]	--
Acrolein	107-02-8	2.7E-24	[6]	--	2.6E-24	[7]	--	1.9E-26	[8]	--	2.7E-24	0.35	7.6E-24 [b]	2.6E-24	1.50	1.7E-24 [b]	1.9E-26	1.50	1.3E-26 [b]	--
Formaldehyde	50-00-0	1.1E-04	0.17	6.6E-04 [b]	1.1E-04	2.00	5.4E-05 [b]	8.0E-07	4.30	1.9E-07 [b]	1.1E-04	9.00	1.3E-05 [b]	1.1E-04	40.0	2.7E-06 [b]	8.0E-07	40.0	2.0E-08 [b]	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	4.7E-05	[6]	--	4.5E-05	[7]	--	3.3E-07	[8]	--	4.7E-05	3,000	1.6E-08 [b]	4.5E-05	13,000	3.4E-09 [b]	3.3E-07	13,000	2.5E-11 [b]	--
Phenol	108-95-2	1.4E-10	[6]	--	1.4E-10	[7]	--	1.0E-12	[8]	--	1.4E-10	200	7.1E-13 [b]	1.4E-10	880	1.6E-13 [b]	1.0E-12	880	1.1E-15 [b]	--
Propionaldehyde	123-38-6	2.1E-05	[6]	--	2.0E-05	[7]	--	1.5E-07	[8]	--	2.1E-05	8.00	2.6E-06 [b]	2.0E-05	35.0	5.7E-07 [b]	1.5E-07	35.0	4.2E-09 [b]	--

NOTES:

lb = pound; yr = year; ug = microgram; m^3 = cubic meter; RBC = risk-based concentration; TAC = toxic air contaminant.

[a] Calculated concentration (ug/m^3) = (dispersion factor [{ug/m^3}/{g/s}]) x (TAC emission rate per TEU [g/s])

TAC emission rate per TEU (g/s) = (1)

[b] Excess cancer risk = (RBC cancer [ug/m^3]) / (annual concentration [ug/m^3])

REFERENCES:

[1] See Table 3-1, DEQ-Approved Annual Emission Rates.

[2] OAR 340-245-8010, Table 2.

[3] Represents highest modeled acute risk using the DEQ-approved risk equivalent emission rates. Exposure location represents the following receptor ID coordinates:

Receptor ID	UTM X (m)	UTM Y (m)
7,381	485,305.00	5,035,012.00

[4] See Table 7-3, Maximum Predicted Risk Exposure Location per Significant TEU (Chronic Only).

[5] Risk comparison value is the facility total risk rounded in accordance with OAR 340-245-0020(4)(a)(A).

[6] This TAC does not have a residential cancer RBC listed in OAR 340-245-8010, Table 2.

[7] This TAC does not have a worker cancer RBC listed in OAR 340-245-8010, Table 2.

[8] This TAC does not have a child cancer RBC listed in OAR 340-245-8010, Table 2.

[9] This TAC does not have a residential noncancer RBC listed in OAR 340-245-8010, Table 2.

[10] This TAC does not have a worker noncancer RBC listed in OAR 340-245-8010, Table 2.

[11] This TAC does not have a child noncancer RBC listed in OAR 340-245-8010, Table 2.

Table 6-2
List of TACs with No Published Risk-Based Concentrations
Stimson Lumber Company Forest Grove Complex—Gaston, Oregon

TAC	CAS or DEQ ID	Risk-Based Concentration? [1] (Yes/No)
Barium and compounds	7440-39-3	No
Zinc oxide	1314-13-2	No
Phosphorus and compounds	504	No
Molybdenum trioxide	1313-27-5	No
Silver and compounds	7440-22-4	No
Thailium and compounds	7440-28-0	No
Zinc and compounds	7440-66-6	No
Acetophenone	98-86-2	No
Butyl benzyl phthalate	85-68-7	No
Dipropylene glycol monomethyl ether	34590-94-8	No
Crotonaldehyde	4170-30-3	No
Dibutyl phthalate	84-74-2	No
Diethylphthalate	84-66-2	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
Decachlorobiphenyl	2051-24-3	No
1-Methylphenanthrene	832-69-9	No
4,6-Dinitro-o-cresol (and salts)	534-52-1	No
di-n-octylphthalateb	518	No
4-nitrophenol	100-02-7	No
Phosphorus and compounds	504	No
2-Chlorophenol	95-57-8	No
2,4-Dinitrophenol	51-28-5	No
Trichlorofluoromethane (Freon 11)	75-69-4	No

NOTES:
TAC = toxic air contaminant.

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

FIGURES

Figure 2-1
Aerial Photography of Facility

Stimson Lumber Company
Forest Grove Complex
Gaston, OR

Legend

Exposure Assessment Boundary
UTM 500-Meter Grid Mark

Key Map

UTM = Universal Trans Mercator

0 600
Meters

Data Sources
Aerial photography from the U.S. Department of Agriculture; reference labels from Esri.

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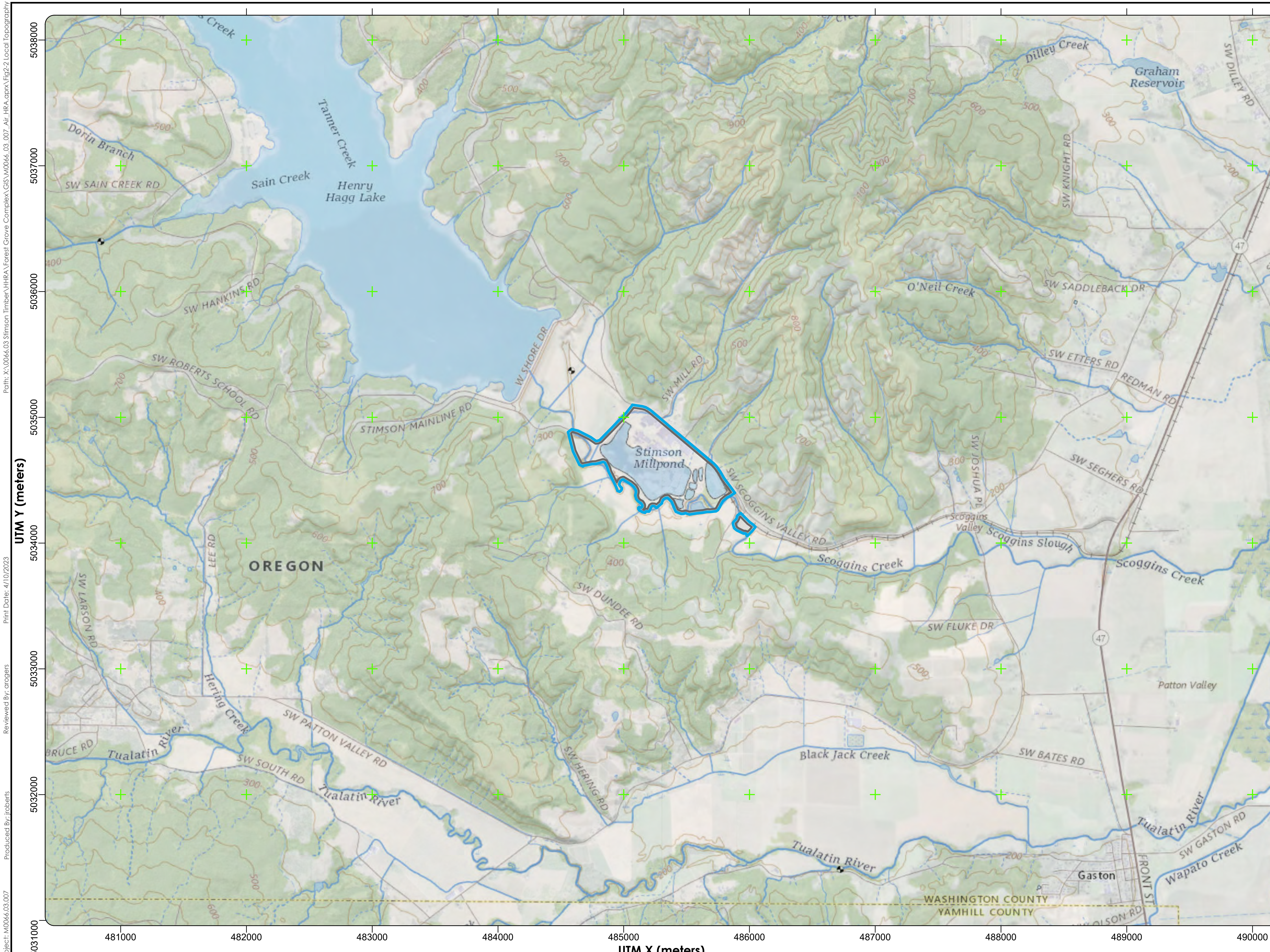
Figure 2-2
Local Topography

Stimson Lumber Company
Forest Grove Complex
Gaston, OR



Legend

- Exposure Assessment Boundary
- UTM 1-Kilometer Grid Mark

Key Map

UTM = Universal Trans Mercator

0 700
Meters

Data Source
Topographic basemap from Esri.

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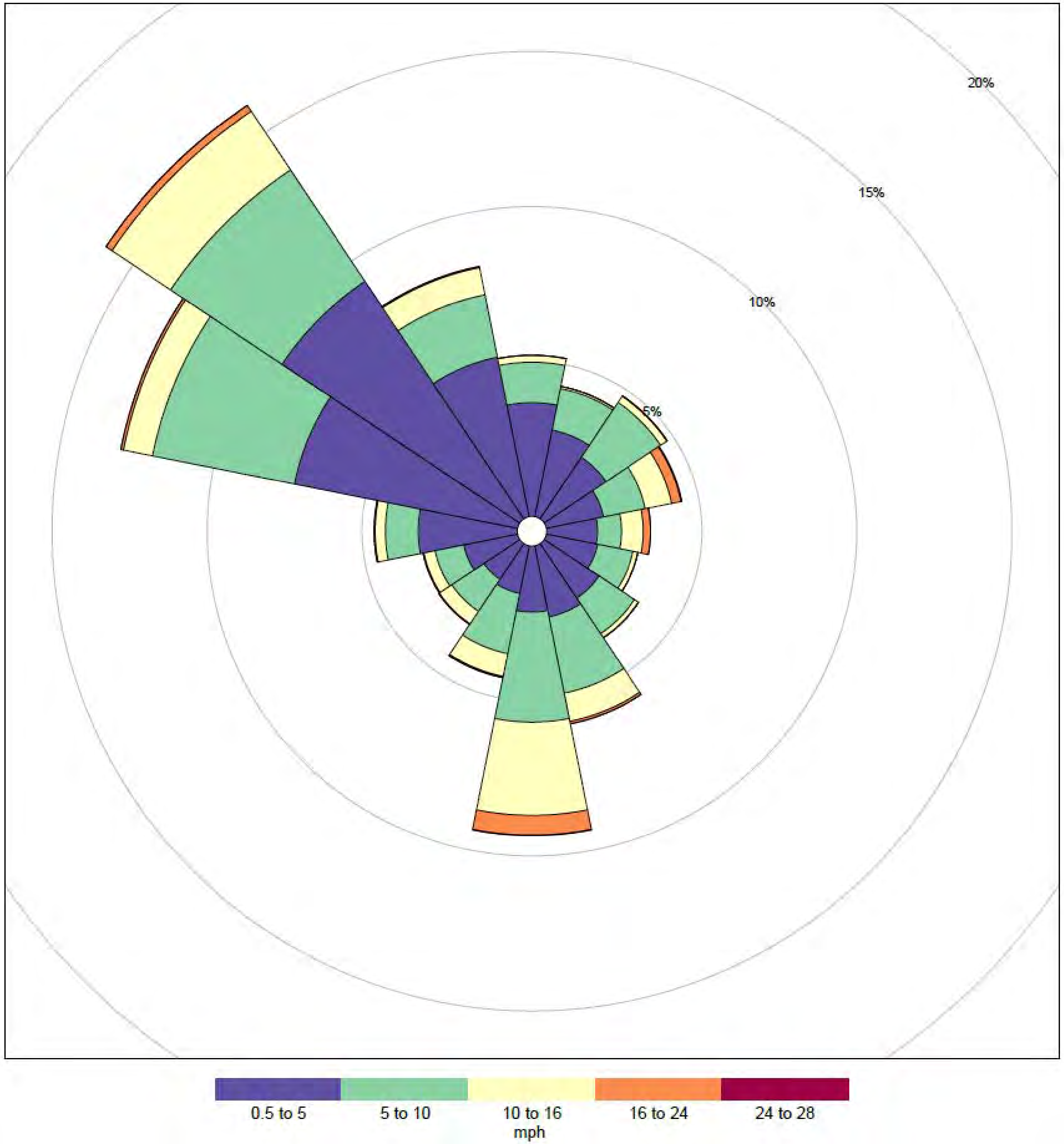
Figure 4-1
Wind Rose

Stimson Lumber Company
Forest Grove Complex
Gaston, OR



Key Map

mph = miles per hour

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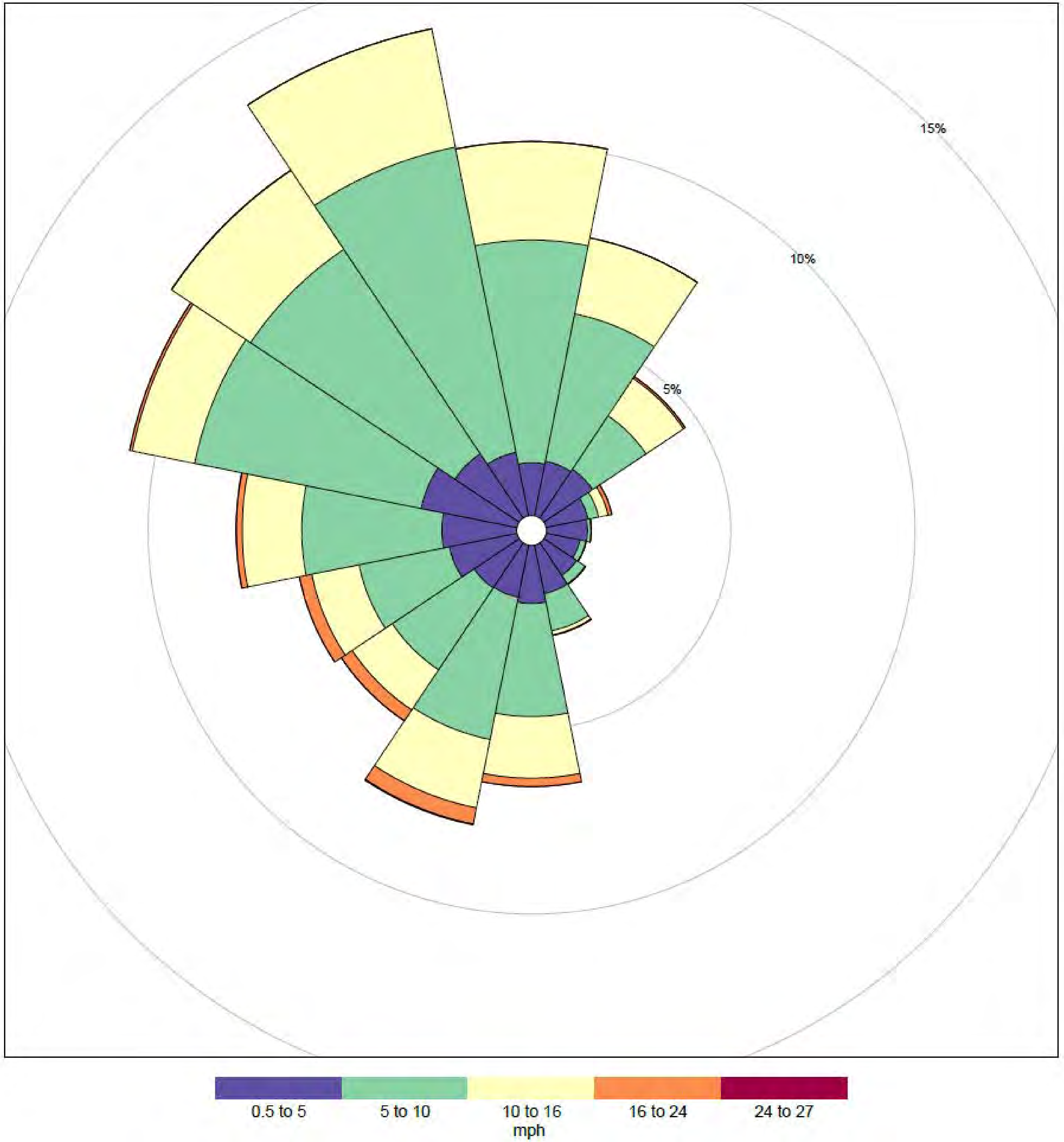
Figure 4-2
Wind Rose
(MMIF Data)

Stimson Lumber Company
Forest Grove Complex
Gaston, OR



Key Map

mph = miles per hour

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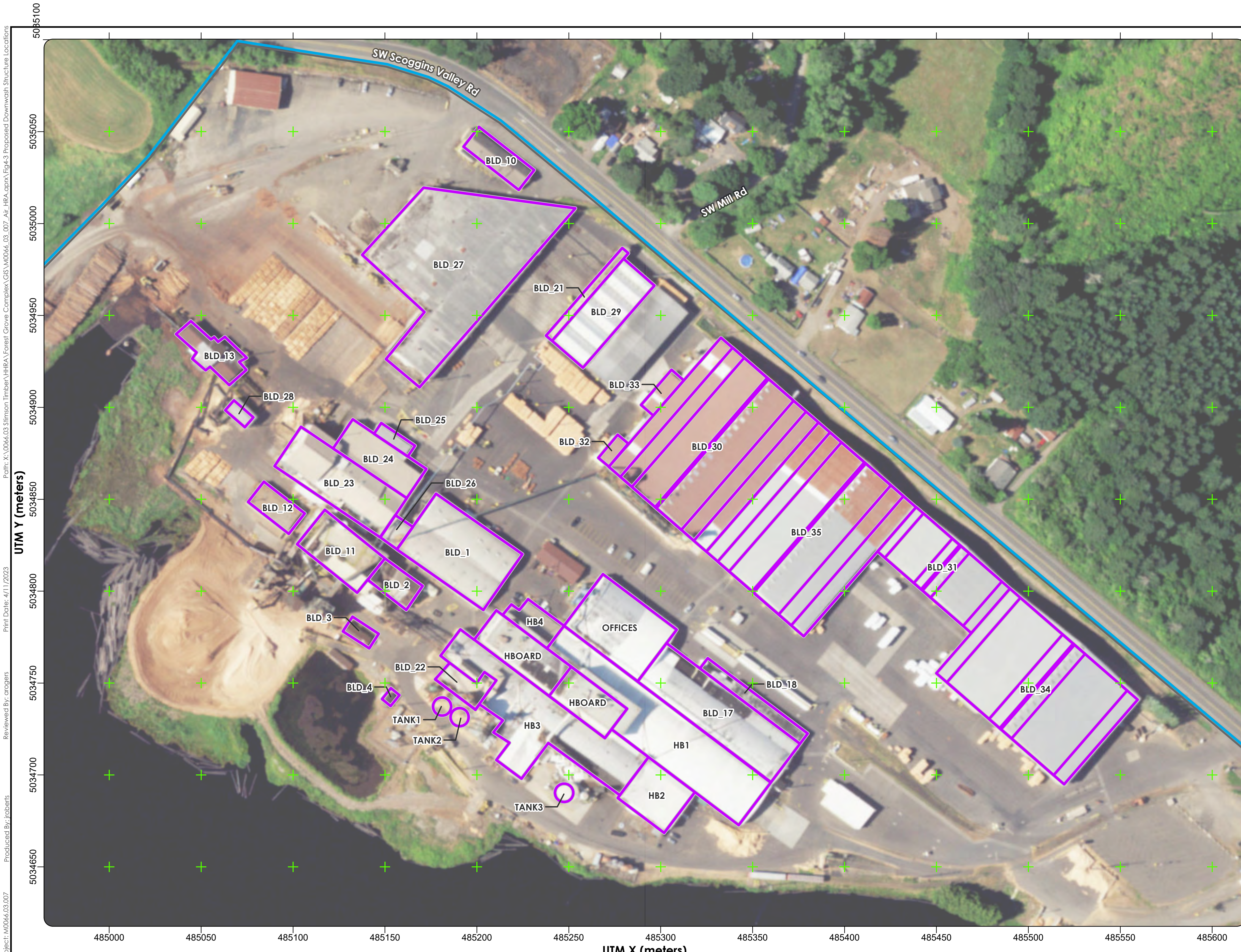
Reviewed By: arogers
Produced By: jroberts
Project: M0066.03.007

Figure 4-4
Downwash Structure Locations

Stimson Lumber Company
Forest Grove Complex
Gaston, OR



Legend

- Downwash Structures Exposure
- Assessment Boundary UTM 50-
- Meter Grid Mark

Key Map

UTM = Universal Trans Mercator

0 40
Meters

Data Sources
Aerial photography from the U.S. Department of Agriculture; reference labels from Esri.

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Path: X:\0066.03 Stimson Timber\HHRA\Forest Grove Complex\GIS\M0066.03_007_Air_HRA.aprx\Fig4-3 Proposed Downwash Structure Locations
Print Date: 4/11/2023
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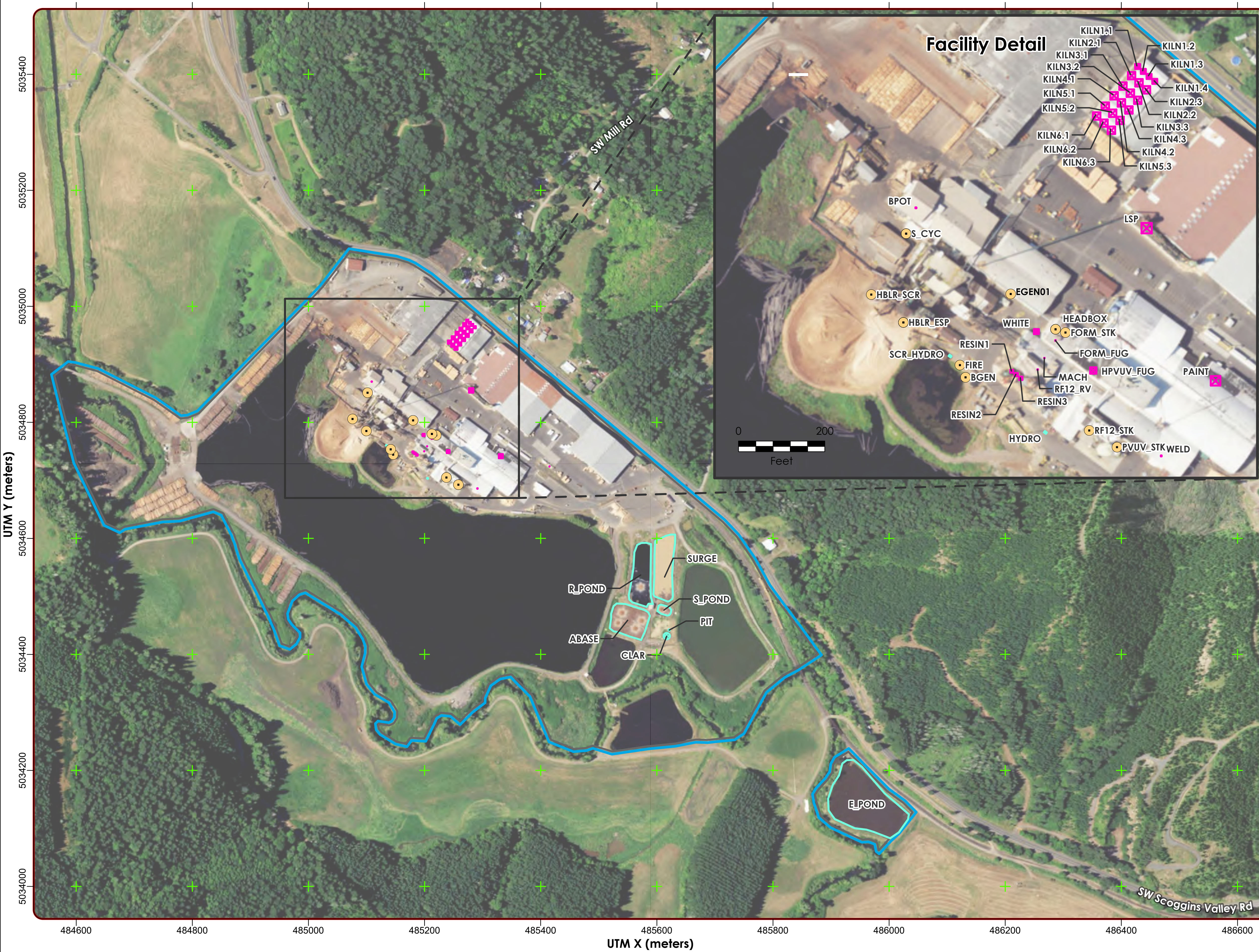
Produced By: jroberts
Project: M0066.03.007

Figure 4-2
Emission Source Locations

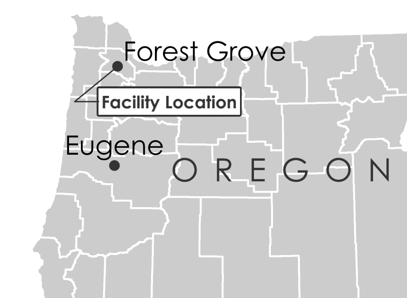
Stimson Lumber Company
Forest Grove Complex
Gaston, OR



Legend

- Point Source
- Area Source
- Volume Source
- Exposure Assessment Boundary
- UTM 500 Meter Grid Mark

Key Map



0 200
Meters

Data Source
Aerial photography from the U.S. Department of Agriculture

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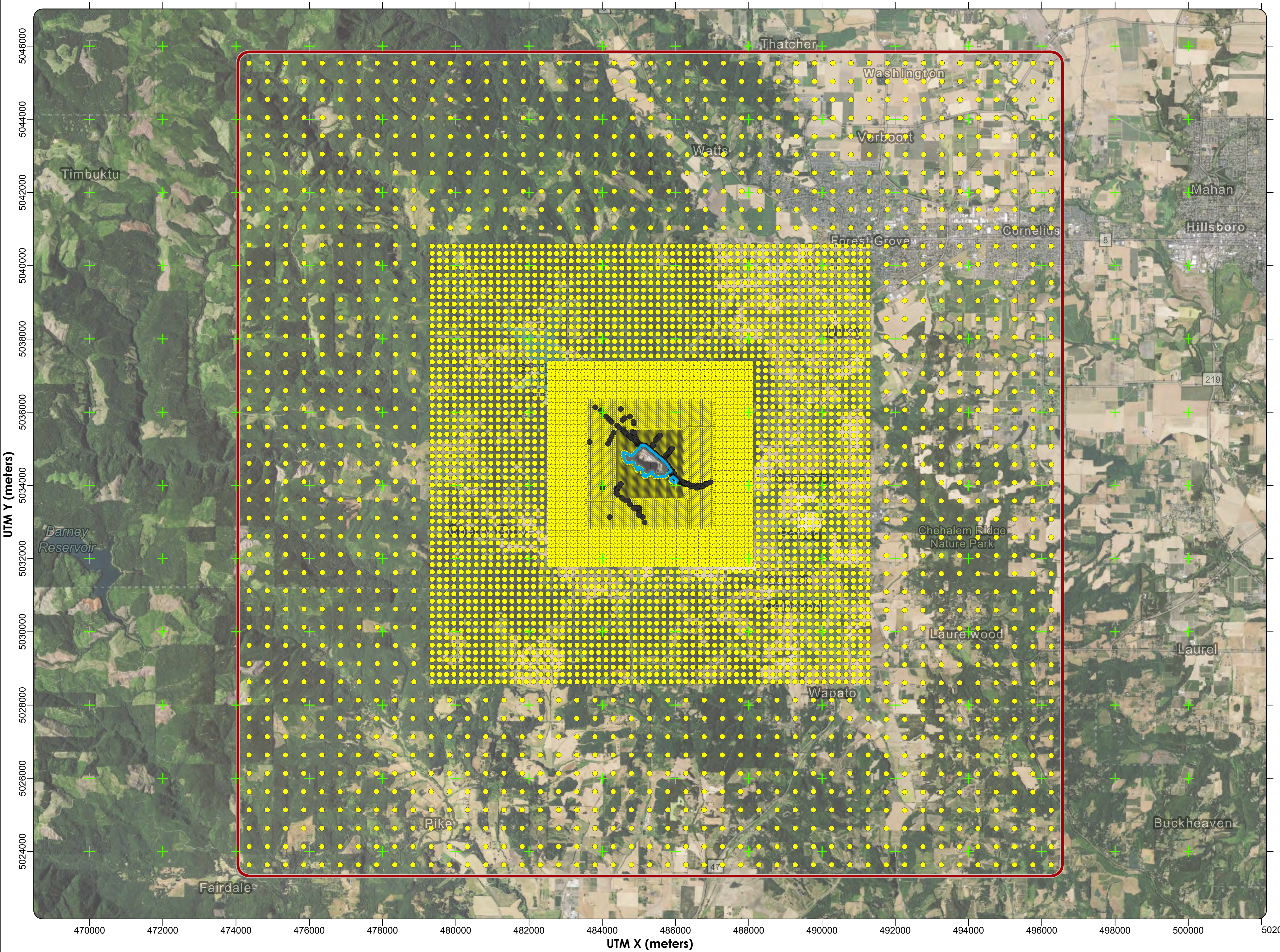
Figure 4-5
Receptor Locations

Stimson Lumber Company
Forest Grove Complex
Gaston, OR



Legend

- Receptor
- Receptor in Right of Way
- Modeling Domain Extent Exposure
- Assessment Boundary UTM 2-
- Kilometer Grid Mark

Key Map

UTM = Universal Trans Mercator

0 2,000
Meters

Data Sources
Aerial photography from the U.S. Department of Agriculture; reference labels from Esri.

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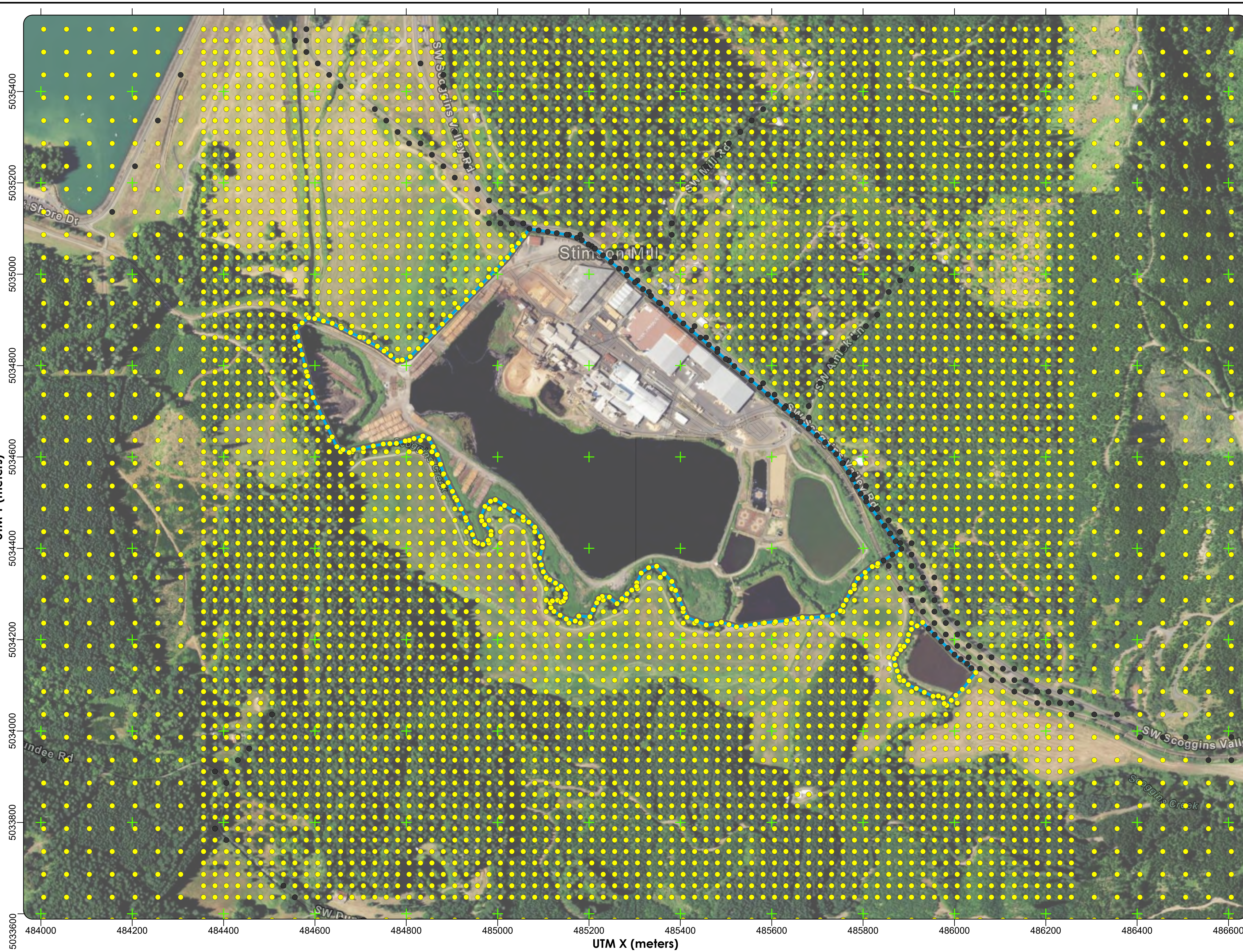
Figure 4-6
Receptor Locations in Immediate Area

Stimson Lumber Company
Forest Grove Complex
Gaston, OR

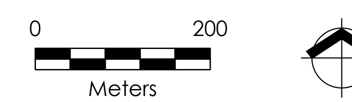


Legend

- Receptor
- Receptor in Right of Way Exposure
- Assessment Boundary UTM 200-
- Meter Grid Mark

Key Map

UTM = Universal Trans Mercator



Data Sources
Aerial photography from the U.S. Department of Agriculture; reference labels from Esri.

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Path: X:\0066.03 Stimson Timber\HHRA\Forest Grove Complex\GIS\M0066_03_007_Air_HRA.aprx\Fig4-5 Proposed Receptor Locations in Immediate Area
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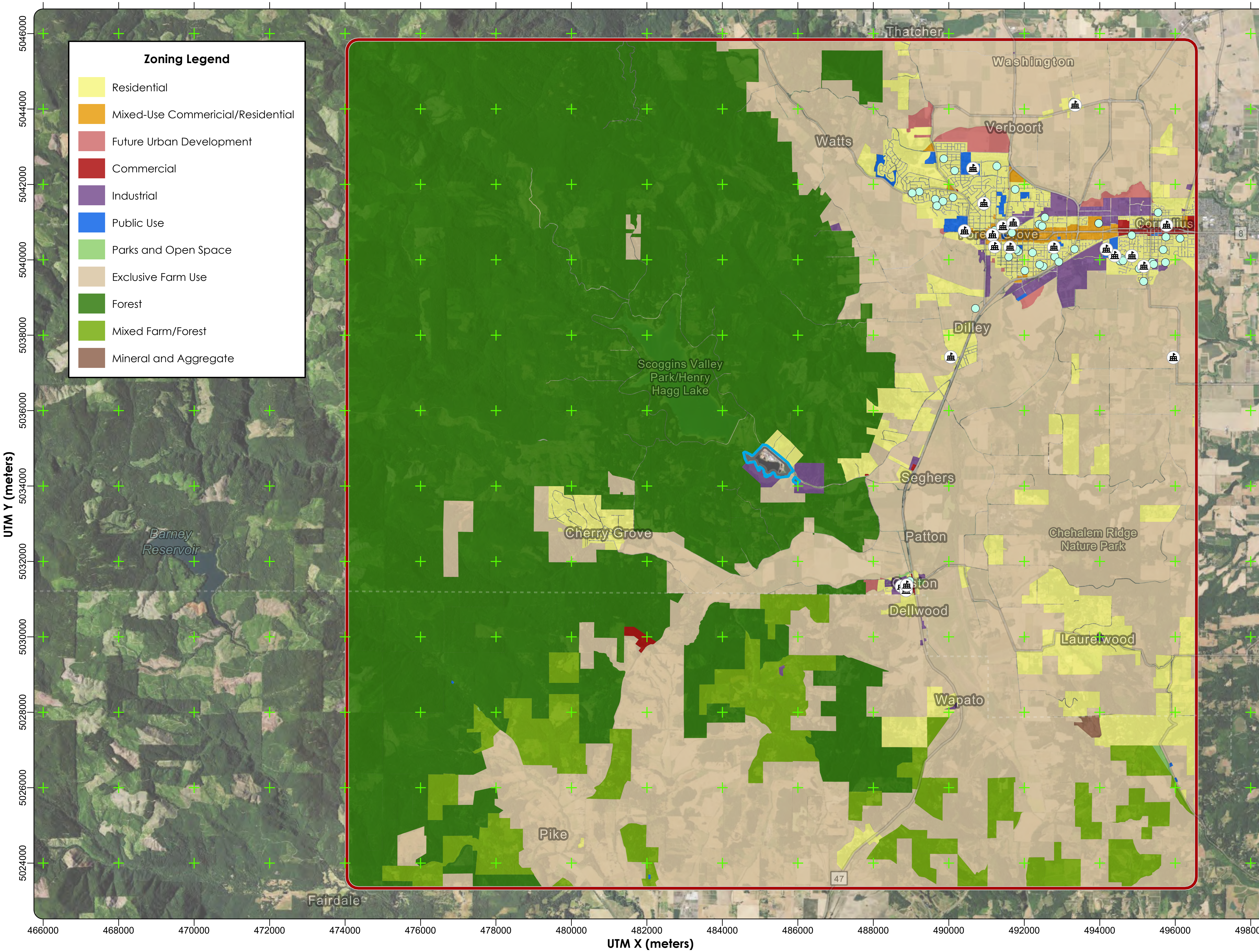
Figure 4-7
Existing Land Use Zoning Classifications

Stimson Lumber Company
Forest Grove Complex
Gaston, OR



Legend

- School Location (2015-16)
- Early Learning Providers (2020)
- Exposure Assessment Boundary
- Modeling Domain Extent
- UTM 2-Kilometer Grid Mark

Key Map

UTM = Universal Trans Mercator

0 2,000
Meters

Data Sources
Zoning from the Oregon Department of Land Conservation and Development (2017); school locations from Oregon Health Authority; early learning providers from Oregon Department of Education; aerial photography from the U.S. Department of Agriculture; reference labels from Esri.

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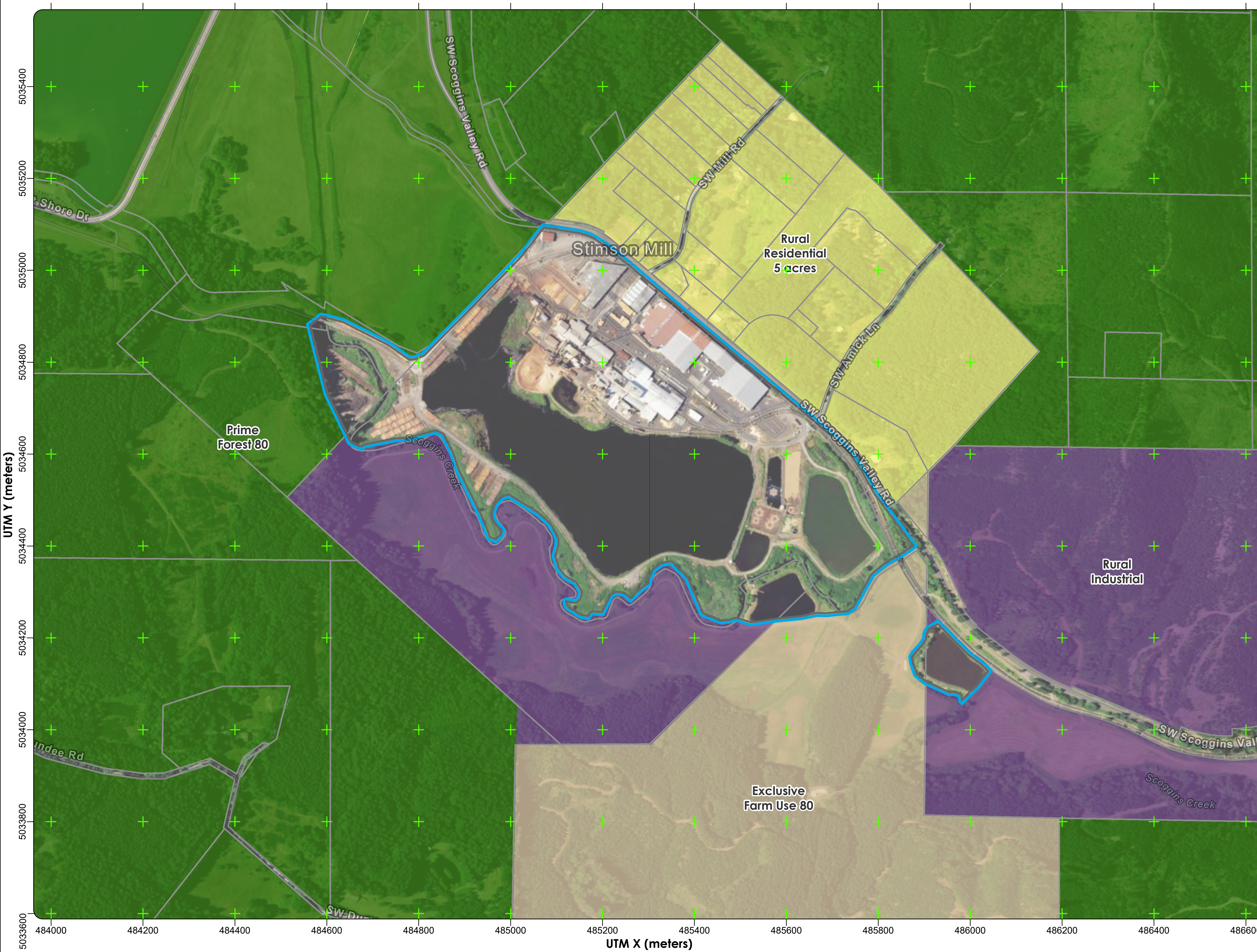
Figure 4-8
Existing Land Use Zoning Classifications in the Immediate Area

Stimson Lumber Company
Forest Grove Complex
Gaston, OR



Legend

- Exposure Assessment Boundary
- Tax Lot
- UTM 200-Meter Grid Mark

Zoning

- Residential
- Industrial
- Exclusive Farm Use
- Forest

Key Map

UTM = Universal Trans Mercator

0 200
Meters

Data Sources
Zoning from the Oregon Department of Land Conservation and Development (2017); aerial photography from the U.S. Department of Agriculture; tax lots from Oregon Metro and Yamhill County.

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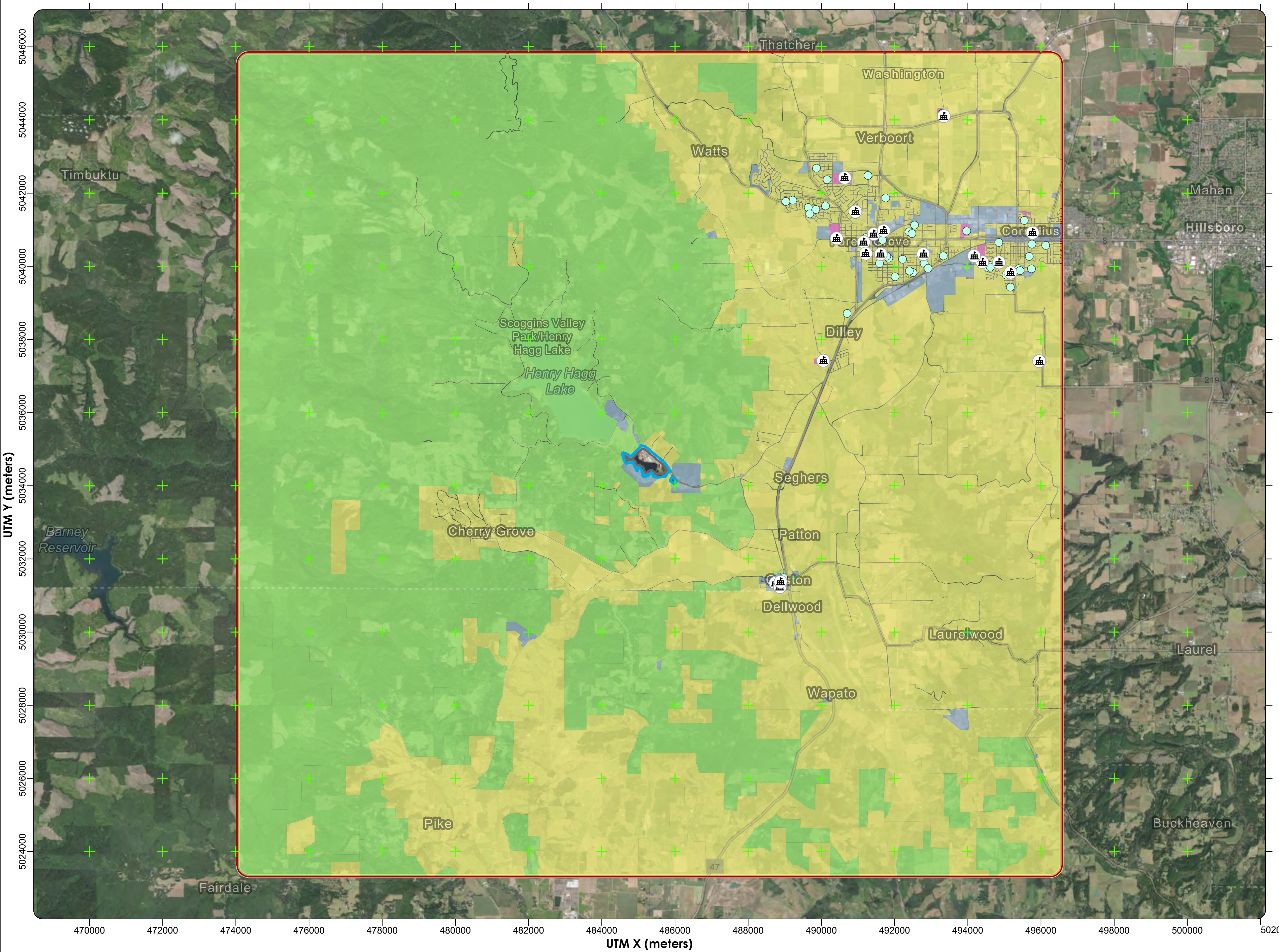

Figure 4-8 Exposure Categorization

Stimson Lumber Company
Forest Grove Complex
Gaston, OR

Legend

- School Location (2015-16)
- Early Learning Providers (2020)
- Exposure Assessment Boundary
- Modeling Domain Extent
- UTM 2-Kilometer Grid Mark

Exposure Classification

- Acute
- Child
- Residential
- Worker

Key Map

Notes

Zoning data from the Oregon Department of Land Conservation and Development (2017).

Existing land use classifications revised to reflect the risk-based concentration categories presented in Oregon Administrative Rule 340-245-8040 Table 4.

Tax lot land use is used for classifications where zoning data is unavailable and where tax lot land use is more conservative.

0 2,000
Meters

Data Sources

Aerial photography from the U.S. Department of Agriculture; schools from Oregon Health Authority; early learning facilities from the Oregon Department of Education.

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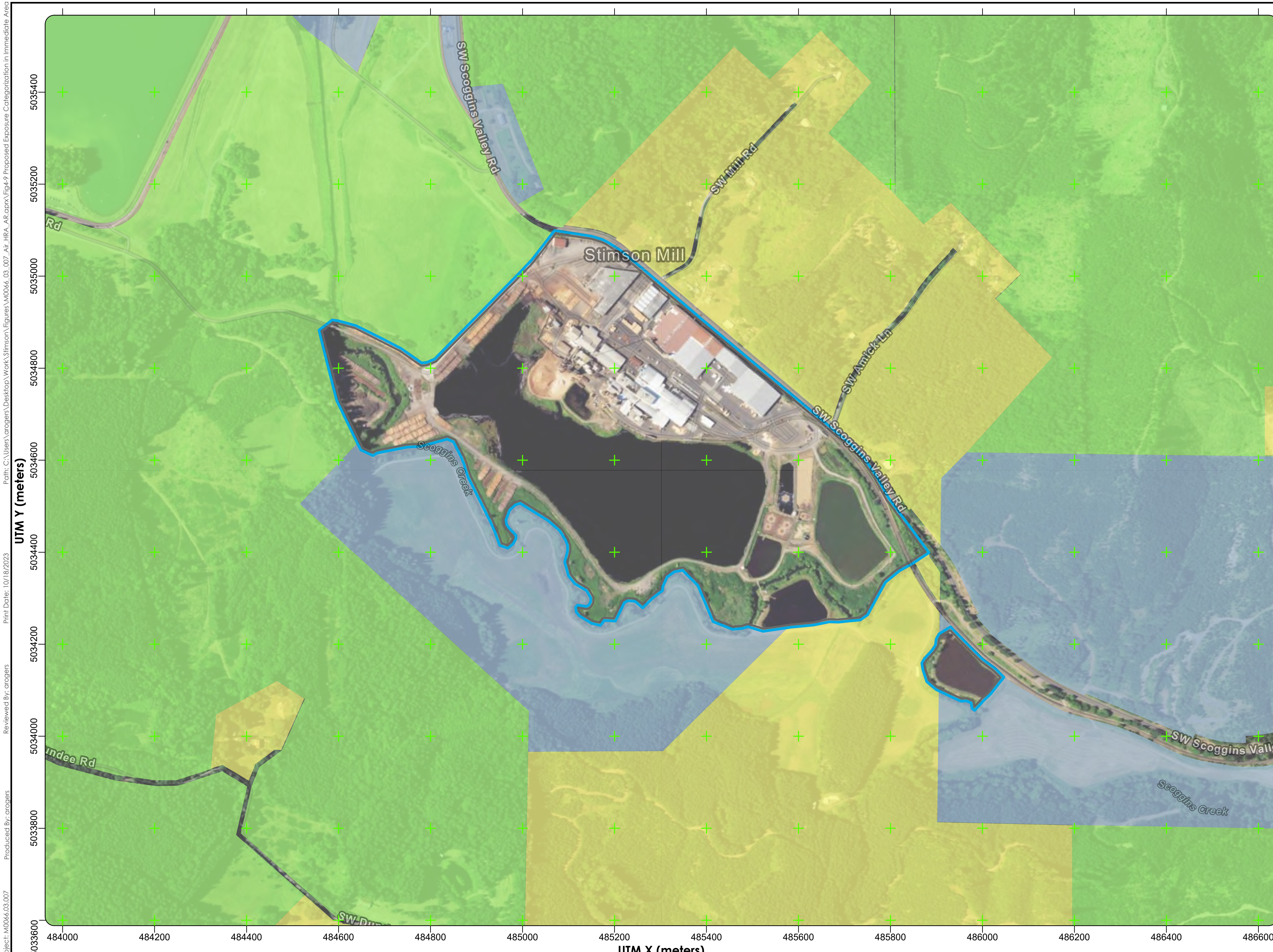

Figure 4-9 Exposure Categorization in the Immediate Area

Stimson Lumber Company
Forest Grove Complex
Gaston, OR

Legend

Exposure Assessment Boundary
UTM 200-Meter Grid Mark

Exposure Classification

Acute
Residential
Worker

Key Map

Notes

Zoning data from the Oregon Department of Land Conservation and Development (2017).
Existing land use classifications revised to reflect the risk-based concentration categories presented in Oregon Administrative Rule 340-245-8040 Table 4.
Tax lot land use is used for classifications where zoning data is unavailable and where tax lot land use is more conservative.

0 200
Meters

Data Sources

Aerial photography from the U.S. Department of Agriculture.

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Path: C:\Users\arogers\Desktop\Work\Stimson\Figures\M0066_03_007_Air_HRA_AR.aprx\Fig4-9 Proposed Exposure Categorization in Immediate Area
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Reviewed By: arogers
Produced By: arogers
Project: M0066.03.007