

REVISED CLEANER AIR OREGON — RISK ASSESSMENT REPORT

ENTEK INTERNATIONAL LLC
LEBANON, OREGON

Prepared for
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
CLEANER AIR OREGON AIR TOXICS PROGRAM
January 18, 2023

Project No. M8006.61.001



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ACRONYMS AND ABBREVIATIONS

Appendix W	40 CFR Appendix W to Part 51
BPIP-PRM	Building Profile Input Program incorporating the Plume Rise Model Enhancements
CAO	Cleaner Air Oregon
DEQ	Oregon Department of Environmental Quality
ENTEK	ENTEK International LLC
EPA	U.S. Environmental Protection Agency
Title V permit the facility	Title V Permit No. 22-6024-TV-01 ENTEK's manufacturing facility located in Lebanon, OR
g/s	gram(s) per second
m	Meter
MFA	Maul Foster & Alongi, Inc.
MMBtu	million British thermal units
NLCD16	State of Oregon National Land Cover Dataset, 2016
OAR	Oregon Administrative Rule
PTEs	Permanent Total Enclosures
RBC	risk-based concentration
sigma-theta	standard deviation of horizontal wind direction
SLA	Solvent Laden Air
TAC	toxic air contaminant
TCE	trichloroethylene
TEU	toxic emissions unit
ug/m ³	microgram(s) per cubic meter
USGS	U.S. Geological Survey
VOC	volatile organic compound

1 INTRODUCTION

ENTEK International LLC (ENTEK) owns and operates a polymer-based film manufacturing facility (“the facility”) located at 250 Hansard Avenue in Lebanon, Oregon. The facility currently operates under Title V Permit No. 22-6024-TV-01 (the “Title V permit”) issued by the Oregon Department of Environmental Quality (DEQ) on December 21, 2018.

Maul Foster & Alongi, Inc. (MFA) was retained by ENTEK 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	ENTEK Submittal Date	DEQ Approval Date
CAO Emissions Inventory	June 3, 2019	January 18, 2022
CAO Modeling Protocol	February 17, 2022 (Final Revision—August 17, 2022)	August 26, 2022
CAO Level 3 Risk Assessment Work Plan	March 18, 2022 (Final Revision—August 17, 2022)	August 26, 2022

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 August 26, 2022 approval, this Level 3 Risk Assessment is due on or before December 24, 2022. 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 only slightly above the Source Permit RAL and well below the Community Engagement RAL. The chronic and acute noncancer hazard indices are well below the TBACT RAL. Because the calculated hazard indices are well below the TBACT RALs, the calculation of the risk determination ratio is not required. The maximum predicted excess cancer risk, and chronic and acute noncancer hazard indices for the natural gas combustion TEUs are presented in Table 1-3.

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	7	Below Community Engagement Level
Non-Residential Child	0.2	Below Source Permit Level
Worker	0.5	
Chronic Noncancer Hazard Index		
Residential	0.4	Below Source Permit Level
Non-Residential Child	0.1	Below Aggregate TEU Level
Worker	0.1	
Acute Noncancer Hazard Index	2	Below TBACT Level

Table 1-3. Level 3 Risk Assessment Result Summary for Natural Gas Combustion TEUs

Exposure Assessment	Facility Risk / Hazard Index
Cancer Risk (excess risk per million)	
Residential	0.5
Non-Residential Child	<0.1
Worker	<0.1
Chronic Noncancer Hazard Index	
Residential	<0.1
Non-Residential Child	<0.1
Worker	<0.1
Acute Noncancer Hazard Index	<0.1

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 approximately one-half mile northwest of downtown Lebanon, Oregon on the eastern edge of the Willamette Valley at the foothills of the Cascade Mountain range, and along the Santiam River. The area immediately surrounding the facility is characterized primarily by flat terrain. Agricultural and industrial land-use zones border the facility to the north and west, and a mixture of residential, mixed-use, and industrial land-use zones border the facility to the south and west. An aerial image showing the facility location overlaid with 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 manufactures microporous polymer-based films on 11 production lines. Dry raw materials and process oils delivered to the facility by rail and trucks throughout the year are stored in enclosures on site. The raw materials are transferred to the mix areas where the dry materials (such as polyethylene and silica) and process oils are mixed together before they enter the process line.

Once the correct mixture of raw materials is achieved, the mixture is transferred to a twin screw extruder via enclosed conveyors. The mix is extruded into a film which is then conveyed through an extractor that employs trichloroethylene (TCE) to remove oil from the film. Each extractor is contained inside a negatively pressurized permanent total enclosure.

After leaving the extractor, the polymer-based film goes through a heated dryer and hot air ovens to remove TCE from the film. Upon exiting the oven, the film passes through a vision and defect marking system. Once through the vision and defect marking system, the film is wound onto rolls to be put into boxes that are then stretch-wrapped. The stretch-wrapped boxes are transported from the production facility by truck to the finished goods warehouse or directly to the customer.

ENTEK maintains two certified Permanent Total Enclosures (PTEs) so as to prevent fugitive emissions. One of the two PTEs encompasses the film production operation and is identified as TEU-1A. Exhaust from equipment in the film production PTE is routed into a duct that discharges to the carbon bed adsorption system. The other of the two PTEs is the product storage warehouse which is identified as TEU-1C. Emissions from both PTEs are continuously monitored using certified monitors compliant with 40 CFR 60, Appendix F quality assurance procedures.

In addition to the film production operations, the facility operates a fiberglass mat lamination line, which consists of adhering a fiberglass mat (made offsite) to the finished film, drying the water-based glue on the fiberglass mat via an electric heater, and then packaging the finished product.

Process steam is provided by a high-efficiency natural-gas-fired boiler. A second high-efficiency natural-gas-fired boiler is maintained as backup for the primary boiler. Since the primary boiler

supplies enough steam to heat all necessary processes at the facility, the secondary boiler is used only in instances where the primary boiler is shut down. Both boilers are fired primarily on natural gas; however, they have limited capability to operate on diesel in the event of natural gas curtailment.

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 as shown in the TAC emissions inventory. The annual and daily TAC emission estimates were converted to units of grams per second (g/s) for purposes 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 detail 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.

Each TEU identified in the DEQ-approved TAC emissions inventory was included in the dispersion model developed for 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. Additional details describing unit emission rate modeling are provided in Section 4.4. 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 4.4.

3.1 Microporous Plastic Production Operation (Permanent Total Enclosure) (TEU-1A)

All process lines containing TCE are contained in the film production PTE located in the manufacturing building. The air in the PTE is constantly exhausted to the carbon bed adsorption system. The carbon bed exhausts to atmosphere through a single stack, which is represented in the model as model ID C_STK. The modeled exhaust parameters for the carbon bed stack are presented in Table 3-4.

3.2 Microporous Plastic Production Operation (Component Fugitive Emissions) (TEU-1B1 & TEU-1B2)

TCE may be released in small amounts from components (e.g., valves, flanges, connectors) in TCE service located outside of the PTEs. Some of these components are located in structures that are maintained under negative pressure and that exhaust through elevated emission points. These components are within TEU-1B1. Other components are located outside of any structure and so release directly to the atmosphere and are identified as TEU-1B2.

Fugitive emissions are represented in the model by ten volume sources (model IDs TCE1_1, TCE1_2, TCE4, TCE16, TCE17, and TCE15_1-5), four line volume sources (model IDs TCE3_V, TCE13_V,

TCE19_V, and TCE20_V) and two point sources (model IDs STK_Z45, STK_Z11). The model exhaust parameters for the fugitive emissions sources LD are presented in Table 3-4.

3.3 Warehouse (TEU-1C)

Polymer-based film awaiting shipment to customers is stored in the warehouse building located at the western side of the property, where trace amounts of TCE off-gas from the plastic stretch-wrapped and boxed product. The warehouse building is a certified PTE with an exhaust system that pulls air from inside the building and vents it through a stack located on the north end of the warehouse. The warehouse stack contains a continuous emissions monitor. The warehouse stack is represented in the model as model ID WHST. The model exhaust parameters for the warehouse stack are presented in Table 3-4.

3.4 Welding for Metal Fabrication Activities (TEU-4)

Welding activities are conducted in building 2, which is located at the south end of the facility. There are 16 vents on the roof of building, including two that passively allow airflow into and out of the building. Emissions from the welding activities were modeled as 16 discrete volume sources with model IDs BLD2_1 through BLD2_16. The model exhaust parameters for fugitive welding activities are presented in Table 3-4.

3.5 Coating Line (TEU-5)

The coating process takes place in an enclosed room, on the southeast corner of building 1. Air from the room is exhausted by a fan through a horizontal stack on the side of the building. The coating line is represented in the model by a horizontal point source with the model ID COATLINE. The model exhaust parameters for the coating line are presented in Table 3-4.

3.6 Natural-Gas-Fired Boilers (TEU-2.3 and TEU-2.1)

The facility uses two Cleaver Brooks high-efficiency natural-gas-fired boilers to provide process steam. The primary boiler (TEU-2.3) has a maximum heat input rating of 96.6 million British thermal units (MMBtu) per hour, while the secondary boiler (TEU-2.1) has a maximum heat input rating of 64.8 MMBtu per hour. The secondary boiler serves only as a backup to the primary boiler and does not operate unless the primary boiler is not operational. Both boilers fire primarily on natural gas; however, the Title V permit (condition 23.g) authorizes limited operation on diesel as a backup fuel during curtailment periods and up to 48 hours per calendar year for operator training and testing.

Because the secondary boiler operates only if the primary boiler is not operational, emissions from the secondary boiler were not included in the risk assessment. For the purposes of estimating cumulative risk from the facility, emissions from the boiler when firing on diesel were included in the Level 3 risk assessment.

The primary boiler stack is represented in the model with model ID BOILER. The model exhaust parameters for the primary boiler are presented in Table 3-4.

3.7 Miscellaneous TAC Fugitive Emissions (TEU-MISC)

Miscellaneous facility-wide fugitive emissions (TEU-MISC) occur from the use of various TAC-containing products at the facility. These emissions occur inside enclosed buildings and are released to atmosphere through specific known locations at the facility, such as wall vents. As a result, the facility-wide miscellaneous TAC fugitive emissions are represented in the model by ten discrete volume sources (model IDs TCE1_1, TCE1_2, TCE4, TCE16, TCE17, and TCE15_1-5) which represent ten exhaust vents from building 1; 16 discrete volume sources (model IDs BLD2_1 through BLD2_16), which represent 16 exhaust vents from building 2; and four line volume sources (model IDs TCE3_V, TCE13_V, TCE19_V, and TCE20_V), which represent fugitive emissions from rooftop piping.

The model exhaust parameters for the miscellaneous fugitive emissions are presented in Table 3-4. Fugitive TCE emissions from buildings 2 and 11 are allocated to each applicable model source (model IDs TCE1_1, TCE1_2, TCE4, TCE16, TCE17, TCE15_1-5, TCE3_V, TCE13_V, TCE19_V, and TCE20_V). Table 3-5 presents the model source allocation for the facility-wide fugitive emissions.

3.8 Parts Washer Fugitive Emissions (TEU-MISC)

Fugitive emissions may occur from the use of two parts washers that use a TAC-containing solvent for cleaning equipment on an as-needed basis. Emissions related to the parts washer occur inside the maintenance shop in Building 1 where they are released to atmosphere via a roll-up door and inside the forklift shop in Building 2 where they are released to the atmosphere through passive vents on the roof. As a result, fugitive emissions from the part washer in the maintenance shops are represented in the model as a volume source identified by model ID MSHOP and as 16 discrete volume sources (model IDs BLD2_1 through BLD2_16). Table 3-5 presents the model source allocation for the parts washer fugitive emissions.

The model exhaust parameters for the parts washer fugitive emissions are presented in Table 3-4.

4 AIR DISPERSION MODELING METHODOLOGY

The following subsections detail the modeling methodology proposed in the DEQ-approved modeling protocol, and the conceptual site model for the facility that was proposed in the DEQ-approved Risk Assessment Work Plan. The dispersion model input and output files are being submitted to the DEQ electronically for review in support of this risk assessment report.

4.1 Model Selection

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

Table 4-1. Model Selection

Model	Model Version
AERMOD	22112
AERMET	22112
AERMAP	18081
AERSURFACE	20060
AERMINUTE	15272
BPIP	04274

4.2 Meteorological Data

MFA developed the meteorological and terrain data files shown in Table 4-2 below.

Table 4-2. Meteorological and Terrain Data

Dataset	Station ID
Site-Specific	On-site meteorological station located on northwest corner of property boundary
Surface	Station ID 24232 for Salem, OR (National Oceanic and Atmospheric Administration)
Upper Air	Station ID 24232 for Salem, OR (National Oceanic and Atmospheric Administration/ Earth System Research Laboratory Radiosonde Database)
Terrain	USGS National Elevation Dataset (1/3-arc seconds with horizontal resolution of 10 meters)

4.2.1 Site-Specific Meteorological Data

ENTEK owns and operated a meteorological tower, located at the northwest corner of the facility. The tower was sited in late 2016 and began collecting data in January 2017. Hourly averaged meteorological data, including wind speed, wind direction, temperature (2-meter and 10-meter), precipitation, relative humidity, and barometric pressure, are collected at the tower.

MFA used the period of January 1, 2018 through March 1, 2019 from the site-specific meteorological data for modeling. Section 8.4.2 “Recommendations and Requirements” of 40 CFR Appendix W to Part 51 (Appendix W) states: “The use of ... at least one year of site-specific ... meteorological data are required.”

This period of January 1, 2018 through March 1, 2019 was chosen so as to include the full year of meteorological data (2018) as well as all of the audited and approved data in 2019 after which time the station ceased to be maintained. Further information that led to the use of this expanded data set is presented in the DEQ-approved modeling protocol.

4.2.2 Surface Meteorological Data

Surface meteorological data were used to supplement solar radiation and substitute for any missing on-site data. The surface meteorological data were collected by the Salem McNary Airport monitoring station (McNary met station) (ID 24232) located in Salem, Oregon. Hourly data for wind speed, wind direction, precipitation, solar radiation, relative humidity, barometric pressure, and temperature for the modeling period (January 1, 2018, through March 1, 2019) were used to substitute for missing or unmonitored variables from the on-site data. The McNary met station data were determined to be the most representative publicly available surface meteorological data because of the station's relatively close proximity to the facility.

4.2.3 Upper-Air Data

Upper-air meteorological data for Salem, Oregon (station ID 24232) were obtained in the Forecast Systems Laboratory format, from the National Oceanic and Atmospheric Administration Earth System Research Laboratory Radiosonde Database. Upper-air meteorological data were extracted for the modeling period (January 1, 2018, through March 1, 2019).

4.2.4 Data Processing—AERMET

MFA processed the meteorological data using AERMET to produce model-ready meteorological data covering the modeling period (January 1, 2018, through March 1, 2019) for use in the AERMOD model. The land-use surface characteristics were processed using AERSURFACE.

As outlined in the DEQ's April 2020 "Recommended Procedures for Air Quality Dispersion Modeling", Section 2.3, Table 2, "Adjusted surface friction velocity (u^*) can be used if no turbulence parameters were passed to AERMOD." Appendix W specifies turbulence parameters as standard deviation of horizontal wind direction (σ -theta) and vertical wind direction. Sigma-theta was not passed to AERMOD, and the adjustment to the surface frictional velocity option (i.e., ADJ_U*) was selected as part of the AERMET processing.

An analysis of the missing hours for the on-site meteorological dataset produced by AERMET was performed by running AERMOD for each calendar quarter and obtaining the number of missing hours from the model output file. To be considered complete and valid, each calendar quarter must have less than 10 percent missing hours. As shown in Table 4-3, all quarters (including the period from January 1, 2019 through March 1, 2019) meet this criterion.

A wind rose for the complete meteorological dataset is presented in Figure 4-1, which indicates a trimodal wind distribution with winds blowing from the south, southwest, and north. This is generally consistent with the north-south orientation of the Willamette Valley, and the proximity of the Cascade Mountain range to the east.

4.3 Land Use

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 Dataset, 2016 (NLCD16) land cover class definitions, along with concurrent percent impervious surface and percent tree canopy data, were downloaded from the U.S. Geological Survey (USGS) and processed using AERSURFACE in order to generate the surface characteristics necessary to run AERMET. The NLCD16 data were processed in AERSURFACE using the settings described in Table 4-4.

Because surface meteorological data were processed from both the site-specific station and the McNary met station, AERSURFACE requires that soil moisture be included for both locations. Soil moisture conditions were determined following the methodology set forth in Section 3.2.8 of the U.S. Environmental Protection Agency (EPA) AERSURFACE User's Guide dated February 2020 (AERSURFACE User's Guide).

[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 the Lacombe, Oregon (ID: 354606) met station were retrieved from the Western Regional Climate Center for the modeling period to assess soil moisture conditions for the site-specific meteorological data. The Lacombe met station was chosen because of its proximity to the modeling domain—approximately 7 miles northeast of the facility. As shown in Table 4-5, the total precipitation collected during the modeling period at the Lacombe station was 42.64 inches, which is less than the 30th percentile annual precipitation of 47.35 inches. As a result of this analysis, AERSURFACE was executed assuming dry soil moisture conditions for the site-specific meteorological data.

Annual precipitation data for the Salem, Oregon (ID: 354606) COOP met station were retrieved from the Western Regional Climate Center to assess soil moisture conditions for the surface McNary met data. As shown in Table 4-5, the total precipitation collected during the modeling period at the Salem COOP station was 31.06 inches, which is less than the 30th percentile annual precipitation of 33.69 inches. As a result of this analysis, AERSURFACE was executed assuming dry soil moisture conditions for the surface meteorological data.

MFA executed the air dispersion model using rural dispersion coefficients. To make this determination, MFA followed the land-use procedure, as recommended by EPA's "Guideline on Air Quality Models," found in Section 7.2.1.1(b) of Appendix W, 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 Model Emission Rates

MFA executed the dispersion model using unit emission rates for all TEUs for annual (chronic cancer and noncancer) assessments. The maximum modeled unit concentration in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at each modeled receptor for the annual averaging period was considered a modeled

“dispersion factor” in units of $\mu\text{g}/\text{m}^3$ per g/s . When this dispersion factor is multiplied by the g/s TAC emission rate for the modeled TEU, the result is the modeled concentration of the TAC. Therefore, a single unit emission rate model result can be used to calculate the modeled concentration for each TAC. The dispersion factors, in combination with TAC emission rates for each TEU in g/s and the RBCs in $\mu\text{g}/\text{m}^3$ set forth under OAR 340-245-8010 Table 2, were used to conduct the chronic cancer and noncancer Level 3 risk assessments.

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

4.5 Emissions Source Locations

The location of each TEU included in the dispersion model is shown in Figure 4-2. For volume sources that are located on or adjacent to buildings, initial horizontal dimension (YSINIT) and initial vertical dimension (ZSINIT) were calculated using the EPA method specified in the “User’s Guide for the Industrial Source Complex (ISC3) Dispersion Models—Volume II—Description of Model Algorithms” (1995). EPA-454/B-95-003a. Release heights were set to half the building height.

4.6 Building Downwash

The current version of BPIP, shown in Table 4-1, was used.

The locations for structures that may influence downwash are presented in Figure 4-3. All stacks at the facility meet good engineering practice design parameters. Table 4-6 presents a summary of the building heights included in the air dispersion model.

4.7 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 4-4 presents the receptor spacing and locations for the modeling domain. Figure 4-5 presents the receptor locations in the area immediately surrounding the facility.

Receptors are defined in the dispersion model according to the spacing identified in Table 4-7. The facility property boundary is bordered on all sides by public rights-of-way – rail tracks to the north, and public roads to the east, south and west. As a result, MFA utilized an “exposure assessment boundary” that was placed on the opposite side of the public rights-of-way adjacent to the property boundary. This method ensured that acute risk was adequately assessed in the areas closest to the facility. The 25-m receptor grid extended out at least 200 m past the exposure assessment boundary in all directions.

Table 4-7. Receptor Spacing

Receptor Spacing	Receptor Distance
25 m	Along exposure assessment boundary and out to at least 200 m
50 m	200 m to 1,000 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

MFA identified locations considered to be “sensitive areas” (e.g., schools) within approximately 1 kilometer of the facility property boundary, as shown in Table 4-8. Each identified sensitive area was accounted for in the air dispersion model by a discrete receptor location centered on the sensitive area.

Table 4-8. Identification of Sensitive Exposure Locations

UTM Coordinates (m)		Sensitive Area
Easting	Northing	
506,832.91	4,933,318.21	Samaritan Lebanon Health Center—Pediatrics
506,817.00	4,933,005.00	Pioneer School
506,417.98	4,932,587.67	Cascade Performing Arts Center
507,244.00	4,932,409.00	Lebanon Public Library
506,721.00	4,933,199.00	Oregon Veterans' Home
507,220.22	4,932,968.07	Samaritan Urgent Care Walk-in
507,021.73	4,932,317.58	Meadowlark Senior Living
506,999.16	4,932,095.21	Boys and Girls Club of the Greater Santiam
506,258.90	4,931,704.27	Green Acres Elementary School
NOTE: UTM = universal transverse mercator.		

Terrain elevations for model receptors, source base elevations, and base elevations of downwash structures were taken from the USGS National Elevation Dataset 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 Gas Combustion TEUs

The specific procedures for assessing the risk of each TEU are dependent on the TEU designation per OAR 340-245-0050(4). Per OAR 340-245-0050(5)(a), “at each exposure location, risk must be reported as two values; (A) The risk from TACs emitted from such combustion of natural gas, propane, liquefied petroleum gas, pretreated landfill gas, and pretreated digester gas or biogas; and (B) the risk from all other TAC emissions.” The following TEU is the only source of natural gas-fired combustion emissions (shown with the corresponding dispersion model ID in parentheses) and was assessed as a Gas Combustion TEU:

- Cleaver Brooks boiler natural gas-fired combustion (BOILER-NG)

DEQ-approved annual and daily TAC emission rates for the BOILER-NG unit are provided in Table 5-1.

5.2 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 other than BOILER-NG, which qualifies for the gas combustion TEU exemption, and exempt TEUs.

5.3 Land-Use Zoning Classification Data for Determining Exposure Types

Land-use classifications for areas in the modeling domain were determined using the Department of Land Conservation and Development’s statewide zoning data. The Oregon statewide zoning classifications provide the basis for the initial categorization of exposure classifications (i.e., residential, nonresidential worker, nonresidential child, or acute).

The zoning data were further evaluated against local data such as the Linn 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 process indicate that multiple receptor locations fall within roadway and/or rail right-of-way interstitial spaces, which are identified as black dots in Figures 4-4 and 4-5. These locations were used for dispersion modeling in order to maintain a uniform receptor grid. 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

Figure 5-1 presents the existing land-use zoning identified for the modeling domain, and Figure 5-2 is provided for the area immediately surrounding the facility. Figure 5-3 and Figure 5-4 present the corresponding exposure location categorization for the modeling domain and the immediate area surrounding the facility, respectively. For additional clarification, Table 5-2 shows all receptor locations and their exposure classification.

5.4 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 risk-based concentration (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 a local lake where fish consumption might present an ingestion pathway, or a nearby farm where subsistence farming practices may occur. Since no additional exposure pathways have been observed, a Level 4 Risk Assessment was not warranted.

5.5 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 approved CAO emissions inventory and corresponding RBCs included in the Level 3 Risk Assessment are presented in Table 5-3.

5.6 Risk Estimates

A single dispersion model was executed using a unit emission rate of 1 gram per second (g/s) for each TEU for annual (chronic cancer and noncancer) assessments, and for the 24-hour (acute) assessment for the Gas Combustion TEU. The maximum modeled unit concentration in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at each modeled receptor for both averaging periods was considered a modeled “dispersion factor” in units of $\mu\text{g}/\text{m}^3$ per g/s. A summary of the modeled dispersion factors for each significant TEU and Gas Combustion TEU is provided in Table 5-4 and Table 5-5, respectively.

Risk estimates were determined for each TEU by multiplying this dispersion factor by the TAC-specific emission rate (g/s) presented in the approved CAO emission 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. For all Significant TEUs and gas combustion TEUs at each exposure location, the calculated risks were summed to obtain the total excess cancer risk and the total chronic noncancer hazard index

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.

5.6.1 Example Calculation—Level 3 Risk Assessment

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

Equation 1.

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

Equation 2.

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

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 example calculation for estimating the acute noncancer hazard index for a single exposure location from a gas combustion TEUs is presented in Equation 3.

Equation 3.

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

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 and Table 6-2 for significant TEUs and gas combustion TEUs, respectively.

6.1 Excess Cancer Risk

The maximum predicted excess cancer risk for significant TEUs is 7 additional chances of developing cancer in a population of 1,000,000 people (excess risk per million) as shown in Table 6-1. The maximum predicted excess cancer risk for gas combustion TEUs is predicted to be less than 0.5

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 0.4 as shown in Table 6-1. The maximum predicted chronic noncancer hazard index for gas combustion TEUs is less than 0.1 as shown in Table 6-2.

6.3 Acute Noncancer Hazard Index

The maximum predicted acute noncancer hazard index for significant TEUs is 2 as shown in Table 6-1. The maximum predicted acute noncancer hazard index for gas combustion TEUs is less than 0.1 as shown in Table 6-2.

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 TRVs with an exposure period of 24-hours or more. Conversely, the Level 3 Risk Assessment may underestimate acute noncancer risk for TRVs 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 design capacity for 24 hours, simultaneously. For example, the boiler typically does not need to operate at maximum operational capacity to satisfy the steam requirements of the facility. It is highly unlikely that all TEUs at the facility will simultaneously operate at their maximum capacity for a 24-hour period. **Therefore, the Level 3 Risk Assessment likely overestimates acute noncancer risk due to unrealistic operating conditions.**
- The Level 3 Risk Assessment relies on computer modeling and site-specific meteorological data to predict potential ambient concentrations, but not actual ambient air monitoring data.

ORS 468A.337 recognizes that ambient air monitoring can be more accurate for determining actual exposure than computer modeling. In November and December 2019, the U.S. Environmental Protection Agency conducted ambient monitoring with two concentric rings of monitors encircling the ENTEK facility. November and December were chosen because they are the months with the worst dispersion characteristics. EPA's monitoring documented that the ambient levels of TCE were de minimis with most readings below the detection limit. **Therefore, the Level 3 Risk Assessment likely overestimates ambient concentrations due to conservative assumptions incorporated into the model and may suggest unrealistic exposure levels.**

- The Level 3 Risk Assessment relies on modeling using a 14 month period of hourly meteorological data. Some meteorological conditions, which may only occur a few days or less in a 14 month 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 capacity. **Therefore, the Level 3 Risk Assessment likely overestimates acute noncancer risk because of the improbability of facility operations at maximum capacity aligning with worst-case meteorological conditions.**
- The rat study used to support the TCE toxicity reference value used 22 days of exposure during gestation to evaluate the potential for fetal cardiac malformation in rats. The study was not designed to identify the time of exposure required to cause an adverse effect.

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 overestimates cancer and chronic noncancer risk due to the unrealistic exposure duration assumption.**

All Assessments:

- Only excess cancer risk and chronic and acute noncancer hazard index from TACs that have RBCs published by the DEQ were assessed. Table 6-3 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 may not accurately 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.**
- The Level 3 Risk Assessment relies on modeling using a 14 month period of hourly meteorological data. Some meteorological conditions, which may only occur a few days or less

in a 14 month 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 capacity. **Therefore, the Level 3 Risk Assessment likely overestimates acute noncancer risk because of the improbability of facility operations at maximum capacity aligning with worst-case meteorological conditions.**

7 CLOSING

MFA looks forward to working with the DEQ throughout the CAO process. If there are any questions or comments regarding this risk assessment report, please contact Andrew Rogers at (503) 407-6406 or at arogers@maulfoster.com.

LIMITATIONS

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

TABLES



Table 3-2
DEQ-Approved Daily Emission Rates
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	RBC? (Yes/No)	Daily Emission Estimates																																																			
			Carbon Bed Stack		Warehouse Stack		Boiler		Cooling Line Horizontal Release		Maintenance Shop Fugitive Emissions		Building 2, Vent 1		Building 2, Vent 2		Building 2, Vent 3		Building 2, Vent 4		Building 2, Vent 5		Building 2, Vent 6		Building 2, Vent 7		Building 2, Vent 8		Building 2, Vent 9		Building 2, Vent 10		Building 2, Vent 11		Building 2, Vent 12		Building 2, Vent 13																	
			(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)	(lb/day) (1)	(g/s) (a)																
Model ID	--	--	C STK WHST BOILER COATLINE MSHOP BLD2_1 BLD2_2 BLD2_3 BLD2_4 BLD2_5 BLD2_6 BLD2_7 BLD2_8 BLD2_9 BLD2_10 BLD2_11 BLD2_12 BLD2_13																																																			
Acetaldehyde	75-07-0	Yes	--	--	--	--	5.85	0.031	--	--	--	--	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04
Total TAC Emissions Estimate			288	1.41	25.7	0.14	35.8	0.19	11.9	0.063	7.7E-04	4.0E-06	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04	0.11	6.0E-04				

NOTES:

g/s = grams per second.

lb/day = pounds per day.

RBC = risk-based concentration.

TAC = toxic air contaminant.

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

REFERENCES:

(1) Emissions estimate based on TAC emissions inventory.

Table 3-2
DEQ-Approved Daily Emission Rates (Cont.)
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	RBC? (Yes/No)	Daily Emission Estimates																																			
			Building 2, Vent 14		Building 2, Vent 15		Building 2, Vent 16		Zones 4 and 5: Stack		Zones 11 and 12A: Stack		Zone 1: Fugitives				Zones 6-10 and 12B: Fugitives				Zones 14 and 15: Fugitives				Zone 3: Fugitive		Zone 13: Fugitive		Zone 17: Fugitives		Zone 19: Fugitive		Zone 20: Fugitive		Facility Total			
			(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(a)	(lb/day)	(g/s)						
			BLD2_14	BLD2_15	BLD2_16	STK_245	STK_211	TCE1_1	TCE1_2	TCE4	TCE16	TCE15_1	TCE15_2	TCE15_3	TCE15_4	TCE15_5	TCE3_V	TCE13_V	TCE17	TCE19_V	TCE20_V	--	--															
Acetaldehyde	75-07-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.85	0.031						
Acetone	67-64-1	Yes	0.081	4.3E-04	0.081	4.3E-04	0.081	4.3E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.25	0.012							
Acrolein	107-02-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.85	0.031							
Benzene	71-43-2	Yes	1.6E-05	8.4E-08	1.6E-05	8.4E-08	1.6E-05	8.4E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.074	3.9E-04								
n-Butyl alcohol	71-36-3	No	2.9E-04	1.5E-06	2.9E-04	1.5E-06	2.9E-04	1.5E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.6E-03	2.4E-05								
1-Butyl acetate	540-88-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	6.5E-04								
Molybdenum trioxide	1313-27-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
1,2-Epoxybutane	106-88-7	No	--	--	--	--	--	--	3.8E-03	2.0E-05	2.2E-03	1.1E-05	3.7E-05	1.9E-07	3.7E-05	1.9E-07	5.6E-04	2.9E-06	1.4E-06	7.2E-09	5.2E-04	2.8E-06	5.2E-04	2.8E-06	5.2E-04	2.8E-06	3.9E-08	2.0E-10	9.9E-08	5.2E-10	4.0E-08	2.1E-10	2.9E-05	1.5E-07	1.9E-04	1.0E-06	1.34	7.1E-03
1,3-Butadiene	106-99-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.25	1.3E-03								
Cyclohexane	110-82-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.20	1.0E-03								
Diethylene glycol	111-46-6	No	7.8E-04	4.1E-06	7.8E-04	4.1E-06	7.8E-04	4.1E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.017	8.9E-05								
1,1-Difluoroethane	75-37-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Ethylbenzene	100-41-4	Yes	4.1E-04	2.1E-06	4.1E-04	2.1E-06	4.1E-04	2.1E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	7.9E-04								
Ethylene glycol monobutyl ether	111-76-2	Yes	5.6E-04	2.9E-06	5.6E-04	2.9E-06	5.6E-04	2.9E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.9E-03	4.7E-05								
Formaldehyde	50-00-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.85	0.031								
Hexane	110-54-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.058	3.1E-04								
Acenaphthene	83-32-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Acenaphthylene	208-96-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Anthracene	120-12-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Benzo[a]anthracene	56-55-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Benzo[a]pyrene	50-32-8	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.0E-04	3.1E-06								
Benzo[b]fluoranthene	205-99-2	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Benzo[k]fluoranthene	207-08-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Chrysene	218-01-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Dibenz[a,h]anthracene	53-70-3	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Fluoranthene	204-44-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Fluorene	86-73-7	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Fluoride	FLUORIDES	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Indeno[1,2,3-c,d]pyrene	193-39-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Isopropyl alcohol	67-63-0	Yes	9.2E-05	4.9E-07	9.2E-05	4.9E-07	9.2E-05	4.9E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35.5	0.19								
Methanol	67-56-1	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.85	4.5E-03								
2-Methylnaphthalene	91-57-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Phenanthrene	85-01-8	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Pyrene	129-00-0	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
7,12-Dimethylbenz[a]anthracene	57-97-6	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
3-Methylcholanthrene	56-49-5	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	No	8.2E-04	4.3E-06	8.2E-04	4.3E-06	8.2E-04	4.3E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.013	6.9E-05								
Naphthalene	91-20-3	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.088	4.6E-04								
OCDD	3268-87-9	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Propylene	115-07-1	No	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	5.7E-03	3.0E-05	5.7E-03	3.0E-05	5.7E-03	3.0E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.090	4.7E-04								
1,1,1-Trichloroethane	71-55-6	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Toluene	108-88-3	Yes	5.3E-03	2.8E-05	5.3E-03	2.8E-05	5.3E-03	2.8E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.52	2.7E-03								
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	--	--	--	--	0.75	3.9E-03	0.44	2.3E-03	7.3E-03	3.8E-05	7.3E-03	3.8E-05	0.11	5.8E-04	2.7E-04	1.4E-06	0.10	5.5E-04	0.10	5.5E-04	0.10	5.5E-04	0.10	5.5E-04	7.8E-06	4.1E-08	2.0E-05	1.0E-07	8.0E-06	4.2E-08	5.7E-03	3.0E-05	0.038	2.0E-04	267	1.40
1,2,3-Trimethylbenzene	526-73-8	No	0.018	9.3E-05	0.018	9.3E-05	0.018	9.3E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	1.5E-03								
Xylenes [mixed isomers]	1330-20-7	Yes	1.3E-03	7.1E-06	1.3E-03	7.1E-06	1.3E-03	7.1E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.33	1.7E-03								
Antimony	7440-36-0	Yes	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0								
Arsenic	7440-38-2	Yes	--																																			

Table 3-3
DEQ-Approved Acute Risk Equivalent Emission Rates
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Acute Risk-Based Concentration (Yes/No)	Acute Risk Based Concentration (ug/m ³) ⁽¹⁾	Acute Risk Equivalent Emission Rate ^(a) (g/s per ug/m ³)																	
				Carbon Bed Stack	Warehouse Stack	Boiler	Coating Line Horizontal Release	Maintenance Shop Fugitive Emissions	Building 2, Vent 1	Building 2, Vent 2	Building 2, Vent 3	Building 2, Vent 4	Building 2, Vent 5	Building 2, Vent 6	Building 2, Vent 7	Building 2, Vent 8	Building 2, Vent 9	Building 2, Vent 10	Building 2, Vent 11	Building 2, Vent 12	
Model ID	--	--	--	C_STK	WHST	BOILER	COATLINE	MSHOP	BLD2_1	BLD2_2	BLD2_3	BLD2_4	BLD2_5	BLD2_6	BLD2_7	BLD2_8	BLD2_9	BLD2_10	BLD2_11	BLD2_12	
Acetaldehyde	75-07-0	Yes	470	--	--	6.5E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	67-64-1	Yes	62,000	8.0E-08	--	--	--	--	6.9E-09	6.9E-09	6.9E-09	6.9E-09	6.9E-09	6.9E-09	6.9E-09	6.9E-09	6.9E-09	6.9E-09	6.9E-09	6.9E-09	6.9E-09
Acrolein	107-02-8	Yes	6.90	--	--	4.4E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	29.0	--	--	1.3E-05	--	1.4E-07	2.9E-09	2.9E-09	2.9E-09	2.9E-09	2.9E-09	2.9E-09	2.9E-09	2.9E-09	2.9E-09	2.9E-09	2.9E-09	2.9E-09	2.9E-09
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	5,000	1.3E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Epoxybutane	106-88-7	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	660	--	--	2.0E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Difluoroethane	75-37-6	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	Yes	22,000	3.3E-08	--	8.0E-10	--	--	9.7E-11	9.7E-11	9.7E-11	9.7E-11	9.7E-11	9.7E-11	9.7E-11	9.7E-11	9.7E-11	9.7E-11	9.7E-11	9.7E-11	9.7E-11
Ethylene glycol monobutyl ether	111-76-2	Yes	29,000	--	--	--	--	--	1.0E-10	1.0E-10	1.0E-10	1.0E-10	1.0E-10	1.0E-10	1.0E-10	1.0E-10	1.0E-10	1.0E-10	1.0E-10	1.0E-10	1.0E-10
Formaldehyde	50-00-0	Yes	49.0	--	--	6.3E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	56-55-3	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	Yes	2.0E-03	--	--	1.6E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	191-24-2	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	FLUORIDES	Yes	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	193-39-5	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	3,200	3.9E-05	--	--	2.0E-05	--	1.5E-10	1.5E-10	1.5E-10	1.5E-10	1.5E-10	1.5E-10	1.5E-10	1.5E-10	1.5E-10	1.5E-10	1.5E-10	1.5E-10	1.5E-10
Methanol	67-56-1	Yes	28,000	1.6E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	200	--	--	2.3E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	3268-87-9	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propylene	115-07-1	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	41.0	--	--	--	--	--	7.2E-07	7.2E-07	7.2E-07	7.2E-07	7.2E-07	7.2E-07	7.2E-07	7.2E-07	7.2E-07	7.2E-07	7.2E-07	7.2E-07	7.2E-07
1,1,1-Trichloroethane	71-55-6	Yes	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	7,500	2.6E-07	--	5.1E-08	--	--	3.7E-09	3.7E-09	3.7E-09	3.7E-09	3.7E-09	3.7E-09	3.7E-09	3.7E-09	3.7E-09	3.7E-09	3.7E-09	3.7E-09	3.7E-09
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	2.10	0.60	0.064	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trimethylbenzene	526-73-8	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (mixed isomers)	1330-20-7	Yes	8,700	1.7E-07	--	1.6E-08	--	--	8.1E-10	8.1E-10	8.1E-10	8.1E-10	8.1E-10	8.1E-10	8.1E-10	8.1E-10	8.1E-10	8.1E-10	8.1E-10	8.1E-10	8.1E-10
Antimony	7440-36-0	Yes	1.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	7440-38-2	Yes	0.20	--	--	7.0E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium	7440-41-7	Yes	0.020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	7440-43-9	Yes	0.030	--	--	4.4E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540299p	Yes	0.30	--	--	2.9E-05	--	--	1.8E-07	1.8E-07	1.8E-07	1.8E-07	1.8E-07	1.8E-07	1.8E-07	1.8E-07	1.8E-07	1.8E-07	1.8E-07	1.8E-07	1.8E-07
Cobalt	7440-48-4	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	7440-50-8	Yes	100.0	--	--	3.6E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	7439-92-1	Yes	0.15	--	--	4.8E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	7439-96-5	Yes	0.30	--	--	9.0E-04	--	--	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06	5.9E-06
Mercury	7439-97-6	Yes	0.60	--	--	2.9E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	7440020in	Yes	0.20	--	--	1.7E-03	--	--	2.8E-07	2.8E-07	2.8E-07	2.8E-07	2.8E-07	2.8E-07	2.8E-07	2.8E-07	2.8E-07	2.8E-07	2.8E-07	2.8E-07	2.8E-07
Selenium	7782-49-2	Yes	2.00	--	--	9.6E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	7440-62-2	Yes	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia	7664-41-7	Yes	1,200	--	--	5.8E-05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	2,100	--	--	7.8E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic aromatic hydrocarbons (PAHs)	PAHs	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TEU Risk Equivalent Emission Rate^(b) (g/s per ug/m³)				0.60	0.064	0.020	2.0E-05	1.4E-07	7.1E-06	7.1E-06	7.1E-06	7.1E-06	7.1E-06	7.1E-06	7.1E-06	7.1E-06	7.1E-06	7.1E-06	7.1E-06	7.1E-06	7.1E-06

NOTES:
g/s = grams per second.
TAC = toxic air contaminant.
ug/m³ = micrograms per cubic meter.

(a) TAC acute risk equivalent emission rate (g/s per ug/m³) = (daily emissions estimate (g/s)) / (acute risk based concentration (ug/m³))
Daily emissions estimate (g/s) = [2]
(b) TEU Risk Equivalent Emission Rate (g/s per ug/m³) = Σ [TAC acute risk equivalent emission rates (g/s per ug/m³)]

REFERENCES:
⁽¹⁾ Oregon Administrative Rule 340-245-8010 Table 2.
⁽²⁾ See Table 3-2, DEQ-Approved Daily Emission Rates.
⁽³⁾ 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.)
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Acute Risk-Based Concentration (Yes/No)	Acute Risk Based Concentration (ug/m ³) ⁽¹⁾	Acute Risk Equivalent Emission Rate ^(a) (g/s per ug/m ³)																			
				Building 2, Vent 13	Building 2, Vent 14	Building 2, Vent 15	Building 2, Vent 16	Zones 4 and 5: Stack	Zones 11 and 12A: Stack	Zone 1: Fugitives		Zones 6-10 and 12B: Fugitives	Zones 16 and 18: Fugitives	Zones 14 and 15: Fugitives					Zone 3: Fugitive	Zone 13: Fugitive	Zone 17: Fugitives	Zone 19: Fugitive	Zone 20: Fugitive
Model ID	--	--	--	BLD2_13	BLD2_14	BLD2_15	BLD2_16	STK_Z45	STK_Z11	TCE1_1	TCE1_2	TCE4	TCE16	TCE15_1	TCE15_2	TCE15_3	TCE15_4	TCE15_5	TCE3_V	TCE13_V	TCE17	TCE19_V	TCE20_V
Acetaldehyde	75-07-0	Yes	470	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	67-64-1	Yes	62,000	6.9E-09	6.9E-09	6.9E-09	6.9E-09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	Yes	6.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	Yes	29.0	2.9E-09	2.9E-09	2.9E-09	2.9E-09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	5,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Epoxybutane	106-88-7	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Butadiene	106-99-0	Yes	660	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cyclohexane	110-82-7	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Difluoroethane	75-37-6	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	Yes	22,000	9.7E-11	9.7E-11	9.7E-11	9.7E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylene glycol monobutyl ether	111-76-2	Yes	29,000	1.0E-10	1.0E-10	1.0E-10	1.0E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Formaldehyde	50-00-0	Yes	49.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexane	110-54-3	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	56-55-3	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	Yes	2.0E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	191-24-2	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	FLUORIDES	Yes	240	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	193-39-5	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Isopropyl alcohol	67-63-0	Yes	3,200	1.5E-10	1.5E-10	1.5E-10	1.5E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methanol	67-56-1	Yes	28,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	Yes	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	3268-87-9	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Propylene	115-07-1	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	41.0	7.2E-07	7.2E-07	7.2E-07	7.2E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	71-55-6	Yes	11,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	108-88-3	Yes	7,500	3.7E-09	3.7E-09	3.7E-09	3.7E-09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	2.10	--	--	--	--	1.9E-03	1.1E-03	1.8E-05	1.8E-05	2.8E-04	6.8E-07	2.6E-04	2.6E-04	2.6E-04	2.6E-04	2.6E-04	1.9E-08	4.9E-08	2.0E-08	1.4E-05	9.5E-05
1,2,3-Trimethylbenzene	526-73-8	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (mixed isomers)	1330-20-7	Yes	8,700	8.1E-10	8.1E-10	8.1E-10	8.1E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony	7440-36-0	Yes	1.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	7440-38-2	Yes	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium	7440-41-7	Yes	0.020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	7440-43-9	Yes	0.030	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium VI	18540299p	Yes	0.30	1.8E-07	1.8E-07	1.8E-07	1.8E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	7440-48-4	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	7440-50-8	Yes	100.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	7439-92-1	Yes	0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	7439-96-5	Yes	0.30	5.9E-06	5.9E-06	5.9E-06	5.9E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	7439-97-6	Yes	0.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	7440020in	Yes	0.20	2.8E-07	2.8E-07	2.8E-07	2.8E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	7782-49-2	Yes	2.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	7440-62-2	Yes	0.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Ammonia	7664-41-7	Yes	1,200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hydrochloric acid	7647-01-0	Yes	2,100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic aromatic hydrocarbons (PAHs)	PAHs	No	⁽³⁾	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TEU Risk Equivalent Emission Rate^(b) (g/s per ug/m³)				7.1E-06	7.1E-06	7.1E-06	7.1E-06	1.9E-03	1.1E-03	1.8E-05	1.8E-05	2.8E-04	6.8E-07	2.6E-04	2.6E-04	2.6E-04	2.6E-04	2.6E-04	1.9E-08	4.9E-08	2.0E-08	1.4E-05	9.5E-05

NOTES:
g/s = grams per second.
TAC = toxic air contaminant.
ug/m³ = micrograms per cubic meter.

(a) TAC acute risk equivalent emission rate (g/s per ug/m³) = (daily emissions estimate [g/s]) / (acute risk based concentration [ug/m³])
Daily emissions estimate [g/s] = [2]
(b) TEU Risk Equivalent Emission Rate (g/s per ug/m³) = Σ (TAC acute risk equivalent emission rates [g/s per ug/m³])

REFERENCES:
⁽¹⁾ Oregon Administrative Rule 340-245-8010 Table 2.
⁽²⁾ See Table 3-2, DEQ-Approved Daily Emission Rates.
⁽³⁾ TAC does not have an acute based concentration listed in OAR 340-245-8010 Table 2.

Table 3-4
Model Source Parameters
ENTEK International LLC — Lebanon, Oregon

Point Sources										
Model ID	Model Source Description	UTM Coordinates ⁽¹⁾		Stack Orientation	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)
		Eastings	Northing							
C_STK	Carbon Bed Stack	506,251.4	4,932,898.1	Vertical	103.2	43.28	1.78	17.11	42.48	315.7
COATLINE	Coating Line Horizontal Release	506,422.6	4,932,811.9	Horizontal	103.0	5.49	0.49	2.54	0.47	316.5
WHST	Warehouse Stack	506,004.0	4,932,962.9	Vertical	102.9	42.67	1.76	4.43	10.77	Ambient
STK_Z45	Zones 4 and 5: Stack	506,247.9	4,932,871.3	Vertical	103.1	11.89	0.97	6.44	4.72	Ambient
STK_Z11	Zones 11 and 12A: Stack	506,266.5	4,932,894.4	Vertical	103.6	9.37	0.97	6.44	4.72	Ambient
BOILER	Boiler	506,232.0	4,932,854.1	Vertical	102.7	15.54	1.07	18.05	16.14	515.4

Discrete Volume Sources									
Model ID	Model Source Description	UTM Coordinates ⁽¹⁾		On or Adjacent to a Building?	Base Elevation ⁽²⁾ (m)	Release Height ⁽³⁾ (m)	Length of Side (m)	Initial Lateral Dimension ^(b) (m)	Initial Vertical Dimension ^(c) (m)
		Eastings	Northing						
TCE1_1	Zone 1: Fugitives	506,304.0	4,932,753.2	Yes	103.6	6.10	8.0	1.86	5.7
TCE1_2	Zone 1: Fugitives	506,300.0	4,932,753.2	Yes	103.7	6.10	8.0	1.86	5.7
TCE4	Zones 6-10 and 12B: Fugitives	506,259.8	4,932,877.6	Yes	103.4	3.92	16.9	3.92	3.7
TCE16	Zones 16 and 18: Fugitives	506,264.4	4,932,820.2	Yes	103.6	3.92	5.0	1.16	3.7
TCE17	Zone 17: Fugitives	506,279.4	4,932,780.0	Yes	103.8	3.92	4.0	0.93	3.7
MSHOP	MShop Fugitives (Parts Washer)	506,345.8	4,932,810.2	Yes	103.4	3.92	3.0	0.71	3.7
TCE15_1	Zones 14 and 15: Fugitives	506,284.5	4,932,756.1	Yes	103.8	6.10	2.0	0.47	5.7
TCE15_2	Zones 14 and 15: Fugitives	506,287.5	4,932,756.1	Yes	103.8	6.10	2.0	0.47	5.7
TCE15_3	Zones 14 and 15: Fugitives	506,290.5	4,932,756.1	Yes	103.8	6.10	2.0	0.47	5.7
TCE15_4	Zones 14 and 15: Fugitives	506,293.5	4,932,756.1	Yes	103.8	6.10	2.0	0.47	5.7
TCE15_5	Zones 14 and 15: Fugitives	506,296.5	4,932,756.1	Yes	103.8	6.10	2.0	0.47	5.7
BLD2_1	Fugitive Welding	506,257.7	4,932,699.9	Yes	103.6	3.05	0.30	0.07	2.8
BLD2_2	Fugitive Welding	506,257.7	4,932,693.1	Yes	103.6	3.05	0.30	0.07	2.8
BLD2_3	Fugitive Welding	506,257.7	4,932,687.9	Yes	103.6	3.05	0.30	0.07	2.8
BLD2_4	Fugitive Welding	506,257.7	4,932,680.1	Yes	103.5	3.05	0.30	0.07	2.8
BLD2_5	Fugitive Welding	506,257.7	4,932,672.4	Yes	103.5	3.05	0.30	0.07	2.8
BLD2_6	Fugitive Welding	506,257.7	4,932,666.8	Yes	103.5	3.05	0.30	0.07	2.8
BLD2_7	Fugitive Welding	506,302.9	4,932,644.3	Yes	103.5	4.08	0.30	0.07	3.8
BLD2_8	Fugitive Welding	506,296.7	4,932,644.3	Yes	103.5	4.08	0.30	0.07	3.8
BLD2_9	Fugitive Welding	506,286.0	4,932,644.3	Yes	103.4	4.08	0.30	0.07	3.8
BLD2_10	Fugitive Welding	506,274.9	4,932,644.3	Yes	103.5	4.08	0.30	0.07	3.8
BLD2_11	Fugitive Welding	506,264.5	4,932,644.3	Yes	103.5	4.08	0.30	0.07	3.8
BLD2_12	Fugitive Welding	506,240.6	4,932,644.3	Yes	103.2	4.08	0.30	0.07	3.8
BLD2_13	Fugitive Welding	506,233.2	4,932,644.3	Yes	103.2	4.08	0.30	0.07	3.8
BLD2_14	Fugitive Welding	506,213.3	4,932,644.3	Yes	103.0	4.08	0.30	0.07	3.8
BLD2_15	Fugitive Welding	506,198.3	4,932,644.3	Yes	103.1	4.08	0.30	0.07	3.8
BLD2_16	Fugitive Welding	506,185.2	4,932,644.3	Yes	103.0	4.08	0.30	0.07	3.8

Line Volume Sources										
Model ID	Model Source Description	UTM Coordinates ⁽¹⁾		Configuration	On or Adjacent to a Building?	Release Height ⁽³⁾ (m)	Line Width (m)	Line Volume Height ⁽⁵⁾ (m)	No. of Volume Sources	Total Length (m)
		Eastings	Northing							
TCE3_V	Zone 3: Fugitive	506,209.1	4,932,808.2	Adjacent	Yes	4.42	1.00	8.84	77.0	116
TCE13_V	Zone 13: Fugitive	506,284.2	4,932,894.4	Adjacent	Yes	3.92	1.50	7.85	77.0	77.5
TCE19_V	Zone 19: Fugitive	506,234.3	4,932,832.1	Adjacent	Yes	3.92	1.00	7.85	26.0	25.6
TCE20_V	Zone 20: Fugitive	506,270.0	4,932,855.0	Adjacent	Yes	3.92	1.00	7.85	26.0	25.6

NOTES:

K = kelvin.

m = meter.

m/s = meters per second.

m³/s = cubic meters per second.

UTM = Universal Transverse Mercator.

(a) Exit flowrate (m³/s) = (π/4) x (stack diameter [m])² x (exit velocity [m/s])

(b) Initial lateral dimension [m] = (length of side [m]) / (4.3) (4)

(c) Initial vertical dimension [m] = (building height [m]) / (2.15) (4)

REFERENCES:

⁽¹⁾ Value based on information provided by ENTEK International LLC.

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

⁽³⁾ 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.

⁽⁴⁾ See "User's Guide for the Industrial Source Complex [ISC3] Dispersion Models - Volume II - Description of Model Algorithms." [1995] EPA-454/B-95-003a.

⁽⁵⁾ Line volume height is equal to the height of the building.

**Table 3-5
Facility-Wide Fugitive VOC Emissions Allocation
ENTEK International LLC — Lebanon, Oregon**

Product	Location Used	Model ID(s)	Allocation per Source
3M Blue 72 Spray Adhesive	Facility-Wide	C_STK	1 ⁽¹⁾
Klean Strip Paint Thinner	Facility-Wide	C_STK	1 ⁽¹⁾
Pelseal 2531 (Solution of Fluoroelastomer Liquid)	Facility-Wide	C_STK	1 ⁽¹⁾
R-1 And R-22 Ink	Facility-Wide	C_STK	1 ⁽¹⁾
Sunnyside Lacquer Thinner	Facility-Wide	C_STK	1 ⁽¹⁾
Acetone	Facility-Wide	C_STK	0.42 ⁽²⁾
Acetone	Building 2	BLD2-1 - BLD2-16	0.036 ⁽²⁾
Ace Premium Enamel Primer Gray	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Ace Premium Enamel Primer Red Oxide	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Ace Rust Stop Enamel Safety Colors, Safety Yellow	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Ace Rust Stop Indoor/Outdoor Enamel, Gloss Black	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Dual Superbond Paint + Primer Gloss White	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Dykem Transparent Stain Aerosol - Steel Blue And Steel Red	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Glass Cleaner	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Krylon Rust Tough Enamel (Aerosol) Gloss White	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Napa Brakeleen Brake Parts Cleaner	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Napa Extended Life Concentrate Antifreeze & Coolant	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Rohper Lspr 6Pk Flat High Temp Black	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Rust Tough Rust Preventive Enamel (Aerosol) Chestnut Brown	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Rust Tough Rust Preventive Enamel (Aerosol) Equipment Orange	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Rust Tough Rust Preventive Enamel (Aerosol) Light Machinery Gray (Asa-61)	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Rust Tough Rust Preventive Enamel (Aerosol) Safety Yellow (Osha Yellow)	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Strust +Spr 6Pk Semigl Black	Building 2	BLD2-1 - BLD2-16	0.063 ⁽³⁾
Napa Mac's All Parts Washer	Building 2	BLD2-1 - BLD2-16	0.016 ⁽⁴⁾
Napa Mac's All Parts Washer	Maintenance Shop	MSHOP	0.750 ⁽⁴⁾

REFERENCES:

- ⁽¹⁾ Provided by ENTEK International LLC. Usage is within the permanent total enclosure that vents through the carbon stack.
- ⁽²⁾ Provided by ENTEK International LLC. 42% of the usage is within the permanent total enclosure that vents through the carbon stack. The rest is split among the Building 2 fugitive sources.
- ⁽³⁾ Information provided by ENTEK International LLC. Usage is within Building 2, and emissions are split among the 16 modeled release points.
- ⁽⁴⁾ Information provided by ENTEK International LLC. Usage is split between the maintenance shop and Building 2. For Building 2, emissions are split among the 16 modeled release points.

Table 4-3
Assessment of Missing Meteorological Data
ENTEK International LLC — Lebanon, Oregon

Quarter ⁽¹⁾	Meteorological Data Assessment for Modeling Period		
	Total Hours	Missing Hours ⁽¹⁾	Available Hours ^(a) (%)
Q1 (2018)	2,160 ⁽²⁾	0	100.0%
Q2 (2018)	2,184 ⁽²⁾	0	100.0%
Q3 (2018)	2,208 ⁽²⁾	0	100.0%
Q4 (2018)	2,208 ⁽²⁾	18	99.2%
Q1 (2019)	1,440 ⁽³⁾	6	99.6%

NOTES:

(a) Available hours (%) = $(1 - \frac{\text{missing hours}}{\text{total hours}}) \times 100\%$

REFERENCES:

- ⁽¹⁾ The number of missing hours was determined by generating a Surface QA Excel file generated by AERMET Version 21112.
- ⁽²⁾ Meteorological data obtained from the facility's on-site meteorological station with substituted data from the Salem McNary Airport monitoring station in Salem, Oregon.
- ⁽³⁾ The first quarter of 2019 only includes data monitored through March 1, 2019.

Table 4-4
AERSURFACE Settings
ENTEK International LLC — Lebanon, Oregon

Parameter	Meteorological Tower Location	
	Site-Specific	Surface (Salem McNary Airport)
Study radius for surface roughness	1.0 kilometer	1.0 kilometer
Are the surface data collected at an airport?	No	Yes
Should continuous snow cover be assumed?	No	No
Soil moisture content	Dry	Dry
Is this an arid region?	No	No
Number of sectors	12	12
Months assumed to constitute "winter"	December, January, and February	December, January, and February
Months assumed to constitute "spring"	March, April, and May	March, April, and May
Months assumed to constitute "summer"	June, July, and August	June, July, and August
Months assumed to constitute "autumn"	September, October, and November	September, October, and November
Period for land use calculations	Monthly	Monthly

Table 4-5
Soil Moisture Condition Assessment
ENTEK International LLC — Lebanon, Oregon

30-Year Climate Precipitation Data ⁽¹⁾	Rain Gauge Sites	
	Site-Specific	Surface
	Lacomb (ID: 354606)	Salem (ID: 357500)
Average Annual Precipitation ⁽²⁾	55.4	40.0
Lower: 30th Percentile Annual Precipitation ⁽³⁾	47.4	34.0
Upper: 70th Percentile Annual Precipitation ⁽⁴⁾	58.6	46.1
Total Measured Precipitation for the Modeling Period		
2018 Total Precipitation ⁽⁵⁾	42.6	31.0
Climatic Significance ⁽⁶⁾	Below 30th Percentile	Below 30th Percentile
Calendar Year Soil Moisture (in) ⁽⁷⁾	Dry	Dry

REFERENCES:

- ⁽¹⁾ Climatological data obtained from the Western Regional Climate Center for the Lacomb, OR (ID: 354606) and Salem, OR (ID: 357500) meteorological stations. Due to both on-site and surface files being used in AERMET, soil moisture conditions are required for both locations. Data represent the 30-year period between January 1989 and March 2019.
- ⁽²⁾ Represents average annual precipitation during the 30-year climatological period.
- ⁽³⁾ Represents upper limit of the 30th percentile annual precipitation during 30-year climatological period.
- ⁽⁴⁾ Represents lower limit of the 70th percentile annual precipitation during 30-year climatological period.
- ⁽⁵⁾ Represents model period (January 1, 2018 - March 1, 2019).
- ⁽⁶⁾ Climatic significance represents annual precipitation compared to 30-year climatological period.
- ⁽⁷⁾ 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 EPA AERSURFACE User's Guide dated February 2020.

Table 4-6
Summary of Downwash Structure Heights
ENTEK International LLC — Lebanon, Oregon

Downwash Structure Model ID	Base Elevation ⁽¹⁾		Number of Building Tiers	Tier Height ⁽²⁾		Diameter ⁽²⁾	
	(ft)	(m)		(ft)	(m)	(ft)	(m)
BLD1-1	339.6	103.5	1	41.0	12.5	--	--
BLD1-2	338.2	103.1	1	35.3	10.8	--	--
BLD1-3	340.3	103.7	1	25.8	7.85	--	--
BLD1-4	339.8	103.6	1	40.3	12.29	--	--
BLD1-5	340.1	103.7	1	43.1	13.13	--	--
BLD1-6	336.2	102.5	1	44.8	13.7	--	--
BLD1-7	340.4	103.8	1	40.0	12.2	--	--
BLD1-8	339.1	103.4	1	40.0	12.2	--	--
BLD1-9	339.9	103.6	1	12.0	3.7	--	--
BLD2-1	339.7	103.5	1	20.0	6.1	--	--
BLD2_2	339.2	103.4	1	26.7	8.2	--	--
BLD4	340.5	103.8	1	21.0	6.4	--	--
BLD6	338.7	103.3	1	10.8	3.3	--	--
BLD9	336.6	102.6	1	34.0	10.4	--	--
BLD11-1	337.2	102.8	1	39.5	12.0	--	--
BLD11-1	337.2	102.8	2	61.7	18.8	--	--
BLD11-2	338.3	103.1	1	29.0	8.8	--	--
BLD11-2	338.3	103.1	2	61.7	18.80	--	--
BLD12	337.7	102.9	1	31.3	9.53	--	--
BLD17	337.6	102.9	1	12.0	3.66	--	--
CT1	340.4	103.8	1	15.0	4.57	--	--
CT2	338.5	103.2	1	15.0	4.57	--	--
CT3	339.1	103.4	1	15.0	4.57	--	--
CT4	338.7	103.3	1	15.0	4.57	--	--
CT5	339.0	103.3	1	15.0	4.57	--	--
CT6	340.5	103.8	1	15.0	4.57	--	--
CT7	338.1	103.1	1	15.0	4.57	--	--
CT8	338.0	103.0	1	15.0	4.57	--	--
CT9	338.0	103.0	1	15.0	4.57	--	--
BOIL	339.3	103.4	1	30.0	9.14	--	--
TRAIL	339.9	103.6	1	12.0	3.66	--	--
OFFICE	340.0	103.6	1	12.0	3.66	--	--
WASTE_EN	337.0	102.7	1	16.5	5.03	--	--
Z11_EN	339.2	103.4	1	24.0	7.32	--	--
LAB	339.0	103.3	1	15.8	4.82	--	--
GATE	339.6	103.5	1	15.8	4.82	--	--
MOD	336.2	102.5	1	11.3	3.43	--	--
BLD_37	337.5	102.9	1	60.0	18.3	15.7	4.80
SILO1	337.7	102.9	1	70.0	21.3	12.0	3.66
SILO2	337.7	102.9	1	70.0	21.3	12.0	3.66
SILO3	337.6	102.9	1	70.0	21.3	12.0	3.66
SILO4	337.7	102.9	1	70.0	21.3	12.0	3.66
SILO5	337.6	102.9	1	70.0	21.3	12.0	3.66

REFERENCES:

⁽¹⁾ Base elevation derived from 1/3-arc second US Geological Survey National Elevation Data processed using AERMAP.

⁽²⁾ Information provided by ENTEK International LLC.

Table 5-1
DEQ-Approved TAC Emission Rates for Gas Combustion TEUs
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	RBC? (Yes/No)	DEQ-Approved Emission Rates (BOILER-NG)			
			Annual		Daily	
			(lb/yr) ⁽¹⁾	(g/s) ^(a)	(lb/day) ⁽¹⁾	(g/s) ^(b)
Acetaldehyde	75-07-0	Yes	2.30	3.3E-05	6.7E-03	3.5E-05
Acrolein	107-02-8	Yes	2.00	2.9E-05	5.8E-03	3.0E-05
Benzene	71-43-2	Yes	4.30	6.2E-05	0.012	6.5E-05
Ethylbenzene	100-41-4	Yes	5.11	7.4E-05	0.015	7.8E-05
Formaldehyde	50-00-0	Yes	9.11	1.3E-04	0.026	1.4E-04
Hexane	110-54-3	Yes	3.41	4.9E-05	9.9E-03	5.2E-05
Benzo(a)pyrene	50-32-8	Yes	8.9E-04	1.3E-08	2.6E-06	1.4E-08
Molybdenum trioxide	1313-27-5	No	1.22	1.8E-05	3.5E-03	1.9E-05
Ammonia	7664-41-7	Yes	2,371	0.034	6.88	0.036
Polycyclic aromatic hydrocarbons (PAHs)	401	Yes	0.074	1.1E-06	2.2E-04	1.1E-06
Naphthalene	91-20-3	Yes	0.22	3.2E-06	6.5E-04	3.4E-06
Toluene	108-88-3	Yes	19.6	2.8E-04	0.057	3.0E-04
Xylenes (mixed isomers)	1330-20-7	Yes	14.6	2.1E-04	0.042	2.2E-04
Arsenic	7440-38-2	Yes	0.15	2.1E-06	4.3E-04	2.3E-06
Barium	7440-39-3	No	3.26	4.7E-05	9.5E-03	5.0E-05
Beryllium	7440-41-7	Yes	8.9E-03	1.3E-07	2.6E-05	1.4E-07
Cadmium	7440-43-9	Yes	0.82	1.2E-05	2.4E-03	1.2E-05
Chromium VI	18540-29-9	Yes	1.04	1.5E-05	3.0E-03	1.6E-05
Cobalt	7440-48-4	Yes	0.062	9.0E-07	1.8E-04	9.5E-07
Copper	7440-50-8	Yes	0.63	9.1E-06	1.8E-03	9.6E-06
Lead	7439-92-1	Yes	0.37	5.3E-06	1.1E-03	5.6E-06
Manganese	7439-96-5	Yes	0.28	4.1E-06	8.2E-04	4.3E-06
Mercury	7439-97-6	Yes	0.19	2.8E-06	5.6E-04	2.9E-06
Nickel	7440-02-0	Yes	1.56	2.2E-05	4.5E-03	2.4E-05
Selenium	7782-49-2	Yes	0.018	2.6E-07	5.2E-05	2.7E-07
Vanadium	7440-62-2	Yes	1.70	2.5E-05	4.9E-03	2.6E-05
Zinc	7440-66-6	No	21.5	3.1E-04	0.062	3.3E-04

NOTES:

RBC = risk based concentration.

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

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

REFERENCE:

⁽¹⁾ Emissions estimate based on TAC emissions inventory.

**Table 5-3
Applicable Risk-Based Concentrations
ENTEK International LLC — Lebanon, Oregon**

Toxic Air Contaminant	CAS	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
Acetaldehyde	75-07-0	Yes	HI3	0.45	140	12	620	5.5	620	470
Acetone	67-64-1	Yes	HI3	--	31,000	--	140,000	--	140,000	62,000
Acrolein	107-02-8	Yes	HI5	--	0.35	--	1.5	--	1.5	6.9
Benzene	71-43-2	Yes	HI3	0.13	3	3.3	13	1.5	13	29
2-Butanone (Methyl ethyl ketone)	78-93-3	Yes	HI3	--	5,000	--	22,000	--	22,000	5,000
1,2-Epoxybutane	106-88-7	Yes	HI5	--	20	--	88	--	88	--
1,3-Butadiene	106-99-0	Yes	HI3	0.033	2	0.86	8.8	0.4	8.8	660
Cyclohexane	110-82-7	Yes	HI3	--	6,000	--	26,000	--	26,000	--
1,1-Difluoroethane	75-37-6	Yes	HI5	--	40,000	--	180,000	--	180,000	--
Ethylbenzene	100-41-4	Yes	HI3	0.4	260	10	1,100	4.8	1,100	22,000
Ethylene glycol monobutyl ether	111-76-2	Yes	HI3	--	82	--	360	--	360	29,000
Formaldehyde	50-00-0	Yes	HI3	0.17	9	4.3	40	2	40	49
Hexane	110-54-3	Yes	HI3	--	700	--	3,100	--	3,100	--
Benzo(a)anthracene	56-55-3	Yes	--	0.00021	--	0.0078	--	0.015	--	--
Benzo(a)pyrene	50-32-8	Yes	HI3	0.000043	0.002	0.0016	0.0088	0.003	0.0088	0.002
Benzo(b)fluoranthene	205-99-2	Yes	--	0.000053	--	0.002	--	0.0038	--	--
Benzo(g,h,i)perylene	191-24-2	Yes	--	0.0047	--	0.17	--	0.34	--	--
Benzo(k)fluoranthene	207-08-9	Yes	--	0.0014	--	0.052	--	0.1	--	--
Chrysene	218-01-9	Yes	--	0.00043	--	0.016	--	0.03	--	--
Dibenzo(a,h)anthracene	53-70-3	Yes	--	0.0000043	--	0.00016	--	0.0003	--	--
Fluoranthene	206-44-0	Yes	--	0.00053	--	0.02	--	0.038	--	--
Fluoride	239	Yes	HI3	--	2.3	--	20	--	20	240
Indeno(1,2,3-c,d)pyrene	193-39-5	Yes	--	0.00061	--	0.022	--	0.043	--	--
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
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	Yes	HI3	--	3,000	--	13,000	--	13,000	--
Naphthalene	91-20-3	Yes	HI3	0.029	3.7	0.76	16	0.35	16	200
OCDD	3268-87-9	Yes	HI3	0.0000034	0.00042	0.0003	0.085	0.00014	0.085	--
Propylene	115-07-1	Yes	HI5	--	3,000	--	13,000	--	13,000	--
Tetrachloroethene (Perchloroethylene)	127-18-4	Yes	HI3	3.8	41	100	180	46	180	41
1,1,1-Trichloroethane	71-55-6	Yes	HI3	--	5,000	--	22,000	--	22,000	11,000
Toluene	108-88-3	Yes	HI3	--	5,000	--	22,000	--	22,000	7,500
Trichloroethene (TCE, Trichloroethylene)	79-01-6	Yes	HI3	0.2	2.1	3.5	9.2	2.9	9.2	2.1
1,2,3-Trimethylbenzene	526-73-8	Yes	HI3	--	60	--	260	--	260	--
Xylenes (mixed isomers)	1330-20-7	Yes	HI3	--	220	--	970	--	970	8,700
Antimony	7440-36-0	Yes	HI3	--	0.3	--	1.3	--	1.3	1
Arsenic	7440-38-2	Yes	HI3	0.000024	0.00017	0.0013	0.0024	0.00062	0.0024	0.2
Beryllium	7440-41-7	Yes	HI3	0.00042	0.007	0.011	0.031	0.005	0.031	0.02
Cadmium	7440-43-9	Yes	HI3	0.00056	0.005	0.014	0.037	0.0067	0.037	0.03
Chromium VI	18540-29-9	Yes	HI3	0.000031	0.083	0.00052	0.88	0.001	0.88	0.3
Cobalt	7440-48-4	Yes	HI3	--	0.1	--	0.44	--	0.44	--
Copper	7440-50-8	Yes	HI3	--	--	--	--	--	--	100
Lead	7439-92-1	Yes	HI3	--	0.15	--	0.66	--	0.66	0.15
Manganese	7439-96-5	Yes	HI3	--	0.09	--	0.4	--	0.4	0.3
Mercury	7439-97-6	Yes	HI3	--	0.077	--	0.63	--	0.63	0.6
Nickel	7440-02-0	Yes	HI3	0.0038	0.014	0.1	0.062	0.046	0.062	0.2
Selenium	7782-49-2	Yes	HI3	--	--	--	--	--	--	2
Vanadium	7440-62-2	Yes	HI3	--	0.1	--	0.44	--	0.44	0.8
Ammonia	7664-41-7	Yes	HI3	--	500	--	2,200	--	2,200	1,200
Hydrochloric acid	7647-01-0	Yes	HI3	--	20	--	88	--	88	2,100
Polycyclic aromatic hydrocarbons (PAHs)	401	Yes	--	0.000043	--	0.0016	--	0.003	--	--

NOTES:
 ug/m³ = micrograms per cubic meter.
 RAL = risk action level.
 RBC = risk based concentration.

REFERENCE:
⁽¹⁾ See Oregon Administrative Rule 340-245-8010 Table 2.

Table 5-4
Maximum Predicted Risk Exposure Location per Significant TEU (Chronic Only)
ENTEK International LLC — Lebanon, Oregon

Modeled TEU	Cancer/Non-Cancer					
	Residential		Child		Worker	
	Exposure Location ⁽¹⁾ (Location of Maximum Risk)	Dispersion Factor (ug/m ³ /[g/s])	Exposure Location ⁽¹⁾ (Location of Maximum Risk)	Dispersion Factor (ug/m ³ /[g/s])	Exposure Location ⁽¹⁾ (Location of Maximum Risk)	Dispersion Factor (ug/m ³ /[g/s])
C_STK	7,783	0.34	583	0.24	7,779	0.40
WHST	7,783	0.48	583	0.29	7,779	0.69
BOILER	7,783	0.42	583	0.52	7,779	0.78
COATLINE	7,783	12.81	583	10.79	7,779	7.75
BLD2_1	7,783	57.59	583	11.48	7,779	105.21
BLD2_2	7,783	60.08	583	11.40	7,779	115.58
BLD2_3	7,783	62.07	583	11.33	7,779	124.57
BLD2_4	7,783	65.19	583	11.21	7,779	140.35
BLD2_5	7,783	68.45	583	11.09	7,779	159.34
BLD2_6	7,783	70.96	583	11.00	7,779	175.42
BLD2_7	7,783	127.14	583	11.46	7,779	148.47
BLD2_8	7,783	117.22	583	11.33	7,779	162.44
BLD2_9	7,783	102.64	583	11.10	7,779	189.50
BLD2_10	7,783	90.23	583	10.86	7,779	214.48
BLD2_11	7,783	80.53	583	10.63	7,779	230.46
BLD2_12	7,783	63.27	583	10.10	7,779	218.47
BLD2_13	7,783	59.01	583	9.94	7,779	197.71
BLD2_14	7,783	49.34	583	9.50	7,779	146.76
BLD2_15	7,783	43.55	583	9.18	7,779	118.71
BLD2_16	7,783	39.23	583	8.89	7,779	101.29
STK_Z45	7,783	8.28	583	7.26	7,779	9.93
STK_Z11	7,783	12.82	583	8.59	7,779	13.64
BLD2_15	7,783	43.55	583	9.18	7,779	118.71
TCE1_1	7,783	43.00	583	13.15	7,779	3.98E+01
TCE1_2	7,783	42.20	583	12.98	7,779	40.34
TCE4	7,783	21.96	583	12.25	7,779	22.81
TCE16	7,783	29.26	583	12.48	7,779	32.07
TCE15_1	7,783	38.23	583	12.40	7,779	41.40
TCE15_2	7,783	38.87	583	12.51	7,779	41.05
TCE15_3	7,783	39.50	583	12.63	7,779	40.70
TCE15_4	7,783	40.12	583	12.75	7,779	40.33
TCE15_5	7,783	40.73	583	12.87	7,779	39.93
MSHOP	7,783	35.78	583	16.89	7,779	27.74
TCE3_V	7,783	24.63	583	10.56	7,779	35.74
TCE13_V	7,783	29.57	583	13.39	7,779	28.87
TCE17	7,783	38.98	583	12.96	7,779	41.70
TCE19_V	7,783	25.78	583	11.76	7,779	30.69
TCE20_V	7,783	30.78	583	12.69	7,779	33.15

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)
7,783	506,364.00	4,932,581.00
7,779	506,264.00	4,932,581.00
583	506,714.00	4,933,031.00

Table 5-5
Maximum Predicted Risk Exposure Location per TEU (Gas Combustion)
ENTEK International LLC — Lebanon, Oregon

Modeled TEU	Residential		Child		Worker		Acute	
	Exposure Location ⁽¹⁾ (Location of Maximum Risk)	Dispersion Factor (ug/m3/[g/s])	Exposure Location ⁽¹⁾ (Location of Maximum Risk)	Dispersion Factor (ug/m3/[g/s])	Exposure Location ⁽¹⁾ (Location of Maximum Risk)	Dispersion Factor (ug/m3/[g/s])	Exposure Location ⁽¹⁾ (Location of Maximum Risk)	Dispersion Factor (ug/m3/[g/s])
BOILER	8,170	0.77	583	0.52	8,314	0.99	8,274	18.08

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)
8,170	506,489.00	4,932,956.00
8,314	506,289.00	4,933,056.00
583	506,714.00	4,933,031.00
8,274	506,264.00	4,933,031.00

**Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon**

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Hazard Index ⁽³⁾
Exposure Location ⁽⁴⁾		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
C_STK																				
Cumulative TEU Risk		--	--	2.14	--	--	0.08	--	--	0.18	--	--	0.20	--	--	0.032	--	--	0.055	--
Dispersion Factor (ug/m3/[g/s])		0.34			0.24			0.40			0.34			0.24			0.40			--
Acetone	67-64-1	1.7E-03	--	(5)	1.2E-03	--	(5)	2.0E-03	--	(5)	1.7E-03	31,000	5.4E-08	1.2E-03	140,000	8.3E-09	2.0E-03	140,000	1.4E-08	--
2-Butanone (Methyl ethyl ketone)	78-93-3	2.2E-04	--	(5)	1.5E-04	--	(5)	2.6E-04	--	(5)	2.2E-04	5,000	4.4E-08	1.5E-04	22,000	6.9E-09	2.6E-04	22,000	1.2E-08	--
1,2-Epoxybutane	106-88-7	2.1E-03	--	(5)	1.5E-03	--	(5)	2.6E-03	--	(5)	2.1E-03	20.0	1.1E-04	1.5E-03	88.0	1.7E-05	2.6E-03	88.0	2.9E-05	--
Cyclohexane	110-82-7	3.6E-04	--	(5)	2.5E-04	--	(5)	4.2E-04	--	(5)	3.6E-04	6,000	5.9E-08	2.5E-04	26,000	9.5E-09	4.2E-04	26,000	1.6E-08	--
Diethylene glycol	111-46-6	8.0E-06	--	(5)	5.5E-06	--	(5)	9.5E-06	--	(5)	8.0E-06	--	(5)	5.5E-06	--	(5)	9.5E-06	--	(5)	--
Ethylbenzene	100-41-4	2.5E-04	0.40	6.2E-04	1.7E-04	10.0	1.7E-05	3.0E-04	4.80	6.2E-05	2.5E-04	260	9.6E-07	1.7E-04	1,100	1.6E-07	3.0E-04	1,100	2.7E-07	--
Isopropyl alcohol	67-63-0	0.042	--	(5)	0.029	--	(5)	0.050	--	(5)	0.042	200	2.1E-04	0.029	880	3.3E-05	0.050	880	5.7E-05	--
Methanol	67-56-1	1.5E-03	--	(5)	1.0E-03	--	(5)	1.8E-03	--	(5)	1.5E-03	4,000	3.8E-07	1.0E-03	18,000	5.8E-08	1.8E-03	18,000	1.0E-07	--
Toluene	108-88-3	6.5E-04	--	(5)	4.5E-04	--	(5)	7.7E-04	--	(5)	6.5E-04	5,000	1.3E-07	4.5E-04	22,000	2.0E-08	7.7E-04	22,000	3.5E-08	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.43	0.20	2.14	0.30	3.50	0.085	0.51	2.90	0.18	0.43	2.10	0.20	0.30	9.20	0.032	0.51	9.20	0.055	--
Xylenes (mixed isomers)	1330-20-7	5.0E-04	--	(5)	3.5E-04	--	(5)	5.9E-04	--	(5)	5.0E-04	220	2.3E-06	3.5E-04	970	3.6E-07	5.9E-04	970	6.1E-07	--
WHST																				
Cumulative TEU Risk		--	--	0.32	--	--	0.011	--	--	0.032	--	--	0.031	--	--	4.3E-03	--	--	0.010	--
Dispersion Factor (ug/m3/[g/s])		0.48			0.29			0.69			0.48			0.29			0.69			--
1,2-Epoxybutane	106-88-7	3.3E-04	--	(5)	2.0E-04	--	(5)	4.7E-04	--	(5)	3.3E-04	20.0	1.6E-05	2.0E-04	88.0	2.2E-06	4.7E-04	88.0	5.3E-06	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.065	0.20	0.32	0.039	3.50	0.011	0.093	2.90	0.032	0.065	2.10	0.031	0.039	9.20	4.3E-03	0.093	9.20	0.010	--

**Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon**

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Hazard Index ⁽³⁾
Exposure Location ⁽⁴⁾		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
BOILER																				
Cumulative TEU Risk		--	--	1.40	--	--	0.046	--	--	0.042	--	--	0.014	--	--	1.6E-03	--	--	2.4E-03	--
Dispersion Factor (ug/m3/[g/s])		0.42			0.52			0.78			0.42			0.52			0.78			--
Acetaldehyde	75-07-0	4.4E-04	0.45	9.8E-04	5.4E-04	12.0	4.5E-05	8.2E-04	5.50	1.5E-04	4.4E-04	140	3.2E-06	5.4E-04	620	8.8E-07	8.2E-04	620	1.3E-06	--
Acrolein	107-02-8	4.4E-04	--	(5)	5.4E-04	--	(5)	8.2E-04	--	(5)	4.4E-04	0.35	1.3E-03	5.4E-04	1.50	3.6E-04	8.2E-04	1.50	5.5E-04	--
Benzene	71-43-2	5.6E-06	0.13	4.3E-05	6.8E-06	3.30	2.1E-06	1.0E-05	1.50	6.9E-06	5.6E-06	3.00	1.9E-06	6.8E-06	13.0	5.2E-07	1.0E-05	13.0	7.9E-07	--
1,3-Butadiene	106-99-0	1.9E-05	0.033	5.7E-04	2.3E-05	0.86	2.7E-05	3.5E-05	0.40	8.7E-05	1.9E-05	2.00	9.3E-06	2.3E-05	8.80	2.6E-06	3.5E-05	8.80	3.9E-06	--
Ethylbenzene	100-41-4	2.5E-07	0.40	6.3E-07	3.1E-07	10.0	3.1E-08	4.7E-07	4.80	9.7E-08	2.5E-07	260	9.7E-10	3.1E-07	1,100	2.8E-10	4.7E-07	1,100	4.3E-10	--
Formaldehyde	50-00-0	4.4E-04	0.17	2.6E-03	5.4E-04	4.30	1.3E-04	8.2E-04	2.00	4.1E-04	4.4E-04	9.00	4.9E-05	5.4E-04	40.0	1.4E-05	8.2E-04	40.0	2.1E-05	--
Hexane	110-54-3	4.4E-06	--	(5)	5.4E-06	--	(5)	8.2E-06	--	(5)	4.4E-06	700	6.3E-09	5.4E-06	3,100	1.8E-09	8.2E-06	3,100	2.6E-09	--
Benzo(a)pyrene	50-32-8	4.5E-08	4.3E-05	1.0E-03	5.5E-08	1.6E-03	3.5E-05	8.4E-08	3.0E-03	2.8E-05	4.5E-08	2.0E-03	2.3E-05	5.5E-08	8.8E-03	6.3E-06	8.4E-08	8.8E-03	9.5E-06	--
Naphthalene	91-20-3	6.7E-06	0.029	2.3E-04	8.2E-06	0.76	1.1E-05	1.2E-05	0.35	3.5E-05	6.7E-06	3.70	1.8E-06	8.2E-06	16.0	5.1E-07	1.2E-05	16.0	7.8E-07	--
Toluene	108-88-3	5.6E-06	--	(5)	6.8E-06	--	(5)	1.0E-05	--	(5)	5.6E-06	5,000	1.1E-09	6.8E-06	22,000	3.1E-10	1.0E-05	22,000	4.7E-10	--
Xylenes (mixed isomers)	1330-20-7	2.0E-06	--	(5)	2.5E-06	--	(5)	3.7E-06	--	(5)	2.0E-06	220	9.2E-09	2.5E-06	970	2.6E-09	3.7E-06	970	3.9E-09	--
Arsenic	7440-38-2	2.0E-06	2.4E-05	0.084	2.5E-06	1.3E-03	1.9E-03	3.7E-06	6.2E-04	6.0E-03	2.0E-06	1.7E-04	0.012	2.5E-06	2.4E-03	1.0E-03	3.7E-06	2.4E-03	1.6E-03	--
Cadmium	7440-43-9	1.9E-06	5.6E-04	3.4E-03	2.3E-06	0.014	1.7E-04	3.5E-06	6.7E-03	5.2E-04	1.9E-06	5.0E-03	3.8E-04	2.3E-06	0.037	6.3E-05	3.5E-06	0.037	9.5E-05	--
Chromium VI	18540299p	1.3E-07	3.1E-05	4.1E-03	1.6E-07	5.2E-04	3.0E-04	2.3E-07	1.0E-03	2.3E-04	1.3E-07	0.083	1.5E-06	1.6E-07	0.88	1.8E-07	2.3E-07	0.88	2.7E-07	--
Copper	7440-50-8	5.2E-06	--	(5)	6.4E-06	--	(5)	9.6E-06	--	(5)	5.2E-06	--	(5)	6.4E-06	--	(5)	9.6E-06	--	(5)	--
Lead	7439-92-1	1.0E-05	--	(5)	1.3E-05	--	(5)	1.9E-05	--	(5)	1.0E-05	0.15	7.0E-05	1.3E-05	0.66	1.9E-05	1.9E-05	0.66	2.9E-05	--
Manganese	7439-96-5	3.9E-06	--	(5)	4.8E-06	--	(5)	7.3E-06	--	(5)	3.9E-06	0.090	4.3E-05	4.8E-06	0.40	1.2E-05	7.3E-06	0.40	1.8E-05	--
Mercury	7439-97-6	2.5E-06	--	(5)	3.1E-06	--	(5)	4.7E-06	--	(5)	2.5E-06	0.077	3.3E-05	3.1E-06	0.63	4.9E-06	4.7E-06	0.63	7.4E-06	--
Nickel	7440020in	4.9E-06	3.8E-03	1.3E-03	6.0E-06	0.10	6.0E-05	9.1E-06	0.046	2.0E-04	4.9E-06	0.014	3.5E-04	6.0E-06	0.062	9.8E-05	9.1E-06	0.062	1.5E-04	--
Selenium	7782-49-2	2.8E-06	--	(5)	3.4E-06	--	(5)	5.1E-06	--	(5)	2.8E-06	--	(5)	3.4E-06	--	(5)	5.1E-06	--	(5)	--
Ammonia	7664-41-7	1.0E-03	--	(5)	1.2E-03	--	(5)	1.9E-03	--	(5)	1.0E-03	500	2.0E-06	1.2E-03	2,200	5.6E-07	1.9E-03	2,200	8.5E-07	--
Hydrochloric acid	7647-01-0	2.4E-04	--	(5)	2.9E-04	--	(5)	4.4E-04	--	(5)	2.4E-04	20.0	1.2E-05	2.9E-04	88.0	3.3E-06	4.4E-04	88.0	5.0E-06	--
Polycyclic aromatic hydrocarbons (PAHs)	PAHs	5.6E-05	4.3E-05	1.31	6.9E-05	1.6E-03	0.043	1.0E-04	3.0E-03	0.035	5.6E-05	--	(5)	6.9E-05	--	(5)	1.0E-04	--	(5)	--
COATLINE																				
Cumulative TEU Risk		--	--	0	--	--	0	--	--	0	--	--	4.0E-03	--	--	7.7E-04	--	--	5.5E-04	--
Dispersion Factor (ug/m3/[g/s])		12.8			10.8			7.75			12.8			10.8			7.75			--
Isopropyl alcohol	67-63-0	0.80	--	(5)	0.68	--	(5)	0.49	--	(5)	0.80	200	4.0E-03	0.68	880	7.7E-04	0.49	880	5.5E-04	--

Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Hazard Index (3)
Exposure Location (4)		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
BLD2_1																				
Cumulative TEU Risk		--	--	0.10	--	--	1.2E-03	--	--	5.9E-03	--	--	1.5E-03	--	--	6.8E-05	--	--	6.2E-04	--
Dispersion Factor (ug/m3/[g/s])		57.6			11.5			105			57.6			11.5			105			--
Acetone	67-64-1	0.025	--	(5)	4.9E-03	--	(5)	0.045	--	(5)	0.025	31,000	7.9E-07	4.9E-03	140,000	3.5E-08	0.045	140,000	3.2E-07	--
Benzene	71-43-2	4.8E-06	0.13	3.7E-05	9.6E-07	3.30	2.9E-07	8.8E-06	1.50	5.9E-06	4.8E-06	3.00	1.6E-06	9.6E-07	13.0	7.4E-08	8.8E-06	13.0	6.8E-07	--
n-Butyl alcohol	71-36-3	8.6E-05	--	(5)	1.7E-05	--	(5)	1.6E-04	--	(5)	8.6E-05	--	(5)	1.7E-05	--	(5)	1.6E-04	--	(5)	--
Diethylene glycol	111-46-6	2.4E-04	--	(5)	4.7E-05	--	(5)	4.3E-04	--	(5)	2.4E-04	--	(5)	4.7E-05	--	(5)	4.3E-04	--	(5)	--
Ethylbenzene	100-41-4	1.2E-04	0.40	3.1E-04	2.5E-05	10.0	2.5E-06	2.3E-04	4.80	4.7E-05	1.2E-04	260	4.7E-07	2.5E-05	1,100	2.2E-08	2.3E-04	1,100	2.0E-07	--
Ethylene glycol monobutyl ether	111-76-2	1.7E-04	--	(5)	3.4E-05	--	(5)	3.1E-04	--	(5)	1.7E-04	82.0	2.1E-06	3.4E-05	360	9.3E-08	3.1E-04	360	8.6E-07	--
Isopropyl alcohol	67-63-0	2.8E-05	--	(5)	5.6E-06	--	(5)	5.1E-05	--	(5)	2.8E-05	200	1.4E-07	5.6E-06	880	6.3E-09	5.1E-05	880	5.8E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.5E-04	--	(5)	5.0E-05	--	(5)	4.5E-04	--	(5)	2.5E-04	3,000	8.3E-08	5.0E-05	13,000	3.8E-09	4.5E-04	13,000	3.5E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	1.7E-03	3.80	4.5E-04	3.4E-04	100.0	3.4E-06	3.1E-03	46.0	6.8E-05	1.7E-03	41.0	4.2E-05	3.4E-04	180	1.9E-06	3.1E-03	180	1.7E-05	--
Toluene	108-88-3	1.6E-03	--	(5)	3.2E-04	--	(5)	2.9E-03	--	(5)	1.6E-03	5,000	3.2E-07	3.2E-04	22,000	1.5E-08	2.9E-03	22,000	1.3E-07	--
1,2,3-Trimethylbenzene	526-73-8	5.3E-03	--	(5)	1.1E-03	--	(5)	9.7E-03	--	(5)	5.3E-03	60.0	8.9E-05	1.1E-03	260	4.1E-06	9.7E-03	260	3.7E-05	--
Xylenes (mixed isomers)	1330-20-7	4.1E-04	--	(5)	8.1E-05	--	(5)	7.4E-04	--	(5)	4.1E-04	220	1.8E-06	8.1E-05	970	8.4E-08	7.4E-04	970	7.7E-07	--
Chromium VI	18540299p	3.1E-06	3.1E-05	0.10	6.2E-07	5.2E-04	1.2E-03	5.7E-06	1.0E-03	5.7E-03	3.1E-06	0.083	3.8E-05	6.2E-07	0.88	7.1E-07	5.7E-06	0.88	6.5E-06	--
Cobalt	7440-48-4	1.4E-07	--	(5)	2.8E-08	--	(5)	2.6E-07	--	(5)	1.4E-07	0.10	1.4E-06	2.8E-08	0.44	6.3E-08	2.6E-07	0.44	5.8E-07	--
Manganese	7439-96-5	1.0E-04	--	(5)	2.0E-05	--	(5)	1.9E-04	--	(5)	1.0E-04	0.090	1.1E-03	2.0E-05	0.40	5.1E-05	1.9E-04	0.40	4.7E-04	--
Nickel	7440020in	3.2E-06	3.8E-03	8.4E-04	6.4E-07	0.10	6.4E-06	5.8E-06	0.046	1.3E-04	3.2E-06	0.014	2.3E-04	6.4E-07	0.062	1.0E-05	5.8E-06	0.062	9.4E-05	--
BLD2_2																				
Cumulative TEU Risk		--	--	0.11	--	--	1.2E-03	--	--	6.5E-03	--	--	1.6E-03	--	--	6.8E-05	--	--	6.9E-04	--
Dispersion Factor (ug/m3/[g/s])		60.1			11.4			116			60.1			11.4			116			--
Acetone	67-64-1	0.026	--	(5)	4.9E-03	--	(5)	0.049	--	(5)	0.026	31,000	8.3E-07	4.9E-03	140,000	3.5E-08	0.049	140,000	3.5E-07	--
Benzene	71-43-2	5.0E-06	0.13	3.9E-05	9.6E-07	3.30	2.9E-07	9.7E-06	1.50	6.5E-06	5.0E-06	3.00	1.7E-06	9.6E-07	13.0	7.4E-08	9.7E-06	13.0	7.5E-07	--
n-Butyl alcohol	71-36-3	9.0E-05	--	(5)	1.7E-05	--	(5)	1.7E-04	--	(5)	9.0E-05	--	(5)	1.7E-05	--	(5)	1.7E-04	--	(5)	--
Diethylene glycol	111-46-6	2.5E-04	--	(5)	4.7E-05	--	(5)	4.7E-04	--	(5)	2.5E-04	--	(5)	4.7E-05	--	(5)	4.7E-04	--	(5)	--
Ethylbenzene	100-41-4	1.3E-04	0.40	3.2E-04	2.4E-05	10.0	2.4E-06	2.5E-04	4.80	5.2E-05	1.3E-04	260	4.9E-07	2.4E-05	1,100	2.2E-08	2.5E-04	1,100	2.2E-07	--
Ethylene glycol monobutyl ether	111-76-2	1.8E-04	--	(5)	3.3E-05	--	(5)	3.4E-04	--	(5)	1.8E-04	82.0	2.1E-06	3.3E-05	360	9.3E-08	3.4E-04	360	9.4E-07	--
Isopropyl alcohol	67-63-0	2.9E-05	--	(5)	5.5E-06	--	(5)	5.6E-05	--	(5)	2.9E-05	200	1.5E-07	5.5E-06	880	6.3E-09	5.6E-05	880	6.4E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.6E-04	--	(5)	4.9E-05	--	(5)	5.0E-04	--	(5)	2.6E-04	3,000	8.6E-08	4.9E-05	13,000	3.8E-09	5.0E-04	13,000	3.8E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	1.8E-03	3.80	4.7E-04	3.4E-04	100.0	3.4E-06	3.4E-03	46.0	7.5E-05	1.8E-03	41.0	4.3E-05	3.4E-04	180	1.9E-06	3.4E-03	180	1.9E-05	--
Toluene	108-88-3	1.7E-03	--	(5)	3.2E-04	--	(5)	3.2E-03	--	(5)	1.7E-03	5,000	3.4E-07	3.2E-04	22,000	1.5E-08	3.2E-03	22,000	1.5E-07	--
1,2,3-Trimethylbenzene	526-73-8	5.6E-03	--	(5)	1.1E-03	--	(5)	0.011	--	(5)	5.6E-03	60.0	9.3E-05	1.1E-03	260	4.1E-06	0.011	260	4.1E-05	--
Xylenes (mixed isomers)	1330-20-7	4.2E-04	--	(5)	8.0E-05	--	(5)	8.2E-04	--	(5)	4.2E-04	220	1.9E-06	8.0E-05	970	8.3E-08	8.2E-04	970	8.4E-07	--
Chromium VI	18540299p	3.3E-06	3.1E-05	0.11	6.2E-07	5.2E-04	1.2E-03	6.3E-06	1.0E-03	6.3E-03	3.3E-06	0.083	3.9E-05	6.2E-07	0.88	7.0E-07	6.3E-06	0.88	7.1E-06	--
Cobalt	7440-48-4	1.5E-07	--	(5)	2.8E-08	--	(5)	2.8E-07	--	(5)	1.5E-07	0.10	1.5E-06	2.8E-08	0.44	6.3E-08	2.8E-07	0.44	6.4E-07	--
Manganese	7439-96-5	1.1E-04	--	(5)	2.0E-05	--	(5)	2.0E-04	--	(5)	1.1E-04	0.090	1.2E-03	2.0E-05	0.40	5.0E-05	2.0E-04	0.40	5.1E-04	--
Nickel	7440020in	3.3E-06	3.8E-03	8.7E-04	6.3E-07	0.10	6.3E-06	6.4E-06	0.046	1.4E-04	3.3E-06	0.014	2.4E-04	6.3E-07	0.062	1.0E-05	6.4E-06	0.062	1.0E-04	--

Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Hazard Index ⁽³⁾
Exposure Location ⁽⁴⁾		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
BLD2_3																				
Cumulative TEU Risk		--	--	0.11	--	--	1.2E-03	--	--	7.0E-03	--	--	1.7E-03	--	--	6.7E-05	--	--	7.4E-04	--
Dispersion Factor (ug/m3/[g/s])		62.1			11.3			125			62.1			11.3			125			--
Acetone	67-64-1	0.027	--	(5)	4.8E-03	--	(5)	0.053	--	(5)	0.027	31,000	8.6E-07	4.8E-03	140,000	3.5E-08	0.053	140,000	3.8E-07	--
Benzene	71-43-2	5.2E-06	0.13	4.0E-05	9.5E-07	3.30	2.9E-07	1.0E-05	1.50	7.0E-06	5.2E-06	3.00	1.7E-06	9.5E-07	13.0	7.3E-08	1.0E-05	13.0	8.0E-07	--
n-Butyl alcohol	71-36-3	9.3E-05	--	(5)	1.7E-05	--	(5)	1.9E-04	--	(5)	9.3E-05	--	(5)	1.7E-05	--	(5)	1.9E-04	--	(5)	--
Diethylene glycol	111-46-6	2.5E-04	--	(5)	4.6E-05	--	(5)	5.1E-04	--	(5)	2.5E-04	--	(5)	4.6E-05	--	(5)	5.1E-04	--	(5)	--
Ethylbenzene	100-41-4	1.3E-04	0.40	3.3E-04	2.4E-05	10.0	2.4E-06	2.7E-04	4.80	5.6E-05	1.3E-04	260	5.1E-07	2.4E-05	1,100	2.2E-08	2.7E-04	1,100	2.4E-07	--
Ethylene glycol monobutyl ether	111-76-2	1.8E-04	--	(5)	3.3E-05	--	(5)	3.7E-04	--	(5)	1.8E-04	82.0	2.2E-06	3.3E-05	360	9.2E-08	3.7E-04	360	1.0E-06	--
Isopropyl alcohol	67-63-0	3.0E-05	--	(5)	5.5E-06	--	(5)	6.0E-05	--	(5)	3.0E-05	200	1.5E-07	5.5E-06	880	6.2E-09	6.0E-05	880	6.9E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.7E-04	--	(5)	4.9E-05	--	(5)	5.4E-04	--	(5)	2.7E-04	3,000	8.9E-08	4.9E-05	13,000	3.8E-09	5.4E-04	13,000	4.1E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	1.8E-03	3.80	4.8E-04	3.4E-04	100.0	3.4E-06	3.7E-03	46.0	8.0E-05	1.8E-03	41.0	4.5E-05	3.4E-04	180	1.9E-06	3.7E-03	180	2.1E-05	--
Toluene	108-88-3	1.7E-03	--	(5)	3.2E-04	--	(5)	3.5E-03	--	(5)	1.7E-03	5,000	3.5E-07	3.2E-04	22,000	1.4E-08	3.5E-03	22,000	1.6E-07	--
1,2,3-Trimethylbenzene	526-73-8	5.7E-03	--	(5)	1.0E-03	--	(5)	0.012	--	(5)	5.7E-03	60.0	9.6E-05	1.0E-03	260	4.0E-06	0.012	260	4.4E-05	--
Xylenes (mixed isomers)	1330-20-7	4.4E-04	--	(5)	8.0E-05	--	(5)	8.8E-04	--	(5)	4.4E-04	220	2.0E-06	8.0E-05	970	8.2E-08	8.8E-04	970	9.1E-07	--
Chromium VI	18540299p	3.4E-06	3.1E-05	0.11	6.1E-07	5.2E-04	1.2E-03	6.7E-06	1.0E-03	6.7E-03	3.4E-06	0.083	4.1E-05	6.1E-07	0.88	7.0E-07	6.7E-06	0.88	7.7E-06	--
Cobalt	7440-48-4	1.5E-07	--	(5)	2.8E-08	--	(5)	3.0E-07	--	(5)	1.5E-07	0.10	1.5E-06	2.8E-08	0.44	6.3E-08	3.0E-07	0.44	6.9E-07	--
Manganese	7439-96-5	1.1E-04	--	(5)	2.0E-05	--	(5)	2.2E-04	--	(5)	1.1E-04	0.090	1.2E-03	2.0E-05	0.40	5.0E-05	2.2E-04	0.40	5.5E-04	--
Nickel	7440020in	3.4E-06	3.8E-03	9.0E-04	6.3E-07	0.10	6.3E-06	6.9E-06	0.046	1.5E-04	3.4E-06	0.014	2.5E-04	6.3E-07	0.062	1.0E-05	6.9E-06	0.062	1.1E-04	--
BLD2_4																				
Cumulative TEU Risk		--	--	0.12	--	--	1.2E-03	--	--	7.9E-03	--	--	1.7E-03	--	--	6.7E-05	--	--	8.3E-04	--
Dispersion Factor (ug/m3/[g/s])		65.2			11.2			140			65.2			11.2			140			--
Acetone	67-64-1	0.028	--	(5)	4.8E-03	--	(5)	0.060	--	(5)	0.028	31,000	9.0E-07	4.8E-03	140,000	3.4E-08	0.060	140,000	4.3E-07	--
Benzene	71-43-2	5.5E-06	0.13	4.2E-05	9.4E-07	3.30	2.9E-07	1.2E-05	1.50	7.9E-06	5.5E-06	3.00	1.8E-06	9.4E-07	13.0	7.2E-08	1.2E-05	13.0	9.1E-07	--
n-Butyl alcohol	71-36-3	9.8E-05	--	(5)	1.7E-05	--	(5)	2.1E-04	--	(5)	9.8E-05	--	(5)	1.7E-05	--	(5)	2.1E-04	--	(5)	--
Diethylene glycol	111-46-6	2.7E-04	--	(5)	4.6E-05	--	(5)	5.8E-04	--	(5)	2.7E-04	--	(5)	4.6E-05	--	(5)	5.8E-04	--	(5)	--
Ethylbenzene	100-41-4	1.4E-04	0.40	3.5E-04	2.4E-05	10.0	2.4E-06	3.0E-04	4.80	6.3E-05	1.4E-04	260	5.4E-07	2.4E-05	1,100	2.2E-08	3.0E-04	1,100	2.7E-07	--
Ethylene glycol monobutyl ether	111-76-2	1.9E-04	--	(5)	3.3E-05	--	(5)	4.1E-04	--	(5)	1.9E-04	82.0	2.3E-06	3.3E-05	360	9.1E-08	4.1E-04	360	1.1E-06	--
Isopropyl alcohol	67-63-0	3.2E-05	--	(5)	5.4E-06	--	(5)	6.8E-05	--	(5)	3.2E-05	200	1.6E-07	5.4E-06	880	6.2E-09	6.8E-05	880	7.7E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.8E-04	--	(5)	4.8E-05	--	(5)	6.1E-04	--	(5)	2.8E-04	3,000	9.4E-08	4.8E-05	13,000	3.7E-09	6.1E-04	13,000	4.7E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	1.9E-03	3.80	5.1E-04	3.3E-04	100.0	3.3E-06	4.2E-03	46.0	9.1E-05	1.9E-03	41.0	4.7E-05	3.3E-04	180	1.8E-06	4.2E-03	180	2.3E-05	--
Toluene	108-88-3	1.8E-03	--	(5)	3.1E-04	--	(5)	3.9E-03	--	(5)	1.8E-03	5,000	3.7E-07	3.1E-04	22,000	1.4E-08	3.9E-03	22,000	1.8E-07	--
1,2,3-Trimethylbenzene	526-73-8	6.0E-03	--	(5)	1.0E-03	--	(5)	0.013	--	(5)	6.0E-03	60.0	1.0E-04	1.0E-03	260	4.0E-06	0.013	260	5.0E-05	--
Xylenes (mixed isomers)	1330-20-7	4.6E-04	--	(5)	7.9E-05	--	(5)	9.9E-04	--	(5)	4.6E-04	220	2.1E-06	7.9E-05	970	8.2E-08	9.9E-04	970	1.0E-06	--
Chromium VI	18540299p	3.5E-06	3.1E-05	0.11	6.1E-07	5.2E-04	1.2E-03	7.6E-06	1.0E-03	7.6E-03	3.5E-06	0.083	4.3E-05	6.1E-07	0.88	6.9E-07	7.6E-06	0.88	8.6E-06	--
Cobalt	7440-48-4	1.6E-07	--	(5)	2.7E-08	--	(5)	3.4E-07	--	(5)	1.6E-07	0.10	1.6E-06	2.7E-08	0.44	6.2E-08	3.4E-07	0.44	7.7E-07	--
Manganese	7439-96-5	1.2E-04	--	(5)	2.0E-05	--	(5)	2.5E-04	--	(5)	1.2E-04	0.090	1.3E-03	2.0E-05	0.40	5.0E-05	2.5E-04	0.40	6.2E-04	--
Nickel	7440020in	3.6E-06	3.8E-03	9.5E-04	6.2E-07	0.10	6.2E-06	7.8E-06	0.046	1.7E-04	3.6E-06	0.014	2.6E-04	6.2E-07	0.062	1.0E-05	7.8E-06	0.062	1.3E-04	--

**Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon**

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Hazard Index (3)
Exposure Location (4)		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
BLD2_5																				
Cumulative TEU Risk		--	--	0.12	--	--	1.2E-03	--	--	9.0E-03	--	--	1.8E-03	--	--	6.6E-05	--	--	9.5E-04	--
Dispersion Factor (ug/m3/[g/s])		68.4			11.1			159			68.4			11.1			159			--
Acetone	67-64-1	0.029	--	(5)	4.7E-03	--	(5)	0.068	--	(5)	0.029	31,000	9.4E-07	4.7E-03	140,000	3.4E-08	0.068	140,000	4.9E-07	--
Benzene	71-43-2	5.7E-06	0.13	4.4E-05	9.3E-07	3.30	2.8E-07	1.3E-05	1.50	8.9E-06	5.7E-06	3.00	1.9E-06	9.3E-07	13.0	7.2E-08	1.3E-05	13.0	1.0E-06	--
n-Butyl alcohol	71-36-3	1.0E-04	--	(5)	1.7E-05	--	(5)	2.4E-04	--	(5)	1.0E-04	--	(5)	1.7E-05	--	(5)	2.4E-04	--	(5)	--
Diethylene glycol	111-46-6	2.8E-04	--	(5)	4.5E-05	--	(5)	6.5E-04	--	(5)	2.8E-04	--	(5)	4.5E-05	--	(5)	6.5E-04	--	(5)	--
Ethylbenzene	100-41-4	1.5E-04	0.40	3.7E-04	2.4E-05	10.0	2.4E-06	3.4E-04	4.80	7.1E-05	1.5E-04	260	5.6E-07	2.4E-05	1,100	2.2E-08	3.4E-04	1,100	3.1E-07	--
Ethylene glycol monobutyl ether	111-76-2	2.0E-04	--	(5)	3.3E-05	--	(5)	4.7E-04	--	(5)	2.0E-04	82.0	2.4E-06	3.3E-05	360	9.0E-08	4.7E-04	360	1.3E-06	--
Isopropyl alcohol	67-63-0	3.3E-05	--	(5)	5.4E-06	--	(5)	7.7E-05	--	(5)	3.3E-05	200	1.7E-07	5.4E-06	880	6.1E-09	7.7E-05	880	8.8E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	3.0E-04	--	(5)	4.8E-05	--	(5)	6.9E-04	--	(5)	3.0E-04	3,000	9.8E-08	4.8E-05	13,000	3.7E-09	6.9E-04	13,000	5.3E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	2.0E-03	3.80	5.3E-04	3.3E-04	100.0	3.3E-06	4.7E-03	46.0	1.0E-04	2.0E-03	41.0	5.0E-05	3.3E-04	180	1.8E-06	4.7E-03	180	2.6E-05	--
Toluene	108-88-3	1.9E-03	--	(5)	3.1E-04	--	(5)	4.5E-03	--	(5)	1.9E-03	5,000	3.8E-07	3.1E-04	22,000	1.4E-08	4.5E-03	22,000	2.0E-07	--
1,2,3-Trimethylbenzene	526-73-8	6.3E-03	--	(5)	1.0E-03	--	(5)	0.015	--	(5)	6.3E-03	60.0	1.1E-04	1.0E-03	260	4.0E-06	0.015	260	5.7E-05	--
Xylenes (mixed isomers)	1330-20-7	4.8E-04	--	(5)	7.8E-05	--	(5)	1.1E-03	--	(5)	4.8E-04	220	2.2E-06	7.8E-05	970	8.1E-08	1.1E-03	970	1.2E-06	--
Chromium VI	18540299p	3.7E-06	3.1E-05	0.12	6.0E-07	5.2E-04	1.2E-03	8.6E-06	1.0E-03	8.6E-03	3.7E-06	0.083	4.5E-05	6.0E-07	0.88	6.8E-07	8.6E-06	0.88	9.8E-06	--
Cobalt	7440-48-4	1.7E-07	--	(5)	2.7E-08	--	(5)	3.9E-07	--	(5)	1.7E-07	0.10	1.7E-06	2.7E-08	0.44	6.1E-08	3.9E-07	0.44	8.8E-07	--
Manganese	7439-96-5	1.2E-04	--	(5)	2.0E-05	--	(5)	2.8E-04	--	(5)	1.2E-04	0.090	1.3E-03	2.0E-05	0.40	4.9E-05	2.8E-04	0.40	7.0E-04	--
Nickel	7440020in	3.8E-06	3.8E-03	1.0E-03	6.1E-07	0.10	6.1E-06	8.8E-06	0.046	1.9E-04	3.8E-06	0.014	2.7E-04	6.1E-07	0.062	9.9E-06	8.8E-06	0.062	1.4E-04	--
BLD2_6																				
Cumulative TEU Risk		--	--	0.13	--	--	1.2E-03	--	--	9.9E-03	--	--	1.9E-03	--	--	6.5E-05	--	--	1.0E-03	--
Dispersion Factor (ug/m3/[g/s])		71.0			11.0			175			71.0			11.0			175			--
Acetone	67-64-1	0.030	--	(5)	4.7E-03	--	(5)	0.075	--	(5)	0.030	31,000	9.8E-07	4.7E-03	140,000	3.4E-08	0.075	140,000	5.4E-07	--
Benzene	71-43-2	6.0E-06	0.13	4.6E-05	9.2E-07	3.30	2.8E-07	1.5E-05	1.50	9.8E-06	6.0E-06	3.00	2.0E-06	9.2E-07	13.0	7.1E-08	1.5E-05	13.0	1.1E-06	--
n-Butyl alcohol	71-36-3	1.1E-04	--	(5)	1.7E-05	--	(5)	2.6E-04	--	(5)	1.1E-04	--	(5)	1.7E-05	--	(5)	2.6E-04	--	(5)	--
Diethylene glycol	111-46-6	2.9E-04	--	(5)	4.5E-05	--	(5)	7.2E-04	--	(5)	2.9E-04	--	(5)	4.5E-05	--	(5)	7.2E-04	--	(5)	--
Ethylbenzene	100-41-4	1.5E-04	0.40	3.8E-04	2.4E-05	10.0	2.4E-06	3.8E-04	4.80	7.8E-05	1.5E-04	260	5.8E-07	2.4E-05	1,100	2.1E-08	3.8E-04	1,100	3.4E-07	--
Ethylene glycol monobutyl ether	111-76-2	2.1E-04	--	(5)	3.2E-05	--	(5)	5.1E-04	--	(5)	2.1E-04	82.0	2.5E-06	3.2E-05	360	9.0E-08	5.1E-04	360	1.4E-06	--
Isopropyl alcohol	67-63-0	3.4E-05	--	(5)	5.3E-06	--	(5)	8.5E-05	--	(5)	3.4E-05	200	1.7E-07	5.3E-06	880	6.1E-09	8.5E-05	880	9.7E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	3.1E-04	--	(5)	4.7E-05	--	(5)	7.6E-04	--	(5)	3.1E-04	3,000	1.0E-07	4.7E-05	13,000	3.7E-09	7.6E-04	13,000	5.8E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	2.1E-03	3.80	5.5E-04	3.3E-04	100.0	3.3E-06	5.2E-03	46.0	1.1E-04	2.1E-03	41.0	5.1E-05	3.3E-04	180	1.8E-06	5.2E-03	180	2.9E-05	--
Toluene	108-88-3	2.0E-03	--	(5)	3.1E-04	--	(5)	4.9E-03	--	(5)	2.0E-03	5,000	4.0E-07	3.1E-04	22,000	1.4E-08	4.9E-03	22,000	2.2E-07	--
1,2,3-Trimethylbenzene	526-73-8	6.6E-03	--	(5)	1.0E-03	--	(5)	0.016	--	(5)	6.6E-03	60.0	1.1E-04	1.0E-03	260	3.9E-06	0.016	260	6.2E-05	--
Xylenes (mixed isomers)	1330-20-7	5.0E-04	--	(5)	7.8E-05	--	(5)	1.2E-03	--	(5)	5.0E-04	220	2.3E-06	7.8E-05	970	8.0E-08	1.2E-03	970	1.3E-06	--
Chromium VI	18540299p	3.8E-06	3.1E-05	0.12	6.0E-07	5.2E-04	1.1E-03	9.5E-06	1.0E-03	9.5E-03	3.8E-06	0.083	4.6E-05	6.0E-07	0.88	6.8E-07	9.5E-06	0.88	1.1E-05	--
Cobalt	7440-48-4	1.7E-07	--	(5)	2.7E-08	--	(5)	4.3E-07	--	(5)	1.7E-07	0.10	1.7E-06	2.7E-08	0.44	6.1E-08	4.3E-07	0.44	9.7E-07	--
Manganese	7439-96-5	1.3E-04	--	(5)	1.9E-05	--	(5)	3.1E-04	--	(5)	1.3E-04	0.090	1.4E-03	1.9E-05	0.40	4.9E-05	3.1E-04	0.40	7.8E-04	--
Nickel	7440020in	3.9E-06	3.8E-03	1.0E-03	6.1E-07	0.10	6.1E-06	9.7E-06	0.046	2.1E-04	3.9E-06	0.014	2.8E-04	6.1E-07	0.062	9.8E-06	9.7E-06	0.062	1.6E-04	--

Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Hazard Index ⁽³⁾
Exposure Location ⁽⁴⁾		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
BLD2_7																				
Cumulative TEU Risk		--	--	0.23	--	--	1.2E-03	--	--	8.4E-03	--	--	3.4E-03	--	--	6.8E-05	--	--	8.8E-04	--
Dispersion Factor (ug/m3/[g/s])		127			11.5			148			127			11.5			148			--
Acetone	67-64-1	0.054	--	(5)	4.9E-03	--	(5)	0.063	--	(5)	0.054	31,000	1.8E-06	4.9E-03	140,000	3.5E-08	0.063	140,000	4.5E-07	--
Benzene	71-43-2	1.1E-05	0.13	8.2E-05	9.6E-07	3.30	2.9E-07	1.2E-05	1.50	8.3E-06	1.1E-05	3.00	3.6E-06	9.6E-07	13.0	7.4E-08	1.2E-05	13.0	9.6E-07	--
n-Butyl alcohol	71-36-3	1.9E-04	--	(5)	1.7E-05	--	(5)	2.2E-04	--	(5)	1.9E-04	--	(5)	1.7E-05	--	(5)	2.2E-04	--	(5)	--
Diethylene glycol	111-46-6	5.2E-04	--	(5)	4.7E-05	--	(5)	6.1E-04	--	(5)	5.2E-04	--	(5)	4.7E-05	--	(5)	6.1E-04	--	(5)	--
Ethylbenzene	100-41-4	2.7E-04	0.40	6.8E-04	2.5E-05	10.0	2.5E-06	3.2E-04	4.80	6.6E-05	2.7E-04	260	1.0E-06	2.5E-05	1,100	2.2E-08	3.2E-04	1,100	2.9E-07	--
Ethylene glycol monobutyl ether	111-76-2	3.7E-04	--	(5)	3.4E-05	--	(5)	4.4E-04	--	(5)	3.7E-04	82.0	4.5E-06	3.4E-05	360	9.3E-08	4.4E-04	360	1.2E-06	--
Isopropyl alcohol	67-63-0	6.2E-05	--	(5)	5.6E-06	--	(5)	7.2E-05	--	(5)	6.2E-05	200	3.1E-07	5.6E-06	880	6.3E-09	7.2E-05	880	8.2E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	5.5E-04	--	(5)	4.9E-05	--	(5)	6.4E-04	--	(5)	5.5E-04	3,000	1.8E-07	4.9E-05	13,000	3.8E-09	6.4E-04	13,000	4.9E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	3.8E-03	3.80	9.9E-04	3.4E-04	100.0	3.4E-06	4.4E-03	46.0	9.6E-05	3.8E-03	41.0	9.2E-05	3.4E-04	180	1.9E-06	4.4E-03	180	2.4E-05	--
Toluene	108-88-3	3.6E-03	--	(5)	3.2E-04	--	(5)	4.2E-03	--	(5)	3.6E-03	5,000	7.1E-07	3.2E-04	22,000	1.5E-08	4.2E-03	22,000	1.9E-07	--
1,2,3-Trimethylbenzene	526-73-8	0.012	--	(5)	1.1E-03	--	(5)	0.014	--	(5)	0.012	60.0	2.0E-04	1.1E-03	260	4.1E-06	0.014	260	5.3E-05	--
Xylenes (mixed isomers)	1330-20-7	9.0E-04	--	(5)	8.1E-05	--	(5)	1.0E-03	--	(5)	9.0E-04	220	4.1E-06	8.1E-05	970	8.3E-08	1.0E-03	970	1.1E-06	--
Chromium VI	18540299p	6.9E-06	3.1E-05	0.22	6.2E-07	5.2E-04	1.2E-03	8.0E-06	1.0E-03	8.0E-03	6.9E-06	0.083	8.3E-05	6.2E-07	0.88	7.1E-07	8.0E-06	0.88	9.1E-06	--
Cobalt	7440-48-4	3.1E-07	--	(5)	2.8E-08	--	(5)	3.6E-07	--	(5)	3.1E-07	0.10	3.1E-06	2.8E-08	0.44	6.3E-08	3.6E-07	0.44	8.2E-07	--
Manganese	7439-96-5	2.2E-04	--	(5)	2.0E-05	--	(5)	2.6E-04	--	(5)	2.2E-04	0.090	2.5E-03	2.0E-05	0.40	5.1E-05	2.6E-04	0.40	6.6E-04	--
Nickel	7440020in	7.0E-06	3.8E-03	1.9E-03	6.3E-07	0.10	6.3E-06	8.2E-06	0.046	1.8E-04	7.0E-06	0.014	5.0E-04	6.3E-07	0.062	1.0E-05	8.2E-06	0.062	1.3E-04	--
BLD2_8																				
Cumulative TEU Risk		--	--	0.21	--	--	1.2E-03	--	--	9.2E-03	--	--	3.1E-03	--	--	6.7E-05	--	--	9.6E-04	--
Dispersion Factor (ug/m3/[g/s])		117			11.3			162			117			11.3			162			--
Acetone	67-64-1	0.050	--	(5)	4.8E-03	--	(5)	0.069	--	(5)	0.050	31,000	1.6E-06	4.8E-03	140,000	3.5E-08	0.069	140,000	5.0E-07	--
Benzene	71-43-2	9.8E-06	0.13	7.6E-05	9.5E-07	3.30	2.9E-07	1.4E-05	1.50	9.1E-06	9.8E-06	3.00	3.3E-06	9.5E-07	13.0	7.3E-08	1.4E-05	13.0	1.0E-06	--
n-Butyl alcohol	71-36-3	1.8E-04	--	(5)	1.7E-05	--	(5)	2.4E-04	--	(5)	1.8E-04	--	(5)	1.7E-05	--	(5)	2.4E-04	--	(5)	--
Diethylene glycol	111-46-6	4.8E-04	--	(5)	4.6E-05	--	(5)	6.7E-04	--	(5)	4.8E-04	--	(5)	4.6E-05	--	(5)	6.7E-04	--	(5)	--
Ethylbenzene	100-41-4	2.5E-04	0.40	6.3E-04	2.4E-05	10.0	2.4E-06	3.5E-04	4.80	7.2E-05	2.5E-04	260	9.6E-07	2.4E-05	1,100	2.2E-08	3.5E-04	1,100	3.2E-07	--
Ethylene glycol monobutyl ether	111-76-2	3.4E-04	--	(5)	3.3E-05	--	(5)	4.8E-04	--	(5)	3.4E-04	82.0	4.2E-06	3.3E-05	360	9.2E-08	4.8E-04	360	1.3E-06	--
Isopropyl alcohol	67-63-0	5.7E-05	--	(5)	5.5E-06	--	(5)	7.9E-05	--	(5)	5.7E-05	200	2.8E-07	5.5E-06	880	6.2E-09	7.9E-05	880	9.0E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	5.1E-04	--	(5)	4.9E-05	--	(5)	7.0E-04	--	(5)	5.1E-04	3,000	1.7E-07	4.9E-05	13,000	3.8E-09	7.0E-04	13,000	5.4E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	3.5E-03	3.80	9.2E-04	3.4E-04	100.0	3.4E-06	4.8E-03	46.0	1.0E-04	3.5E-03	41.0	8.5E-05	3.4E-04	180	1.9E-06	4.8E-03	180	2.7E-05	--
Toluene	108-88-3	3.3E-03	--	(5)	3.2E-04	--	(5)	4.6E-03	--	(5)	3.3E-03	5,000	6.6E-07	3.2E-04	22,000	1.4E-08	4.6E-03	22,000	2.1E-07	--
1,2,3-Trimethylbenzene	526-73-8	0.011	--	(5)	1.0E-03	--	(5)	0.015	--	(5)	0.011	60.0	1.8E-04	1.0E-03	260	4.0E-06	0.015	260	5.8E-05	--
Xylenes (mixed isomers)	1330-20-7	8.3E-04	--	(5)	8.0E-05	--	(5)	1.1E-03	--	(5)	8.3E-04	220	3.8E-06	8.0E-05	970	8.2E-08	1.1E-03	970	1.2E-06	--
Chromium VI	18540299p	6.4E-06	3.1E-05	0.20	6.1E-07	5.2E-04	1.2E-03	8.8E-06	1.0E-03	8.8E-03	6.4E-06	0.083	7.7E-05	6.1E-07	0.88	7.0E-07	8.8E-06	0.88	1.0E-05	--
Cobalt	7440-48-4	2.8E-07	--	(5)	2.8E-08	--	(5)	3.9E-07	--	(5)	2.8E-07	0.10	2.8E-06	2.8E-08	0.44	6.3E-08	3.9E-07	0.44	9.0E-07	--
Manganese	7439-96-5	2.1E-04	--	(5)	2.0E-05	--	(5)	2.9E-04	--	(5)	2.1E-04	0.090	2.3E-03	2.0E-05	0.40	5.0E-05	2.9E-04	0.40	7.2E-04	--
Nickel	7440020in	6.5E-06	3.8E-03	1.7E-03	6.3E-07	0.10	6.3E-06	9.0E-06	0.046	2.0E-04	6.5E-06	0.014	4.6E-04	6.3E-07	0.062	1.0E-05	9.0E-06	0.062	1.4E-04	--

Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Hazard Index ⁽³⁾
Exposure Location ⁽⁴⁾		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
BLD2_9																				
Cumulative TEU Risk		--	--	0.18	--	--	1.2E-03	--	--	0.011	--	--	2.7E-03	--	--	6.6E-05	--	--	1.1E-03	--
Dispersion Factor (ug/m3/[g/s])		103			11.1			189			103			11.1			189			--
Acetone	67-64-1	0.044	--	(5)	4.7E-03	--	(5)	0.081	--	(5)	0.044	31,000	1.4E-06	4.7E-03	140,000	3.4E-08	0.081	140,000	5.8E-07	--
Benzene	71-43-2	8.6E-06	0.13	6.6E-05	9.3E-07	3.30	2.8E-07	1.6E-05	1.50	1.1E-05	8.6E-06	3.00	2.9E-06	9.3E-07	13.0	7.2E-08	1.6E-05	13.0	1.2E-06	--
n-Butyl alcohol	71-36-3	1.5E-04	--	(5)	1.7E-05	--	(5)	2.8E-04	--	(5)	1.5E-04	--	(5)	1.7E-05	--	(5)	2.8E-04	--	(5)	--
Diethylene glycol	111-46-6	4.2E-04	--	(5)	4.5E-05	--	(5)	7.8E-04	--	(5)	4.2E-04	--	(5)	4.5E-05	--	(5)	7.8E-04	--	(5)	--
Ethylbenzene	100-41-4	2.2E-04	0.40	5.5E-04	2.4E-05	10.0	2.4E-06	4.1E-04	4.80	8.4E-05	2.2E-04	260	8.4E-07	2.4E-05	1,100	2.2E-08	4.1E-04	1,100	3.7E-07	--
Ethylene glycol monobutyl ether	111-76-2	3.0E-04	--	(5)	3.3E-05	--	(5)	5.6E-04	--	(5)	3.0E-04	82.0	3.7E-06	3.3E-05	360	9.0E-08	5.6E-04	360	1.5E-06	--
Isopropyl alcohol	67-63-0	5.0E-05	--	(5)	5.4E-06	--	(5)	9.2E-05	--	(5)	5.0E-05	200	2.5E-07	5.4E-06	880	6.1E-09	9.2E-05	880	1.0E-07	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	4.4E-04	--	(5)	4.8E-05	--	(5)	8.2E-04	--	(5)	4.4E-04	3,000	1.5E-07	4.8E-05	13,000	3.7E-09	8.2E-04	13,000	6.3E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	3.0E-03	3.80	8.0E-04	3.3E-04	100.0	3.3E-06	5.6E-03	46.0	1.2E-04	3.0E-03	41.0	7.4E-05	3.3E-04	180	1.8E-06	5.6E-03	180	3.1E-05	--
Toluene	108-88-3	2.9E-03	--	(5)	3.1E-04	--	(5)	5.3E-03	--	(5)	2.9E-03	5,000	5.8E-07	3.1E-04	22,000	1.4E-08	5.3E-03	22,000	2.4E-07	--
1,2,3-Trimethylbenzene	526-73-8	9.5E-03	--	(5)	1.0E-03	--	(5)	0.018	--	(5)	9.5E-03	60.0	1.6E-04	1.0E-03	260	4.0E-06	0.018	260	6.7E-05	--
Xylenes (mixed isomers)	1330-20-7	7.2E-04	--	(5)	7.8E-05	--	(5)	1.3E-03	--	(5)	7.2E-04	220	3.3E-06	7.8E-05	970	8.1E-08	1.3E-03	970	1.4E-06	--
Chromium VI	18540299p	5.6E-06	3.1E-05	0.18	6.0E-07	5.2E-04	1.2E-03	1.0E-05	1.0E-03	0.010	5.6E-06	0.083	6.7E-05	6.0E-07	0.88	6.8E-07	1.0E-05	0.88	1.2E-05	--
Cobalt	7440-48-4	2.5E-07	--	(5)	2.7E-08	--	(5)	4.6E-07	--	(5)	2.5E-07	0.10	2.5E-06	2.7E-08	0.44	6.1E-08	4.6E-07	0.44	1.0E-06	--
Manganese	7439-96-5	1.8E-04	--	(5)	2.0E-05	--	(5)	3.4E-04	--	(5)	1.8E-04	0.090	2.0E-03	2.0E-05	0.40	4.9E-05	3.4E-04	0.40	8.4E-04	--
Nickel	7440020in	5.7E-06	3.8E-03	1.5E-03	6.1E-07	0.10	6.1E-06	1.0E-05	0.046	2.3E-04	5.7E-06	0.014	4.1E-04	6.1E-07	0.062	9.9E-06	1.0E-05	0.062	1.7E-04	--
BLD2_10																				
Cumulative TEU Risk		--	--	0.16	--	--	1.1E-03	--	--	0.012	--	--	2.4E-03	--	--	6.4E-05	--	--	1.3E-03	--
Dispersion Factor (ug/m3/[g/s])		90.2			10.9			214			90.2			10.9			214			--
Acetone	67-64-1	0.039	--	(5)	4.6E-03	--	(5)	0.092	--	(5)	0.039	31,000	1.2E-06	4.6E-03	140,000	3.3E-08	0.092	140,000	6.5E-07	--
Benzene	71-43-2	7.6E-06	0.13	5.8E-05	9.1E-07	3.30	2.8E-07	1.8E-05	1.50	1.2E-05	7.6E-06	3.00	2.5E-06	9.1E-07	13.0	7.0E-08	1.8E-05	13.0	1.4E-06	--
n-Butyl alcohol	71-36-3	1.4E-04	--	(5)	1.6E-05	--	(5)	3.2E-04	--	(5)	1.4E-04	--	(5)	1.6E-05	--	(5)	3.2E-04	--	(5)	--
Diethylene glycol	111-46-6	3.7E-04	--	(5)	4.5E-05	--	(5)	8.8E-04	--	(5)	3.7E-04	--	(5)	4.5E-05	--	(5)	8.8E-04	--	(5)	--
Ethylbenzene	100-41-4	1.9E-04	0.40	4.8E-04	2.3E-05	10.0	2.3E-06	4.6E-04	4.80	9.6E-05	1.9E-04	260	7.4E-07	2.3E-05	1,100	2.1E-08	4.6E-04	1,100	4.2E-07	--
Ethylene glycol monobutyl ether	111-76-2	2.6E-04	--	(5)	3.2E-05	--	(5)	6.3E-04	--	(5)	2.6E-04	82.0	3.2E-06	3.2E-05	360	8.8E-08	6.3E-04	360	1.7E-06	--
Isopropyl alcohol	67-63-0	4.4E-05	--	(5)	5.3E-06	--	(5)	1.0E-04	--	(5)	4.4E-05	200	2.2E-07	5.3E-06	880	6.0E-09	1.0E-04	880	1.2E-07	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	3.9E-04	--	(5)	4.7E-05	--	(5)	9.3E-04	--	(5)	3.9E-04	3,000	1.3E-07	4.7E-05	13,000	3.6E-09	9.3E-04	13,000	7.1E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	2.7E-03	3.80	7.0E-04	3.2E-04	100.0	3.2E-06	6.4E-03	46.0	1.4E-04	2.7E-03	41.0	6.5E-05	3.2E-04	180	1.8E-06	6.4E-03	180	3.5E-05	--
Toluene	108-88-3	2.5E-03	--	(5)	3.0E-04	--	(5)	6.0E-03	--	(5)	2.5E-03	5,000	5.1E-07	3.0E-04	22,000	1.4E-08	6.0E-03	22,000	2.7E-07	--
1,2,3-Trimethylbenzene	526-73-8	8.4E-03	--	(5)	1.0E-03	--	(5)	0.020	--	(5)	8.4E-03	60.0	1.4E-04	1.0E-03	260	3.9E-06	0.020	260	7.6E-05	--
Xylenes (mixed isomers)	1330-20-7	6.4E-04	--	(5)	7.7E-05	--	(5)	1.5E-03	--	(5)	6.4E-04	220	2.9E-06	7.7E-05	970	7.9E-08	1.5E-03	970	1.6E-06	--
Chromium VI	18540299p	4.9E-06	3.1E-05	0.16	5.9E-07	5.2E-04	1.1E-03	1.2E-05	1.0E-03	0.012	4.9E-06	0.083	5.9E-05	5.9E-07	0.88	6.7E-07	1.2E-05	0.88	1.3E-05	--
Cobalt	7440-48-4	2.2E-07	--	(5)	2.6E-08	--	(5)	5.2E-07	--	(5)	2.2E-07	0.10	2.2E-06	2.6E-08	0.44	6.0E-08	5.2E-07	0.44	1.2E-06	--
Manganese	7439-96-5	1.6E-04	--	(5)	1.9E-05	--	(5)	3.8E-04	--	(5)	1.6E-04	0.090	1.8E-03	1.9E-05	0.40	4.8E-05	3.8E-04	0.40	9.5E-04	--
Nickel	7440020in	5.0E-06	3.8E-03	1.3E-03	6.0E-07	0.10	6.0E-06	1.2E-05	0.046	2.6E-04	5.0E-06	0.014	3.6E-04	6.0E-07	0.062	9.7E-06	1.2E-05	0.062	1.9E-04	--

Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Hazard Index ⁽³⁾
Exposure Location ⁽⁴⁾		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
BLD2_11																				
Cumulative TEU Risk		--	--	0.14	--	--	1.1E-03	--	--	0.013	--	--	2.1E-03	--	--	6.3E-05	--	--	1.4E-03	--
Dispersion Factor (ug/m3/[g/s])		80.5			10.6			230			80.5			10.6			230			--
Acetone	67-64-1	0.034	--	(5)	4.5E-03	--	(5)	0.099	--	(5)	0.034	31,000	1.1E-06	4.5E-03	140,000	3.2E-08	0.099	140,000	7.0E-07	--
Benzene	71-43-2	6.8E-06	0.13	5.2E-05	8.9E-07	3.30	2.7E-07	1.9E-05	1.50	1.3E-05	6.8E-06	3.00	2.3E-06	8.9E-07	13.0	6.9E-08	1.9E-05	13.0	1.5E-06	--
n-Butyl alcohol	71-36-3	1.2E-04	--	(5)	1.6E-05	--	(5)	3.5E-04	--	(5)	1.2E-04	--	(5)	1.6E-05	--	(5)	3.5E-04	--	(5)	--
Diethylene glycol	111-46-6	3.3E-04	--	(5)	4.4E-05	--	(5)	9.4E-04	--	(5)	3.3E-04	--	(5)	4.4E-05	--	(5)	9.4E-04	--	(5)	--
Ethylbenzene	100-41-4	1.7E-04	0.40	4.3E-04	2.3E-05	10.0	2.3E-06	4.9E-04	4.80	1.0E-04	1.7E-04	260	6.6E-07	2.3E-05	1,100	2.1E-08	4.9E-04	1,100	4.5E-07	--
Ethylene glycol monobutyl ether	111-76-2	2.4E-04	--	(5)	3.1E-05	--	(5)	6.8E-04	--	(5)	2.4E-04	82.0	2.9E-06	3.1E-05	360	8.7E-08	6.8E-04	360	1.9E-06	--
Isopropyl alcohol	67-63-0	3.9E-05	--	(5)	5.2E-06	--	(5)	1.1E-04	--	(5)	3.9E-05	200	2.0E-07	5.2E-06	880	5.9E-09	1.1E-04	880	1.3E-07	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	3.5E-04	--	(5)	4.6E-05	--	(5)	9.9E-04	--	(5)	3.5E-04	3,000	1.2E-07	4.6E-05	13,000	3.5E-09	9.9E-04	13,000	7.6E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	2.4E-03	3.80	6.3E-04	3.2E-04	100.0	3.2E-06	6.8E-03	46.0	1.5E-04	2.4E-03	41.0	5.8E-05	3.2E-04	180	1.8E-06	6.8E-03	180	3.8E-05	--
Toluene	108-88-3	2.3E-03	--	(5)	3.0E-04	--	(5)	6.5E-03	--	(5)	2.3E-03	5,000	4.5E-07	3.0E-04	22,000	1.4E-08	6.5E-03	22,000	2.9E-07	--
1,2,3-Trimethylbenzene	526-73-8	7.5E-03	--	(5)	9.8E-04	--	(5)	0.021	--	(5)	7.5E-03	60.0	1.2E-04	9.8E-04	260	3.8E-06	0.021	260	8.2E-05	--
Xylenes (mixed isomers)	1330-20-7	5.7E-04	--	(5)	7.5E-05	--	(5)	1.6E-03	--	(5)	5.7E-04	220	2.6E-06	7.5E-05	970	7.7E-08	1.6E-03	970	1.7E-06	--
Chromium VI	18540299p	4.4E-06	3.1E-05	0.14	5.8E-07	5.2E-04	1.1E-03	1.2E-05	1.0E-03	0.012	4.4E-06	0.083	5.3E-05	5.8E-07	0.88	6.5E-07	1.2E-05	0.88	1.4E-05	--
Cobalt	7440-48-4	2.0E-07	--	(5)	2.6E-08	--	(5)	5.6E-07	--	(5)	2.0E-07	0.10	2.0E-06	2.6E-08	0.44	5.9E-08	5.6E-07	0.44	1.3E-06	--
Manganese	7439-96-5	1.4E-04	--	(5)	1.9E-05	--	(5)	4.1E-04	--	(5)	1.4E-04	0.090	1.6E-03	1.9E-05	0.40	4.7E-05	4.1E-04	0.40	1.0E-03	--
Nickel	7440020in	4.5E-06	3.8E-03	1.2E-03	5.9E-07	0.10	5.9E-06	1.3E-05	0.046	2.8E-04	4.5E-06	0.014	3.2E-04	5.9E-07	0.062	9.5E-06	1.3E-05	0.062	2.1E-04	--
BLD2_12																				
Cumulative TEU Risk		--	--	0.11	--	--	1.1E-03	--	--	0.012	--	--	1.7E-03	--	--	6.0E-05	--	--	1.3E-03	--
Dispersion Factor (ug/m3/[g/s])		63.3			10.1			218			63.3			10.1			218			--
Acetone	67-64-1	0.027	--	(5)	4.3E-03	--	(5)	0.093	--	(5)	0.027	31,000	8.7E-07	4.3E-03	140,000	3.1E-08	0.093	140,000	6.7E-07	--
Benzene	71-43-2	5.3E-06	0.13	4.1E-05	8.5E-07	3.30	2.6E-07	1.8E-05	1.50	1.2E-05	5.3E-06	3.00	1.8E-06	8.5E-07	13.0	6.5E-08	1.8E-05	13.0	1.4E-06	--
n-Butyl alcohol	71-36-3	9.5E-05	--	(5)	1.5E-05	--	(5)	3.3E-04	--	(5)	9.5E-05	--	(5)	1.5E-05	--	(5)	3.3E-04	--	(5)	--
Diethylene glycol	111-46-6	2.6E-04	--	(5)	4.1E-05	--	(5)	9.0E-04	--	(5)	2.6E-04	--	(5)	4.1E-05	--	(5)	9.0E-04	--	(5)	--
Ethylbenzene	100-41-4	1.4E-04	0.40	3.4E-04	2.2E-05	10.0	2.2E-06	4.7E-04	4.80	9.7E-05	1.4E-04	260	5.2E-07	2.2E-05	1,100	2.0E-08	4.7E-04	1,100	4.2E-07	--
Ethylene glycol monobutyl ether	111-76-2	1.9E-04	--	(5)	3.0E-05	--	(5)	6.4E-04	--	(5)	1.9E-04	82.0	2.3E-06	3.0E-05	360	8.2E-08	6.4E-04	360	1.8E-06	--
Isopropyl alcohol	67-63-0	3.1E-05	--	(5)	4.9E-06	--	(5)	1.1E-04	--	(5)	3.1E-05	200	1.5E-07	4.9E-06	880	5.6E-09	1.1E-04	880	1.2E-07	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.7E-04	--	(5)	4.4E-05	--	(5)	9.4E-04	--	(5)	2.7E-04	3,000	9.1E-08	4.4E-05	13,000	3.4E-09	9.4E-04	13,000	7.3E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	1.9E-03	3.80	4.9E-04	3.0E-04	100.0	3.0E-06	6.5E-03	46.0	1.4E-04	1.9E-03	41.0	4.6E-05	3.0E-04	180	1.7E-06	6.5E-03	180	3.6E-05	--
Toluene	108-88-3	1.8E-03	--	(5)	2.8E-04	--	(5)	6.1E-03	--	(5)	1.8E-03	5,000	3.5E-07	2.8E-04	22,000	1.3E-08	6.1E-03	22,000	2.8E-07	--
1,2,3-Trimethylbenzene	526-73-8	5.9E-03	--	(5)	9.4E-04	--	(5)	0.020	--	(5)	5.9E-03	60.0	9.8E-05	9.4E-04	260	3.6E-06	0.020	260	7.8E-05	--
Xylenes (mixed isomers)	1330-20-7	4.5E-04	--	(5)	7.1E-05	--	(5)	1.5E-03	--	(5)	4.5E-04	220	2.0E-06	7.1E-05	970	7.3E-08	1.5E-03	970	1.6E-06	--
Chromium VI	18540299p	3.4E-06	3.1E-05	0.11	5.5E-07	5.2E-04	1.1E-03	1.2E-05	1.0E-03	0.012	3.4E-06	0.083	4.1E-05	5.5E-07	0.88	6.2E-07	1.2E-05	0.88	1.3E-05	--
Cobalt	7440-48-4	1.5E-07	--	(5)	2.5E-08	--	(5)	5.3E-07	--	(5)	1.5E-07	0.10	1.5E-06	2.5E-08	0.44	5.6E-08	5.3E-07	0.44	1.2E-06	--
Manganese	7439-96-5	1.1E-04	--	(5)	1.8E-05	--	(5)	3.9E-04	--	(5)	1.1E-04	0.090	1.2E-03	1.8E-05	0.40	4.5E-05	3.9E-04	0.40	9.7E-04	--
Nickel	7440020in	3.5E-06	3.8E-03	9.2E-04	5.6E-07	0.10	5.6E-06	1.2E-05	0.046	2.6E-04	3.5E-06	0.014	2.5E-04	5.6E-07	0.062	9.0E-06	1.2E-05	0.062	1.9E-04	--

Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Hazard Index (3)
Exposure Location (4)		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
BLD2_13																				
Cumulative TEU Risk		--	--	0.10	--	--	1.0E-03	--	--	0.011	--	--	1.6E-03	--	--	5.9E-05	--	--	1.2E-03	--
Dispersion Factor (ug/m3/[g/s])		59.0			9.94			198			59.0			9.94			198			--
Acetone	67-64-1	0.025	--	(5)	4.2E-03	--	(5)	0.085	--	(5)	0.025	31,000	8.1E-07	4.2E-03	140,000	3.0E-08	0.085	140,000	6.0E-07	--
Benzene	71-43-2	5.0E-06	0.13	3.8E-05	8.3E-07	3.30	2.5E-07	1.7E-05	1.50	1.1E-05	5.0E-06	3.00	1.7E-06	8.3E-07	13.0	6.4E-08	1.7E-05	13.0	1.3E-06	--
n-Butyl alcohol	71-36-3	8.9E-05	--	(5)	1.5E-05	--	(5)	3.0E-04	--	(5)	8.9E-05	--	(5)	1.5E-05	--	(5)	3.0E-04	--	(5)	--
Diethylene glycol	111-46-6	2.4E-04	--	(5)	4.1E-05	--	(5)	8.1E-04	--	(5)	2.4E-04	--	(5)	4.1E-05	--	(5)	8.1E-04	--	(5)	--
Ethylbenzene	100-41-4	1.3E-04	0.40	3.2E-04	2.1E-05	10.0	2.1E-06	4.2E-04	4.80	8.8E-05	1.3E-04	260	4.9E-07	2.1E-05	1,100	1.9E-08	4.2E-04	1,100	3.8E-07	--
Ethylene glycol monobutyl ether	111-76-2	1.7E-04	--	(5)	2.9E-05	--	(5)	5.8E-04	--	(5)	1.7E-04	82.0	2.1E-06	2.9E-05	360	8.1E-08	5.8E-04	360	1.6E-06	--
Isopropyl alcohol	67-63-0	2.9E-05	--	(5)	4.8E-06	--	(5)	9.6E-05	--	(5)	2.9E-05	200	1.4E-07	4.8E-06	880	5.5E-09	9.6E-05	880	1.1E-07	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.5E-04	--	(5)	4.3E-05	--	(5)	8.5E-04	--	(5)	2.5E-04	3,000	8.5E-08	4.3E-05	13,000	3.3E-09	8.5E-04	13,000	6.6E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	1.8E-03	3.80	4.6E-04	2.9E-04	100.0	2.9E-06	5.9E-03	46.0	1.3E-04	1.8E-03	41.0	4.3E-05	2.9E-04	180	1.6E-06	5.9E-03	180	3.3E-05	--
Toluene	108-88-3	1.7E-03	--	(5)	2.8E-04	--	(5)	5.5E-03	--	(5)	1.7E-03	5,000	3.3E-07	2.8E-04	22,000	1.3E-08	5.5E-03	22,000	2.5E-07	--
1,2,3-Trimethylbenzene	526-73-8	5.5E-03	--	(5)	9.2E-04	--	(5)	0.018	--	(5)	5.5E-03	60.0	9.1E-05	9.2E-04	260	3.5E-06	0.018	260	7.0E-05	--
Xylenes (mixed isomers)	1330-20-7	4.2E-04	--	(5)	7.0E-05	--	(5)	1.4E-03	--	(5)	4.2E-04	220	1.9E-06	7.0E-05	970	7.2E-08	1.4E-03	970	1.4E-06	--
Chromium VI	18540299p	3.2E-06	3.1E-05	0.10	5.4E-07	5.2E-04	1.0E-03	1.1E-05	1.0E-03	0.011	3.2E-06	0.083	3.9E-05	5.4E-07	0.88	6.1E-07	1.1E-05	0.88	1.2E-05	--
Cobalt	7440-48-4	1.4E-07	--	(5)	2.4E-08	--	(5)	4.8E-07	--	(5)	1.4E-07	0.10	1.4E-06	2.4E-08	0.44	5.5E-08	4.8E-07	0.44	1.1E-06	--
Manganese	7439-96-5	1.0E-04	--	(5)	1.8E-05	--	(5)	3.5E-04	--	(5)	1.0E-04	0.090	1.2E-03	1.8E-05	0.40	4.4E-05	3.5E-04	0.40	8.7E-04	--
Nickel	7440020in	3.3E-06	3.8E-03	8.6E-04	5.5E-07	0.10	5.5E-06	1.1E-05	0.046	2.4E-04	3.3E-06	0.014	2.3E-04	5.5E-07	0.062	8.9E-06	1.1E-05	0.062	1.8E-04	--
BLD2_14																				
Cumulative TEU Risk		--	--	0.088	--	--	1.0E-03	--	--	8.3E-03	--	--	1.3E-03	--	--	5.6E-05	--	--	8.7E-04	--
Dispersion Factor (ug/m3/[g/s])		49.3			9.50			147			49.3			9.50			147			--
Acetone	67-64-1	0.021	--	(5)	4.1E-03	--	(5)	0.063	--	(5)	0.021	31,000	6.8E-07	4.1E-03	140,000	2.9E-08	0.063	140,000	4.5E-07	--
Benzene	71-43-2	4.1E-06	0.13	3.2E-05	8.0E-07	3.30	2.4E-07	1.2E-05	1.50	8.2E-06	4.1E-06	3.00	1.4E-06	8.0E-07	13.0	6.1E-08	1.2E-05	13.0	9.5E-07	--
n-Butyl alcohol	71-36-3	7.4E-05	--	(5)	1.4E-05	--	(5)	2.2E-04	--	(5)	7.4E-05	--	(5)	1.4E-05	--	(5)	2.2E-04	--	(5)	--
Diethylene glycol	111-46-6	2.0E-04	--	(5)	3.9E-05	--	(5)	6.0E-04	--	(5)	2.0E-04	--	(5)	3.9E-05	--	(5)	6.0E-04	--	(5)	--
Ethylbenzene	100-41-4	1.1E-04	0.40	2.6E-04	2.0E-05	10.0	2.0E-06	3.1E-04	4.80	6.5E-05	1.1E-04	260	4.1E-07	2.0E-05	1,100	1.8E-08	3.1E-04	1,100	2.9E-07	--
Ethylene glycol monobutyl ether	111-76-2	1.4E-04	--	(5)	2.8E-05	--	(5)	4.3E-04	--	(5)	1.4E-04	82.0	1.8E-06	2.8E-05	360	7.7E-08	4.3E-04	360	1.2E-06	--
Isopropyl alcohol	67-63-0	2.4E-05	--	(5)	4.6E-06	--	(5)	7.1E-05	--	(5)	2.4E-05	200	1.2E-07	4.6E-06	880	5.2E-09	7.1E-05	880	8.1E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	2.1E-04	--	(5)	4.1E-05	--	(5)	6.3E-04	--	(5)	2.1E-04	3,000	7.1E-08	4.1E-05	13,000	3.2E-09	6.3E-04	13,000	4.9E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	1.5E-03	3.80	3.9E-04	2.8E-04	100.0	2.8E-06	4.4E-03	46.0	9.5E-05	1.5E-03	41.0	3.6E-05	2.8E-04	180	1.6E-06	4.4E-03	180	2.4E-05	--
Toluene	108-88-3	1.4E-03	--	(5)	2.7E-04	--	(5)	4.1E-03	--	(5)	1.4E-03	5,000	2.8E-07	2.7E-04	22,000	1.2E-08	4.1E-03	22,000	1.9E-07	--
1,2,3-Trimethylbenzene	526-73-8	4.6E-03	--	(5)	8.8E-04	--	(5)	0.014	--	(5)	4.6E-03	60.0	7.6E-05	8.8E-04	260	3.4E-06	0.014	260	5.2E-05	--
Xylenes (mixed isomers)	1330-20-7	3.5E-04	--	(5)	6.7E-05	--	(5)	1.0E-03	--	(5)	3.5E-04	220	1.6E-06	6.7E-05	970	6.9E-08	1.0E-03	970	1.1E-06	--
Chromium VI	18540299p	2.7E-06	3.1E-05	0.086	5.1E-07	5.2E-04	9.9E-04	8.0E-06	1.0E-03	8.0E-03	2.7E-06	0.083	3.2E-05	5.1E-07	0.88	5.8E-07	8.0E-06	0.88	9.0E-06	--
Cobalt	7440-48-4	1.2E-07	--	(5)	2.3E-08	--	(5)	3.6E-07	--	(5)	1.2E-07	0.10	1.2E-06	2.3E-08	0.44	5.2E-08	3.6E-07	0.44	8.1E-07	--
Manganese	7439-96-5	8.7E-05	--	(5)	1.7E-05	--	(5)	2.6E-04	--	(5)	8.7E-05	0.090	9.7E-04	1.7E-05	0.40	4.2E-05	2.6E-04	0.40	6.5E-04	--
Nickel	7440020in	2.7E-06	3.8E-03	7.2E-04	5.3E-07	0.10	5.3E-06	8.1E-06	0.046	1.8E-04	2.7E-06	0.014	1.9E-04	5.3E-07	0.062	8.5E-06	8.1E-06	0.062	1.3E-04	--

Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Hazard Index (3)
Exposure Location (4)		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
BLD2_15																				
Cumulative TEU Risk		--	--	0.077	--	--	9.7E-04	--	--	6.7E-03	--	--	1.2E-03	--	--	5.4E-05	--	--	7.0E-04	--
Dispersion Factor (ug/m3/[g/s])		43.6			9.18			119			43.6			9.18			119			--
Acetone	67-64-1	0.019	--	(5)	3.9E-03	--	(5)	0.051	--	(5)	0.019	31,000	6.0E-07	3.9E-03	140,000	2.8E-08	0.051	140,000	3.6E-07	--
Benzene	71-43-2	3.7E-06	0.13	2.8E-05	7.7E-07	3.30	2.3E-07	1.0E-05	1.50	6.6E-06	3.7E-06	3.00	1.2E-06	7.7E-07	13.0	5.9E-08	1.0E-05	13.0	7.7E-07	--
n-Butyl alcohol	71-36-3	6.5E-05	--	(5)	1.4E-05	--	(5)	1.8E-04	--	(5)	6.5E-05	--	(5)	1.4E-05	--	(5)	1.8E-04	--	(5)	--
Diethylene glycol	111-46-6	1.8E-04	--	(5)	3.8E-05	--	(5)	4.9E-04	--	(5)	1.8E-04	--	(5)	3.8E-05	--	(5)	4.9E-04	--	(5)	--
Ethylbenzene	100-41-4	9.3E-05	0.40	2.3E-04	2.0E-05	10.0	2.0E-06	2.5E-04	4.80	5.3E-05	9.3E-05	260	3.6E-07	2.0E-05	1,100	1.8E-08	2.5E-04	1,100	2.3E-07	--
Ethylene glycol monobutyl ether	111-76-2	1.3E-04	--	(5)	2.7E-05	--	(5)	3.5E-04	--	(5)	1.3E-04	82.0	1.6E-06	2.7E-05	360	7.5E-08	3.5E-04	360	9.7E-07	--
Isopropyl alcohol	67-63-0	2.1E-05	--	(5)	4.5E-06	--	(5)	5.8E-05	--	(5)	2.1E-05	200	1.1E-07	4.5E-06	880	5.1E-09	5.8E-05	880	6.5E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	1.9E-04	--	(5)	4.0E-05	--	(5)	5.1E-04	--	(5)	1.9E-04	3,000	6.3E-08	4.0E-05	13,000	3.0E-09	5.1E-04	13,000	3.9E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	1.3E-03	3.80	3.4E-04	2.7E-04	100.0	2.7E-06	3.5E-03	46.0	7.7E-05	1.3E-03	41.0	3.2E-05	2.7E-04	180	1.5E-06	3.5E-03	180	2.0E-05	--
Toluene	108-88-3	1.2E-03	--	(5)	2.6E-04	--	(5)	3.3E-03	--	(5)	1.2E-03	5,000	2.4E-07	2.6E-04	22,000	1.2E-08	3.3E-03	22,000	1.5E-07	--
1,2,3-Trimethylbenzene	526-73-8	4.0E-03	--	(5)	8.5E-04	--	(5)	0.011	--	(5)	4.0E-03	60.0	6.7E-05	8.5E-04	260	3.3E-06	0.011	260	4.2E-05	--
Xylenes (mixed isomers)	1330-20-7	3.1E-04	--	(5)	6.5E-05	--	(5)	8.4E-04	--	(5)	3.1E-04	220	1.4E-06	6.5E-05	970	6.7E-08	8.4E-04	970	8.6E-07	--
Chromium VI	18540299p	2.4E-06	3.1E-05	0.076	5.0E-07	5.2E-04	9.6E-04	6.4E-06	1.0E-03	6.4E-03	2.4E-06	0.083	2.8E-05	5.0E-07	0.88	5.6E-07	6.4E-06	0.88	7.3E-06	--
Cobalt	7440-48-4	1.1E-07	--	(5)	2.2E-08	--	(5)	2.9E-07	--	(5)	1.1E-07	0.10	1.1E-06	2.2E-08	0.44	5.1E-08	2.9E-07	0.44	6.6E-07	--
Manganese	7439-96-5	7.7E-05	--	(5)	1.6E-05	--	(5)	2.1E-04	--	(5)	7.7E-05	0.090	8.6E-04	1.6E-05	0.40	4.1E-05	2.1E-04	0.40	5.3E-04	--
Nickel	7440020in	2.4E-06	3.8E-03	6.3E-04	5.1E-07	0.10	5.1E-06	6.6E-06	0.046	1.4E-04	2.4E-06	0.014	1.7E-04	5.1E-07	0.062	8.2E-06	6.6E-06	0.062	1.1E-04	--
BLD2_16																				
Cumulative TEU Risk		--	--	0.070	--	--	9.4E-04	--	--	5.7E-03	--	--	1.0E-03	--	--	5.3E-05	--	--	6.0E-04	--
Dispersion Factor (ug/m3/[g/s])		39.2			8.89			101			39.2			8.89			101			--
Acetone	67-64-1	0.017	--	(5)	3.8E-03	--	(5)	0.043	--	(5)	0.017	31,000	5.4E-07	3.8E-03	140,000	2.7E-08	0.043	140,000	3.1E-07	--
Benzene	71-43-2	3.3E-06	0.13	2.5E-05	7.5E-07	3.30	2.3E-07	8.5E-06	1.50	5.7E-06	3.3E-06	3.00	1.1E-06	7.5E-07	13.0	5.7E-08	8.5E-06	13.0	6.5E-07	--
n-Butyl alcohol	71-36-3	5.9E-05	--	(5)	1.3E-05	--	(5)	1.5E-04	--	(5)	5.9E-05	--	(5)	1.3E-05	--	(5)	1.5E-04	--	(5)	--
Diethylene glycol	111-46-6	1.6E-04	--	(5)	3.6E-05	--	(5)	4.2E-04	--	(5)	1.6E-04	--	(5)	3.6E-05	--	(5)	4.2E-04	--	(5)	--
Ethylbenzene	100-41-4	8.4E-05	0.40	2.1E-04	1.9E-05	10.0	1.9E-06	2.2E-04	4.80	4.5E-05	8.4E-05	260	3.2E-07	1.9E-05	1,100	1.7E-08	2.2E-04	1,100	2.0E-07	--
Ethylene glycol monobutyl ether	111-76-2	1.1E-04	--	(5)	2.6E-05	--	(5)	3.0E-04	--	(5)	1.1E-04	82.0	1.4E-06	2.6E-05	360	7.2E-08	3.0E-04	360	8.2E-07	--
Isopropyl alcohol	67-63-0	1.9E-05	--	(5)	4.3E-06	--	(5)	4.9E-05	--	(5)	1.9E-05	200	9.5E-08	4.3E-06	880	4.9E-09	4.9E-05	880	5.6E-08	--
Methyl isobutyl ketone (MIBK, Hexone)	108-10-1	1.7E-04	--	(5)	3.8E-05	--	(5)	4.4E-04	--	(5)	1.7E-04	3,000	5.6E-08	3.8E-05	13,000	3.0E-09	4.4E-04	13,000	3.4E-08	--
Tetrachloroethene (Perchloroethylene)	127-18-4	1.2E-03	3.80	3.1E-04	2.6E-04	100.0	2.6E-06	3.0E-03	46.0	6.5E-05	1.2E-03	41.0	2.8E-05	2.6E-04	180	1.5E-06	3.0E-03	180	1.7E-05	--
Toluene	108-88-3	1.1E-03	--	(5)	2.5E-04	--	(5)	2.8E-03	--	(5)	1.1E-03	5,000	2.2E-07	2.5E-04	22,000	1.1E-08	2.8E-03	22,000	1.3E-07	--
1,2,3-Trimethylbenzene	526-73-8	3.6E-03	--	(5)	8.2E-04	--	(5)	9.4E-03	--	(5)	3.6E-03	60.0	6.1E-05	8.2E-04	260	3.2E-06	9.4E-03	260	3.6E-05	--
Xylenes (mixed isomers)	1330-20-7	2.8E-04	--	(5)	6.3E-05	--	(5)	7.1E-04	--	(5)	2.8E-04	220	1.3E-06	6.3E-05	970	6.5E-08	7.1E-04	970	7.4E-07	--
Chromium VI	18540299p	2.1E-06	3.1E-05	0.069	4.8E-07	5.2E-04	9.3E-04	5.5E-06	1.0E-03	5.5E-03	2.1E-06	0.083	2.6E-05	4.8E-07	0.88	5.5E-07	5.5E-06	0.88	6.2E-06	--
Cobalt	7440-48-4	9.5E-08	--	(5)	2.2E-08	--	(5)	2.5E-07	--	(5)	9.5E-08	0.10	9.5E-07	2.2E-08	0.44	4.9E-08	2.5E-07	0.44	5.6E-07	--
Manganese	7439-96-5	6.9E-05	--	(5)	1.6E-05	--	(5)	1.8E-04	--	(5)	6.9E-05	0.090	7.7E-04	1.6E-05	0.40	3.9E-05	1.8E-04	0.40	4.5E-04	--
Nickel	7440020in	2.2E-06	3.8E-03	5.7E-04	4.9E-07	0.10	4.9E-06	5.6E-06	0.046	1.2E-04	2.2E-06	0.014	1.6E-04	4.9E-07	0.062	7.9E-06	5.6E-06	0.062	9.0E-05	--

**Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon**

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Hazard Index ⁽³⁾
Exposure Location ⁽⁴⁾		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
STK_Z45																				
Cumulative TEU Risk		--	--	0.16	--	--	8.1E-03	--	--	0.013	--	--	0.016	--	--	3.1E-03	--	--	4.2E-03	--
Dispersion Factor (ug/m3/[g/s])		8.28			7.26			9.93			8.28			7.26			9.93			--
1,2-Epoxybutane	106-88-7	1.6E-04	--	(5)	1.4E-04	--	(5)	2.0E-04	--	(5)	1.6E-04	20.0	8.2E-06	1.4E-04	88.0	1.6E-06	2.0E-04	88.0	2.2E-06	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.033	0.20	0.16	0.029	3.50	8.1E-03	0.039	2.90	0.013	0.033	2.10	0.015	0.029	9.20	3.1E-03	0.039	9.20	4.2E-03	--
STK_Z11																				
Cumulative TEU Risk		--	--	0.15	--	--	5.6E-03	--	--	0.011	--	--	0.014	--	--	2.1E-03	--	--	3.4E-03	--
Dispersion Factor (ug/m3/[g/s])		12.8			8.59			13.6			12.8			8.59			13.6			--
1,2-Epoxybutane	106-88-7	1.5E-04	--	(5)	9.9E-05	--	(5)	1.6E-04	--	(5)	1.5E-04	20.0	7.4E-06	9.9E-05	88.0	1.1E-06	1.6E-04	88.0	1.8E-06	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.029	0.20	0.15	0.020	3.50	5.6E-03	0.031	2.90	0.011	0.029	2.10	0.014	0.020	9.20	2.1E-03	0.031	9.20	3.4E-03	--
TCE1_1																				
Cumulative TEU Risk		--	--	8.2E-03	--	--	1.4E-04	--	--	5.2E-04	--	--	7.8E-04	--	--	5.5E-05	--	--	1.7E-04	--
Dispersion Factor (ug/m3/[g/s])		43.0			13.1			39.8			43.0			13.1			39.8			--
1,2-Epoxybutane	106-88-7	8.3E-06	--	(5)	2.5E-06	--	(5)	7.6E-06	--	(5)	8.3E-06	20.0	4.1E-07	2.5E-06	88.0	2.9E-08	7.6E-06	88.0	8.7E-08	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	1.6E-03	0.20	8.2E-03	5.0E-04	3.50	1.4E-04	1.5E-03	2.90	5.2E-04	1.6E-03	2.10	7.8E-04	5.0E-04	9.20	5.5E-05	1.5E-03	9.20	1.7E-04	--
TCE1_2																				
Cumulative TEU Risk		--	--	8.1E-03	--	--	1.4E-04	--	--	5.3E-04	--	--	7.7E-04	--	--	5.4E-05	--	--	1.7E-04	--
Dispersion Factor (ug/m3/[g/s])		42.2			13.0			40.3			42.2			13.0			40.3			--
1,2-Epoxybutane	106-88-7	8.1E-06	--	(5)	2.5E-06	--	(5)	7.7E-06	--	(5)	8.1E-06	20.0	4.1E-07	2.5E-06	88.0	2.8E-08	7.7E-06	88.0	8.8E-08	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	1.6E-03	0.20	8.1E-03	5.0E-04	3.50	1.4E-04	1.5E-03	2.90	5.3E-04	1.6E-03	2.10	7.7E-04	5.0E-04	9.20	5.4E-05	1.5E-03	9.20	1.7E-04	--
TCE4																				
Cumulative TEU Risk		--	--	0.064	--	--	2.0E-03	--	--	4.6E-03	--	--	6.1E-03	--	--	7.8E-04	--	--	1.4E-03	--
Dispersion Factor (ug/m3/[g/s])		22.0			12.3			22.8			22.0			12.3			22.8			--
1,2-Epoxybutane	106-88-7	6.4E-05	--	(5)	3.6E-05	--	(5)	6.7E-05	--	(5)	6.4E-05	20.0	3.2E-06	3.6E-05	88.0	4.1E-07	6.7E-05	88.0	7.6E-07	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.013	0.20	0.064	7.1E-03	3.50	2.0E-03	0.013	2.90	4.6E-03	0.013	2.10	6.1E-03	7.1E-03	9.20	7.8E-04	0.013	9.20	1.4E-03	--
TCE16																				
Cumulative TEU Risk		--	--	2.1E-04	--	--	5.1E-06	--	--	1.6E-05	--	--	2.0E-05	--	--	1.9E-06	--	--	5.0E-06	--
Dispersion Factor (ug/m3/[g/s])		29.3			12.5			32.1			29.3			12.5			32.1			--
1,2-Epoxybutane	106-88-7	2.1E-07	--	(5)	8.9E-08	--	(5)	2.3E-07	--	(5)	2.1E-07	20.0	1.0E-08	8.9E-08	88.0	1.0E-09	2.3E-07	88.0	2.6E-09	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	4.2E-05	0.20	2.1E-04	1.8E-05	3.50	5.1E-06	4.6E-05	2.90	1.6E-05	4.2E-05	2.10	2.0E-05	1.8E-05	9.20	1.9E-06	4.6E-05	9.20	5.0E-06	--
TCE17																				
Cumulative TEU Risk		--	--	8.2E-06	--	--	1.6E-07	--	--	6.1E-07	--	--	7.8E-07	--	--	5.9E-08	--	--	1.9E-07	--
Dispersion Factor (ug/m3/[g/s])		39.0			13.0			41.7			39.0			13.0			41.7			--
1,2-Epoxybutane	106-88-7	8.2E-09	--	(5)	2.7E-09	--	(5)	8.8E-09	--	(5)	8.2E-09	20.0	4.1E-10	2.7E-09	88.0	3.1E-11	8.8E-09	88.0	1.0E-10	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	1.6E-06	0.20	8.2E-06	5.5E-07	3.50	1.6E-07	1.8E-06	2.90	6.1E-07	1.6E-06	2.10	7.8E-07	5.5E-07	9.20	5.9E-08	1.8E-06	9.20	1.9E-07	--
TCE15_1																				
Cumulative TEU Risk		--	--	0.10	--	--	1.9E-03	--	--	7.8E-03	--	--	1.0E-02	--	--	7.4E-04	--	--	2.5E-03	--
Dispersion Factor (ug/m3/[g/s])		38.2			12.4			41.4			38.2			12.4			41.4			--
1,2-Epoxybutane	106-88-7	1.1E-04	--	(5)	3.4E-05	--	(5)	1.1E-04	--	(5)	1.1E-04	20.0	5.3E-06	3.4E-05	88.0	3.9E-07	1.1E-04	88.0	1.3E-06	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.021	0.20	0.10	6.8E-03	3.50	1.9E-03	0.023	2.90	7.8E-03	0.021	2.10	1.0E-02	6.8E-03	9.20	7.4E-04	0.023	9.20	2.5E-03	--

**Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon**

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Hazard Index ⁽³⁾
Exposure Location ⁽⁴⁾		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
TCE15_2																				
Cumulative TEU Risk		--	--	0.11	--	--	2.0E-03	--	--	7.8E-03	--	--	0.010	--	--	7.5E-04	--	--	2.4E-03	--
Dispersion Factor (ug/m3/[g/s])		38.9			12.5			41.1			38.9			12.5			41.1			--
1,2-Epoxybutane	106-88-7	1.1E-04	--	(5)	3.4E-05	--	(5)	1.1E-04	--	(5)	1.1E-04	20.0	5.4E-06	3.4E-05	88.0	3.9E-07	1.1E-04	88.0	1.3E-06	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.021	0.20	0.11	6.9E-03	3.50	2.0E-03	0.023	2.90	7.8E-03	0.021	2.10	0.010	6.9E-03	9.20	7.5E-04	0.023	9.20	2.4E-03	--
TCE15_3																				
Cumulative TEU Risk		--	--	0.11	--	--	2.0E-03	--	--	7.7E-03	--	--	0.010	--	--	7.5E-04	--	--	2.4E-03	--
Dispersion Factor (ug/m3/[g/s])		39.5			12.6			40.7			39.5			12.6			40.7			--
1,2-Epoxybutane	106-88-7	1.1E-04	--	(5)	3.5E-05	--	(5)	1.1E-04	--	(5)	1.1E-04	20.0	5.4E-06	3.5E-05	88.0	4.0E-07	1.1E-04	88.0	1.3E-06	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.022	0.20	0.11	6.9E-03	3.50	2.0E-03	0.022	2.90	7.7E-03	0.022	2.10	0.010	6.9E-03	9.20	7.5E-04	0.022	9.20	2.4E-03	--
TCE15_4																				
Cumulative TEU Risk		--	--	0.11	--	--	2.0E-03	--	--	7.6E-03	--	--	0.010	--	--	7.6E-04	--	--	2.4E-03	--
Dispersion Factor (ug/m3/[g/s])		40.1			12.8			40.3			40.1			12.8			40.3			--
1,2-Epoxybutane	106-88-7	1.1E-04	--	(5)	3.5E-05	--	(5)	1.1E-04	--	(5)	1.1E-04	20.0	5.5E-06	3.5E-05	88.0	4.0E-07	1.1E-04	88.0	1.3E-06	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.022	0.20	0.11	7.0E-03	3.50	2.0E-03	0.022	2.90	7.6E-03	0.022	2.10	0.010	7.0E-03	9.20	7.6E-04	0.022	9.20	2.4E-03	--
TCE15_5																				
Cumulative TEU Risk		--	--	0.11	--	--	2.0E-03	--	--	7.5E-03	--	--	0.011	--	--	7.7E-04	--	--	2.4E-03	--
Dispersion Factor (ug/m3/[g/s])		40.7			12.9			39.9			40.7			12.9			39.9			--
1,2-Epoxybutane	106-88-7	1.1E-04	--	(5)	3.5E-05	--	(5)	1.1E-04	--	(5)	1.1E-04	20.0	5.6E-06	3.5E-05	88.0	4.0E-07	1.1E-04	88.0	1.3E-06	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	0.022	0.20	0.11	7.1E-03	3.50	2.0E-03	0.022	2.90	7.5E-03	0.022	2.10	0.011	7.1E-03	9.20	7.7E-04	0.022	9.20	2.4E-03	--
MSHOP																				
Cumulative TEU Risk		--	--	1.1E-03	--	--	2.1E-05	--	--	7.4E-05	--	--	4.8E-05	--	--	5.2E-06	--	--	8.6E-06	--
Dispersion Factor (ug/m3/[g/s])		35.8			16.9			27.7			35.8			16.9			27.7			--
Benzene	71-43-2	1.4E-04	0.13	1.1E-03	6.8E-05	3.30	2.1E-05	1.1E-04	1.50	7.4E-05	1.4E-04	3.00	4.8E-05	6.8E-05	13.0	5.2E-06	1.1E-04	13.0	8.6E-06	--
TCE3_V																				
Cumulative TEU Risk		--	--	5.0E-06	--	--	1.2E-07	--	--	5.0E-07	--	--	4.8E-07	--	--	4.7E-08	--	--	1.6E-07	--
Dispersion Factor (ug/m3/[g/s])		24.6			10.6			35.7			24.6			10.6			35.7			--
1,2-Epoxybutane	106-88-7	5.0E-09	--	(5)	2.2E-09	--	(5)	7.3E-09	--	(5)	5.0E-09	20.0	2.5E-10	2.2E-09	88.0	2.5E-11	7.3E-09	88.0	8.3E-11	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	1.0E-06	0.20	5.0E-06	4.3E-07	3.50	1.2E-07	1.5E-06	2.90	5.0E-07	1.0E-06	2.10	4.8E-07	4.3E-07	9.20	4.7E-08	1.5E-06	9.20	1.6E-07	--

**Table 6-1
Level 3 Risk Assessment Results for Significant TEUs
ENTEK International LLC — Lebanon, Oregon**

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer									
		Residential			Child			Worker			Residential			Child			Worker			Acute
		Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Excess Risk Per Million ^(b)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Calculated Conc. ^(a) (ug/m ³)	RBC ⁽²⁾ (ug/m ³)	Hazard Index ^(c)	Hazard Index ⁽³⁾
Exposure Location ⁽⁴⁾		7,783			583			7,779			7,783			583			7,779			7,740
Cumulative Facility-wide Risk		--	--	7	--	--	0.2	--	--	0.5	--	--	0.4	--	--	0.1	--	--	0.1	2
TCE13_V																				
Cumulative TEU Risk		--	--	1.5E-05	--	--	4.0E-07	--	--	1.0E-06	--	--	1.5E-06	--	--	1.5E-07	--	--	3.2E-07	--
Dispersion Factor (ug/m3/[g/s])		29.6			13.4			28.9			29.6			13.4			28.9			--
1,2-Epoxybutane	106-88-7	1.5E-08	--	(5)	7.0E-09	--	(5)	1.5E-08	--	(5)	1.5E-08	20.0	7.7E-10	7.0E-09	88.0	7.9E-11	1.5E-08	88.0	1.7E-10	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	3.1E-06	0.20	1.5E-05	1.4E-06	3.50	4.0E-07	3.0E-06	2.90	1.0E-06	3.1E-06	2.10	1.5E-06	1.4E-06	9.20	1.5E-07	3.0E-06	9.20	3.2E-07	--
TCE19_V																				
Cumulative TEU Risk		--	--	3.9E-03	--	--	1.0E-04	--	--	3.2E-04	--	--	3.7E-04	--	--	3.8E-05	--	--	1.0E-04	--
Dispersion Factor (ug/m3/[g/s])		25.8			11.8			30.7			25.8			11.8			30.7			--
1,2-Epoxybutane	106-88-7	3.9E-06	--	(5)	1.8E-06	--	(5)	4.6E-06	--	(5)	3.9E-06	20.0	1.9E-07	1.8E-06	88.0	2.0E-08	4.6E-06	88.0	5.3E-08	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	7.8E-04	0.20	3.9E-03	3.5E-04	3.50	1.0E-04	9.2E-04	2.90	3.2E-04	7.8E-04	2.10	3.7E-04	3.5E-04	9.20	3.8E-05	9.2E-04	9.20	1.0E-04	--
TCE20_V																				
Cumulative TEU Risk		--	--	0.031	--	--	7.3E-04	--	--	2.3E-03	--	--	2.9E-03	--	--	2.8E-04	--	--	7.2E-04	--
Dispersion Factor (ug/m3/[g/s])		30.8			12.7			33.2			30.8			12.7			33.2			--
1,2-Epoxybutane	106-88-7	3.1E-05	--	(5)	1.3E-05	--	(5)	3.3E-05	--	(5)	3.1E-05	20.0	1.5E-06	1.3E-05	88.0	1.5E-07	3.3E-05	88.0	3.8E-07	--
Trichloroethene (TCE, Trichloroethylene)	79-01-6	6.2E-03	0.20	0.031	2.5E-03	3.50	7.3E-04	6.6E-03	2.90	2.3E-03	6.2E-03	2.10	2.9E-03	2.5E-03	9.20	2.8E-04	6.6E-03	9.20	7.2E-04	--

RBC = risk-based concentration.

TEU = toxic emission unit.

TAC = toxic air contaminant.

NOTES:

(a) Calculated concentration (ug/m³) = (dispersion factor [(ug/m³)/(g/s)]) x (TAC emission rate per TEU [g/s])

$$\text{TAC emission rate per TEU (g/s)} = (1)$$

(b) Excess risk per million = (calculated concentration [ug/m³]) / (risk-based concentration [ug/m³])

(c) Hazard index = (calculated concentration [ug/m³]) / (risk-based concentration [ug/m³])

REFERENCES:

- (1) See Table 3-1, DEQ-Approved Annual Emission Rates.
- (2) Oregon Administrative Rule 340-245-8010, Table 2, Risk-Based Concentrations.
- (3) Represents highest modeled acute risk using the DEQ-approved risk equivalent emission rates.
- (4) Represents the exposure location with the highest predicted cancer or noncancer risk per exposure category.

Receptor ID	UTM X (m)	UTM Y (m)
7,783	506,364.00	4,932,581.00
7,779	506,264.00	4,932,581.00
583	506,714.00	4,933,031.00
7,740	506,264.00	4,932,556.00

(5) TAC does not have an established RBC for this exposure category per Oregon Administrative Rule 340-245-8040, Table 4.

Table 6-2
Level 3 Risk Assessment Results for Gas Combustion TEUs
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Cancer									Chronic Noncancer											
		Residential			Child			Worker			Residential			Child			Worker			Acute		
		Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Excess Risk Per Million (b)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)	Calculated Conc. (a) (ug/m ³)	RBC (2) (ug/m ³)	Hazard Index (c)
Exposure Location (4)		8,170			583			8,314			8,170			583			8,314			8,274		
Facility-wide Risk		--	--	0.5	--	--	<0.1	--	--	<0.1	--	--	<0.1	--	--	<0.1	--	--	<0.1	--	--	<0.1
BOILER																						
Cumulative TEU Risk		--	--	0.46	--	--	0.016	--	--	0.021	--	--	0.013	--	--	8.9E-04	--	--	1.7E-03	--	--	0.013
Dispersion Factor (ug/m3/[g/s])		0.77			0.52			0.99			0.77			0.52			0.99			18.1		
Acetaldehyde	75-07-0	2.5E-05	0.45	5.6E-05	1.7E-05	12.0	1.4E-06	3.3E-05	5.50	5.9E-06	2.5E-05	140	1.8E-07	1.7E-05	620	2.8E-08	3.3E-05	620	5.3E-08	6.3E-04	470	1.3E-06
Acrolein	107-02-8	2.2E-05	--	(4)	1.5E-05	--	(4)	2.8E-05	--	(4)	2.2E-05	0.35	6.3E-05	1.5E-05	1.50	1.0E-05	2.8E-05	1.50	1.9E-05	5.5E-04	6.90	8.0E-05
Benzene	71-43-2	4.7E-05	0.13	3.7E-04	3.2E-05	3.30	9.7E-06	6.1E-05	1.50	4.1E-05	4.7E-05	3.00	1.6E-05	3.2E-05	13.0	2.5E-06	6.1E-05	13.0	4.7E-06	1.2E-03	29.0	4.1E-05
Ethylbenzene	100-41-4	5.6E-05	0.40	1.4E-04	3.8E-05	10.0	3.8E-06	7.3E-05	4.80	1.5E-05	5.6E-05	260	2.2E-07	3.8E-05	1,100	3.5E-08	7.3E-05	1,100	6.6E-08	1.4E-03	22,000	6.4E-08
Formaldehyde	50-00-0	1.0E-04	0.17	5.9E-04	6.8E-05	4.30	1.6E-05	1.3E-04	2.00	6.5E-05	1.0E-04	9.00	1.1E-05	6.8E-05	40.0	1.7E-06	1.3E-04	40.0	3.2E-06	2.5E-03	49.0	5.1E-05
Hexane	110-54-3	3.8E-05	--	(4)	2.5E-05	--	(4)	4.9E-05	--	(4)	3.8E-05	700	5.4E-08	2.5E-05	3,100	8.2E-09	4.9E-05	3,100	1.6E-08	9.4E-04	--	(4)
Benzo(a)pyrene	50-32-8	9.8E-09	4.3E-05	2.3E-04	6.7E-09	1.6E-03	4.2E-06	1.3E-08	3.0E-03	4.2E-06	9.8E-09	2.0E-03	4.9E-06	6.7E-09	8.8E-03	7.6E-07	1.3E-08	8.8E-03	1.4E-06	2.4E-07	2.0E-03	1.2E-04
Ammonia	7664-41-7	0.026	--	(4)	0.018	--	(4)	0.034	--	(4)	0.026	500	5.2E-05	0.018	2,200	8.1E-06	0.034	2,200	1.5E-05	0.65	1,200	5.4E-04
Polycyclic aromatic hydrocarbons (PAHs)	401	8.2E-07	--	(4)	5.5E-07	--	(4)	1.1E-06	--	(4)	8.2E-07	--	(4)	5.5E-07	--	(4)	1.1E-06	--	(4)	2.0E-05	--	(4)
Naphthalene	91-20-3	2.5E-06	0.029	8.5E-05	1.7E-06	0.76	2.2E-06	3.2E-06	0.35	9.0E-06	2.5E-06	3.70	6.6E-07	1.7E-06	16.0	1.0E-07	3.2E-06	16.0	2.0E-07	6.1E-05	200	3.1E-07
Toluene	108-88-3	2.2E-04	--	(4)	1.5E-04	--	(4)	2.8E-04	--	(4)	2.2E-04	5,000	4.3E-08	1.5E-04	22,000	6.7E-09	2.8E-04	22,000	1.3E-08	5.4E-03	7,500	7.2E-07
Xylenes (mixed isomers)	1330-20-7	1.6E-04	--	(4)	1.1E-04	--	(4)	2.1E-04	--	(4)	1.6E-04	220	7.3E-07	1.1E-04	970	1.1E-07	2.1E-04	970	2.1E-07	4.0E-03	8,700	4.6E-07
Arsenic	7440-38-2	1.6E-06	2.4E-05	0.068	1.1E-06	1.3E-03	8.5E-04	2.1E-06	6.2E-04	3.4E-03	1.6E-06	1.7E-04	9.6E-03	1.1E-06	2.4E-03	4.6E-04	2.1E-06	2.4E-03	8.8E-04	4.1E-05	0.20	2.0E-04
Beryllium	7440-41-7	9.8E-08	4.2E-04	2.3E-04	6.7E-08	0.011	6.0E-06	1.3E-07	5.0E-03	2.5E-05	9.8E-08	7.0E-03	1.4E-05	6.7E-08	0.031	2.1E-06	1.3E-07	0.031	4.1E-06	2.4E-06	0.020	1.2E-04
Cadmium	7440-43-9	9.0E-06	5.6E-04	0.016	6.1E-06	0.014	4.4E-04	1.2E-05	6.7E-03	1.7E-03	9.0E-06	5.0E-03	1.8E-03	6.1E-06	0.037	1.6E-04	1.2E-05	0.037	3.1E-04	2.2E-04	0.030	7.5E-03
Chromium VI	18540-29-9	1.1E-05	3.1E-05	0.37	7.8E-06	5.2E-04	0.015	1.5E-05	1.0E-03	0.015	1.1E-05	0.083	1.4E-04	7.8E-06	0.88	8.8E-06	1.5E-05	0.88	1.7E-05	2.9E-04	0.30	9.5E-04
Cobalt	7440-48-4	6.9E-07	--	(4)	4.7E-07	--	(4)	8.9E-07	--	(4)	6.9E-07	0.10	6.9E-06	4.7E-07	0.44	1.1E-06	8.9E-07	0.44	2.0E-06	1.7E-05	--	(4)
Copper	7440-50-8	7.0E-06	--	(4)	4.7E-06	--	(4)	9.0E-06	--	(4)	7.0E-06	--	(4)	4.7E-06	--	(4)	9.0E-06	--	(4)	1.7E-04	100.0	1.7E-06
Lead	7439-92-1	4.1E-06	--	(4)	2.8E-06	--	(4)	5.3E-06	--	(4)	4.1E-06	0.15	2.7E-05	2.8E-06	0.66	4.2E-06	5.3E-06	0.66	8.0E-06	1.0E-04	0.15	6.8E-04
Manganese	7439-96-5	3.1E-06	--	(4)	2.1E-06	--	(4)	4.0E-06	--	(4)	3.1E-06	0.090	3.5E-05	2.1E-06	0.40	5.3E-06	4.0E-06	0.40	1.0E-05	7.8E-05	0.30	2.6E-04
Mercury	7439-97-6	2.1E-06	--	(4)	1.4E-06	--	(4)	2.7E-06	--	(4)	2.1E-06	0.077	2.8E-05	1.4E-06	0.63	2.3E-06	2.7E-06	0.63	4.4E-06	5.3E-05	0.60	8.8E-05
Nickel	7440-02-0	1.7E-05	3.8E-03	4.5E-03	1.2E-05	0.10	1.2E-04	2.2E-05	0.046	4.8E-04	1.7E-05	0.014	1.2E-03	1.2E-05	0.062	1.9E-04	2.2E-05	0.062	3.6E-04	4.3E-04	0.20	2.1E-03
Selenium	7782-49-2	2.0E-07	--	(4)	1.3E-07	--	(4)	2.5E-07	--	(4)	2.0E-07	--	(4)	1.3E-07	--	(4)	2.5E-07	--	(4)	4.9E-06	2.00	2.4E-06
Vanadium	7440-62-2	1.9E-05	--	(4)	1.3E-05	--	(4)	2.4E-05	--	(4)	1.9E-05	0.10	1.9E-04	1.3E-05	0.44	2.9E-05	2.4E-05	0.44	5.5E-05	4.7E-04	0.80	5.9E-04
Zinc	7440-66-6	2.4E-04	--	(4)	1.6E-04	--	(4)	3.1E-04	--	(4)	2.4E-04	--	(4)	1.6E-04	--	(4)	3.1E-04	--	(4)	5.9E-03	--	(4)

RBC = risk-based concentration.

TEU = toxic emission unit.

TAC = toxic air contaminant.

NOTES:

(a) Calculated concentration (ug/m³) = (dispersion factor [(ug/m³)/(g/s)]) x (TAC emission rate per TEU [g/s])
TAC emission rate per TEU (g/s) = (1)

(b) Excess risk per million = (calculated concentration [ug/m³]) / (risk-based concentration [ug/m³])

(c) Hazard index = (calculated concentration [ug/m³]) / (risk-based concentration [ug/m³])

REFERENCES:

(1) See Table 5-1, DEQ-Approved TAC Emission Rates for Gas Combustion TEUs.

(2) Oregon Administrative Rule 340-245-8010, Table 2, Risk-Based Concentrations.

(3) Represents the exposure location with the highest predicted cancer or noncancer risk per exposure category.

Receptor ID	UTM X (m)	UTM Y (m)
8,170	506,489.00	4,932,956.00
8,314	506,289.00	4,933,056.00
583	506,714.00	4,933,031.00
8,274	506,264.00	4,933,031.00

(4) TAC does not have an established RBC for this exposure category per Oregon Administrative Rule 340-245-8040, Table 4.

Table 6-3
List of TACs With No Published Risk-Based Concentrations
ENTEK International LLC — Lebanon, Oregon

Toxic Air Contaminant	CAS	Risk-Based Concentration? ⁽¹⁾ (Yes/No)
n-Butyl alcohol	71-36-3	No
t-Butyl acetate	540-88-5	No
Molybdenum trioxide	1313-27-5	No
Diethylene glycol	111-46-6	No
Acenaphthene	83-32-9	No
Acenaphthylene	208-96-8	No
Anthracene	120-12-7	No
Fluorene	86-73-7	No
2-Methylnaphthalene	91-57-6	No
Phenanthrene	85-01-8	No
Pyrene	129-00-0	No
Barium	7440-39-3	No
Phosphorus and Compounds	504	No
Zinc	7440-66-6	No

NOTES:

TAC = toxic air contaminant.

REFERENCES:

⁽¹⁾ See Oregon Administrative Rule 340-245-8010 Table 2.

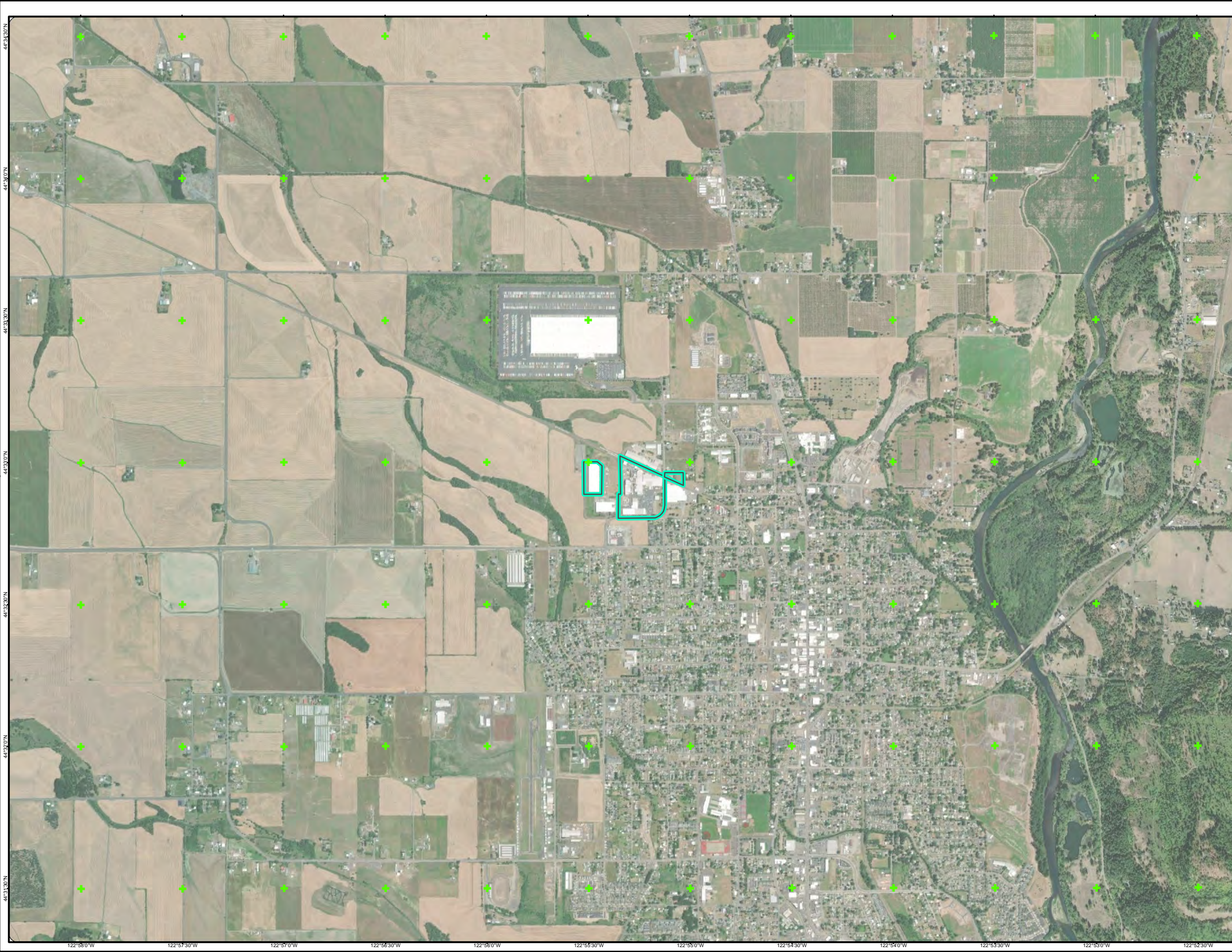
FIGURES



Figure 2-1
 Aerial Photograph of Facility
 ENTEK International LLC
 Lebanon, Oregon 97355

Legend

- + UTM Grid Guideline
- Exposure Assessment Boundary



Key Map



Source:
 Aerial photograph obtained from
 ArcGIS Online.

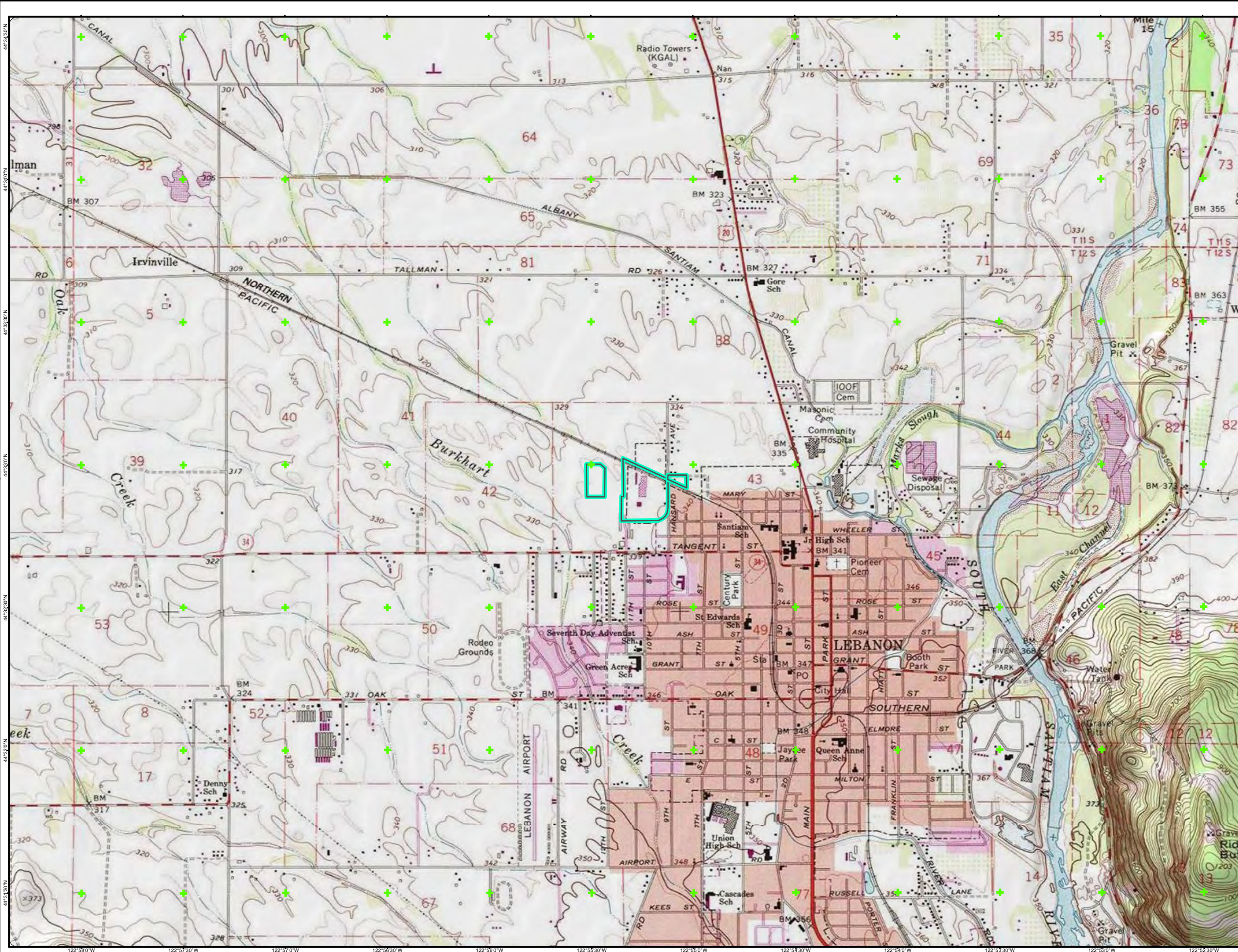
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Figure 2-2
Local Topography
 ENTEK International LLC
 Lebanon, Oregon 97355

Legend

- + UTM Grid Guideline
- Exposure Assessment Boundary



Key Map



Source:
 USGS Topographic basemap obtained from
 ArcGIS Online.

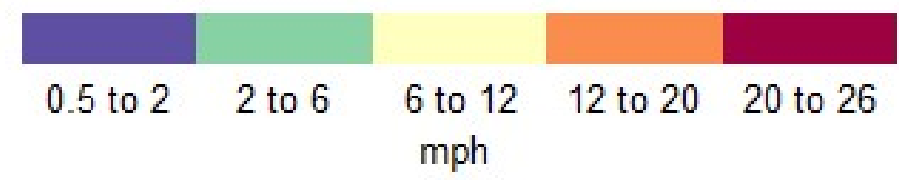
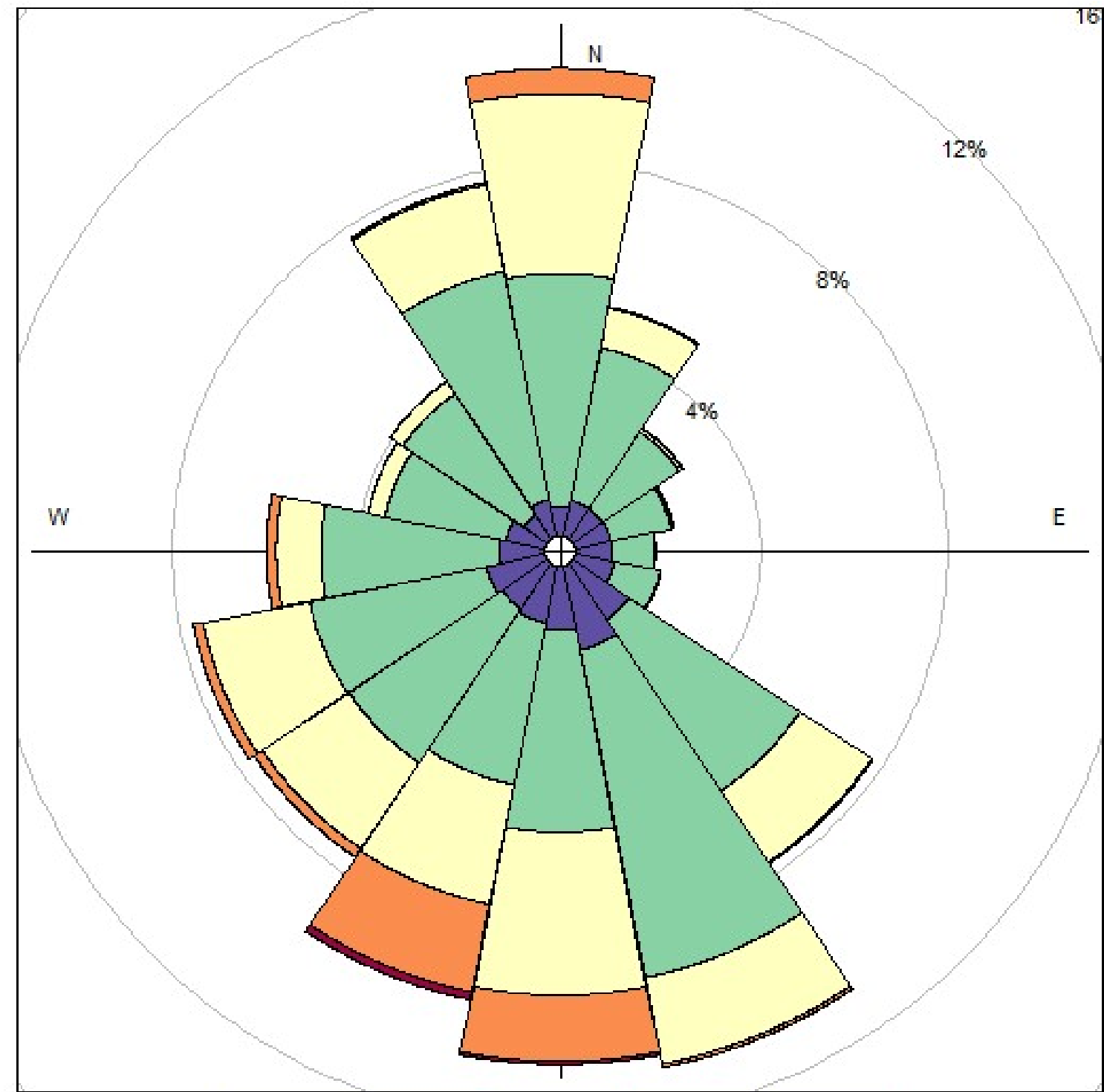
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**Figure 4-1
Wind Rose**

ENTEK International LLC
Lebanon, Oregon 97355



Notes:
Wind Direction = Blowing From

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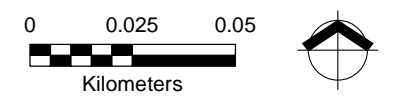
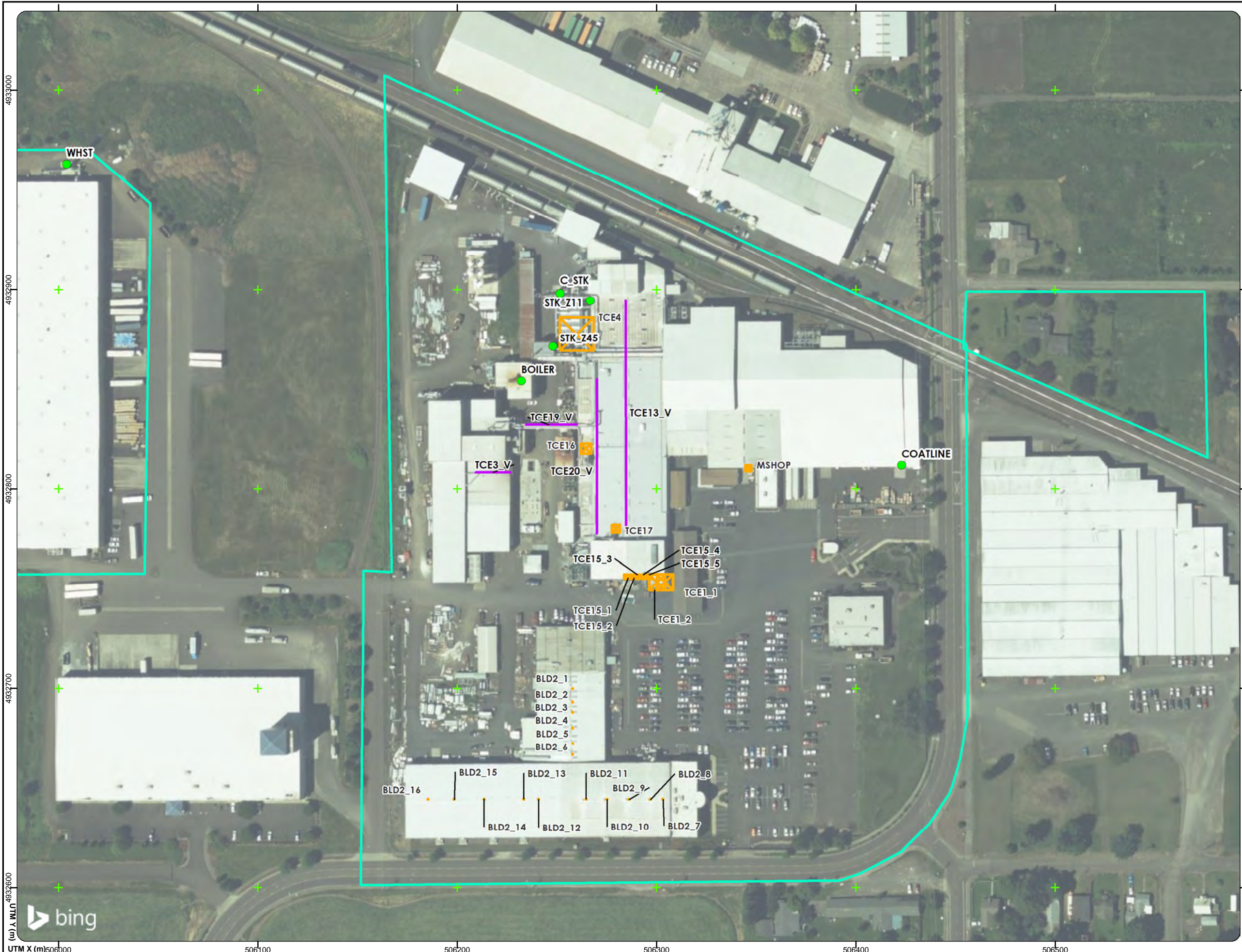
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Figure 4-2 Emission Source Locations

ENTEK International LLC
Lebanon, Oregon 97355

Legend

- + UTM Grid Guideline
- Point Source
- Exposure Assessment Boundary
- Volume Source
- Line Source

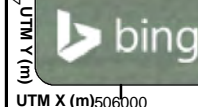


Sources: Aerial photograph obtained from Bing via Esri ArcGIS Online.



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UTM X (m) 506000 506100 506200 506300 506400 506500

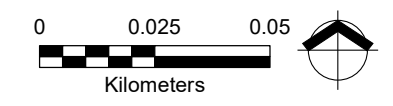
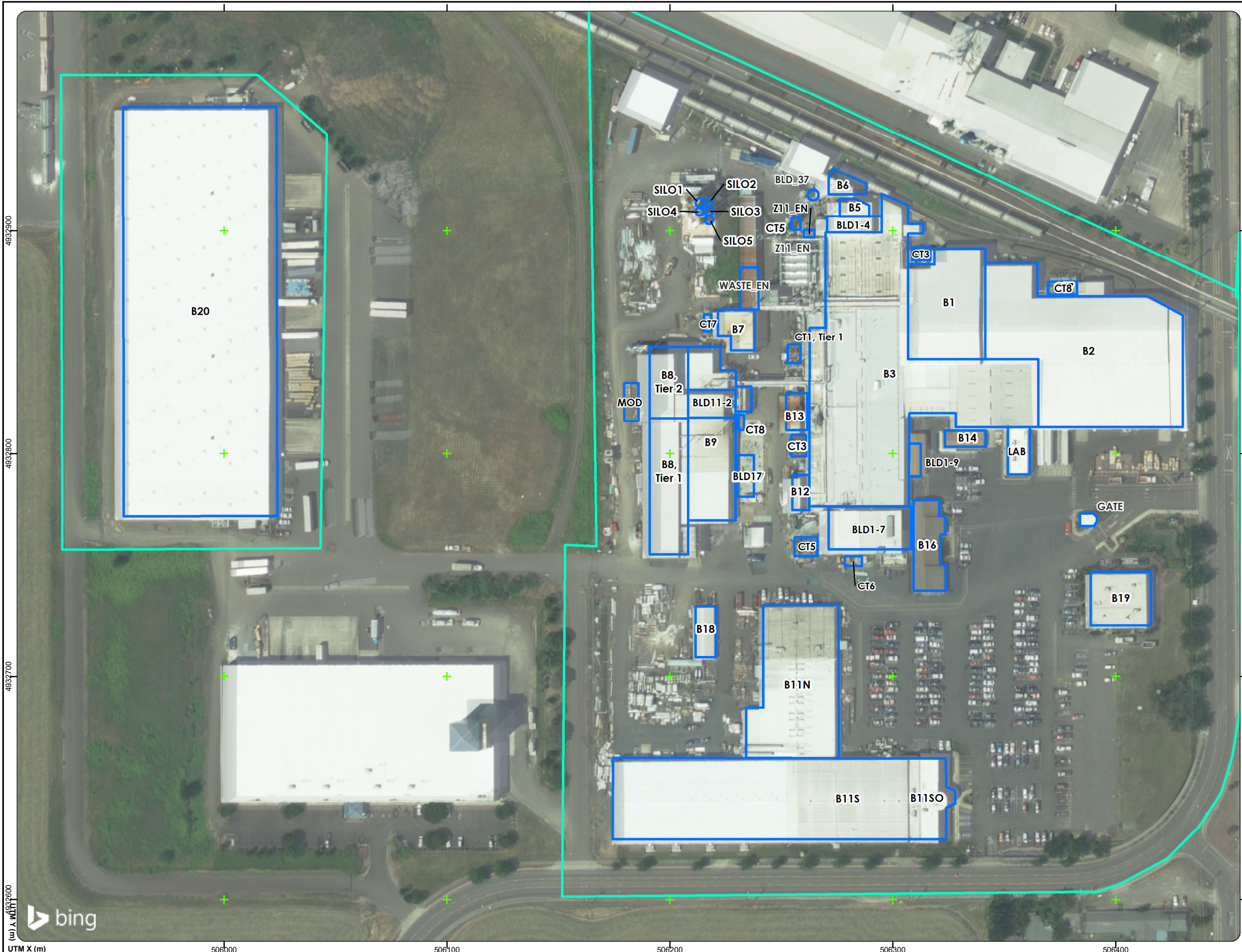
4932600
 4932700
 4932800
 4932900
 4933000

Figure 4-3 Downwash Structure Locations

ENTEK International LLC
Lebanon, Oregon 97355

Legend

- + UTM Grid Guideline
- Exposure Assessment Boundary
- Downwash Structure



Sources: Aerial photograph obtained from Bing via Esri ArcGIS Online.



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 UTM X (m)
 4932900
 4932800
 4932700
 4932600

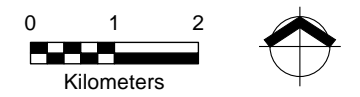
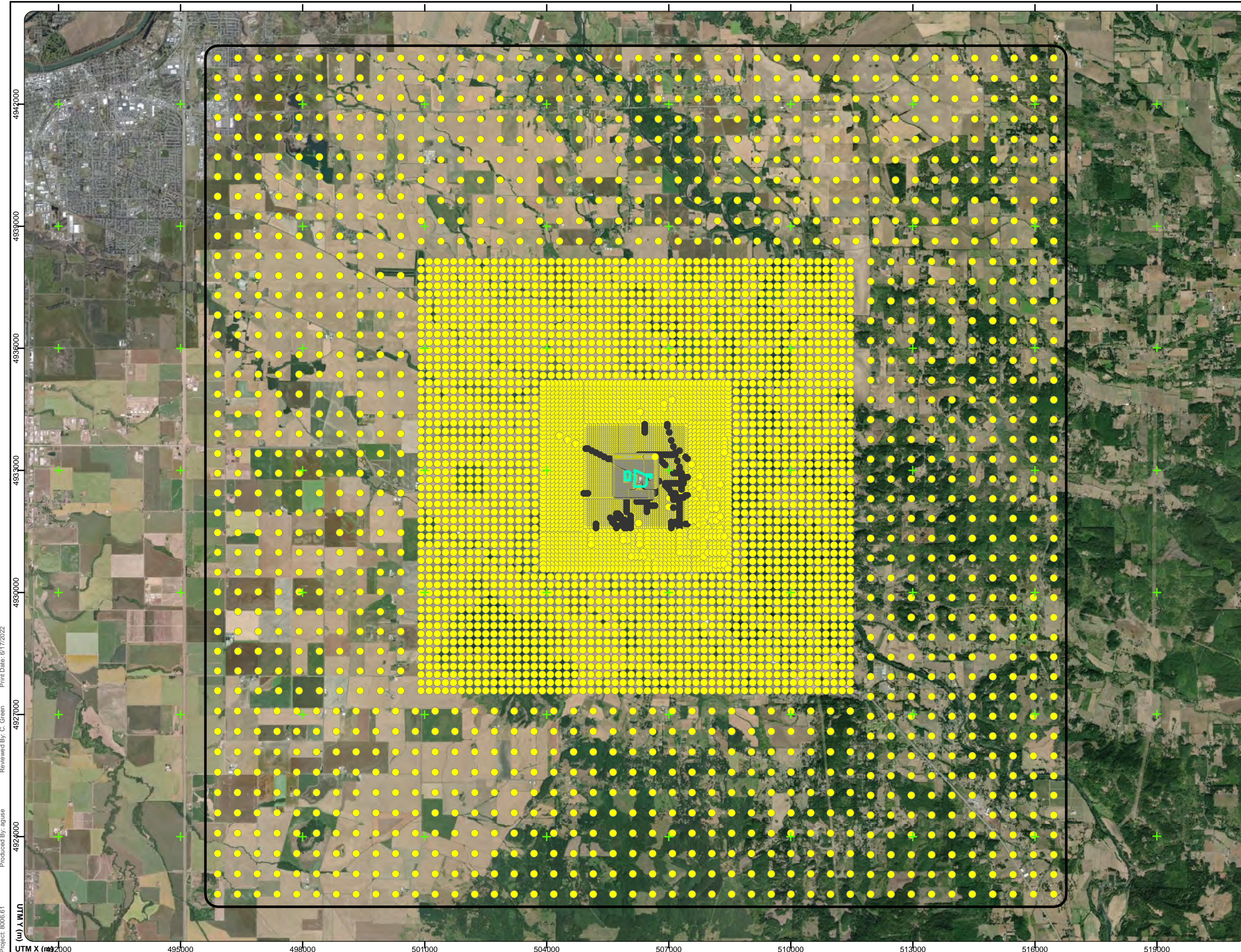


Figure 4-4 Receptor Locations

ENTEK International LLC
Lebanon, Oregon 97355

Legend

-  UTM Grid Guideline
-  Receptor
-  Receptor in Right-of-Way - Risk Not Assessed
-  Modeling Domain Extent
-  Exposure Assessment Boundary



Sources: Aerial photograph obtained from Esri
ArcGIS Online.



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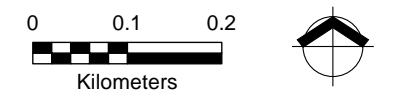
UTM X (m)

492000 495000 498000 501000 504000 507000 510000 513000 516000 519000

4924000 4927000 4930000 4933000 4936000 4939000 4942000

Figure 4-5
Receptor Locations
 in the Immediate Area
 ENTEK International LLC
 Lebanon, Oregon 97355

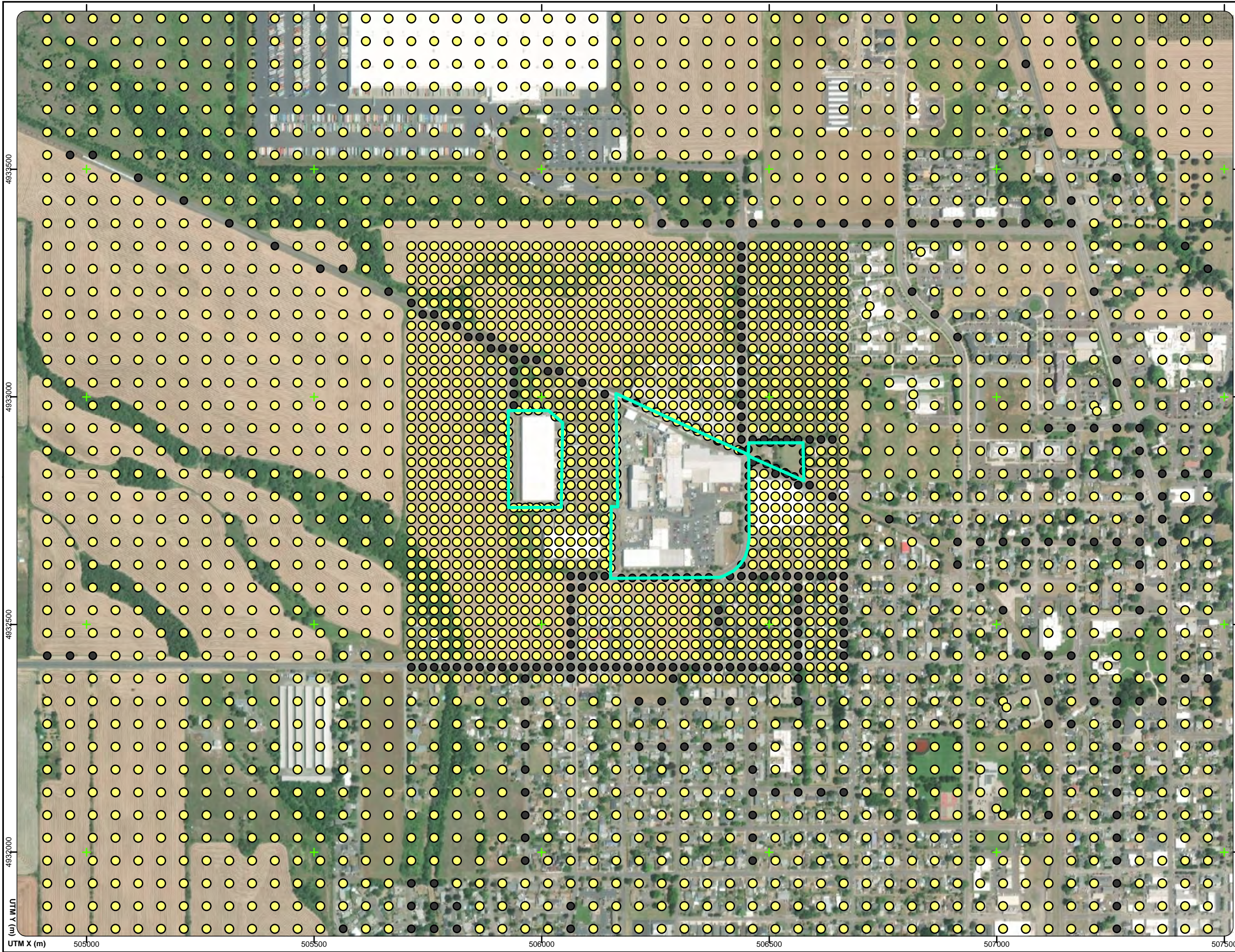
- Legend
- + UTM Grid Guideline
 - Receptor in Right-of-Way - Risk Not Assessed
 - Receptor Location Exposure
 - Assessment Boundary



Sources: Aerial photograph obtained from Esri ArcGIS Online.

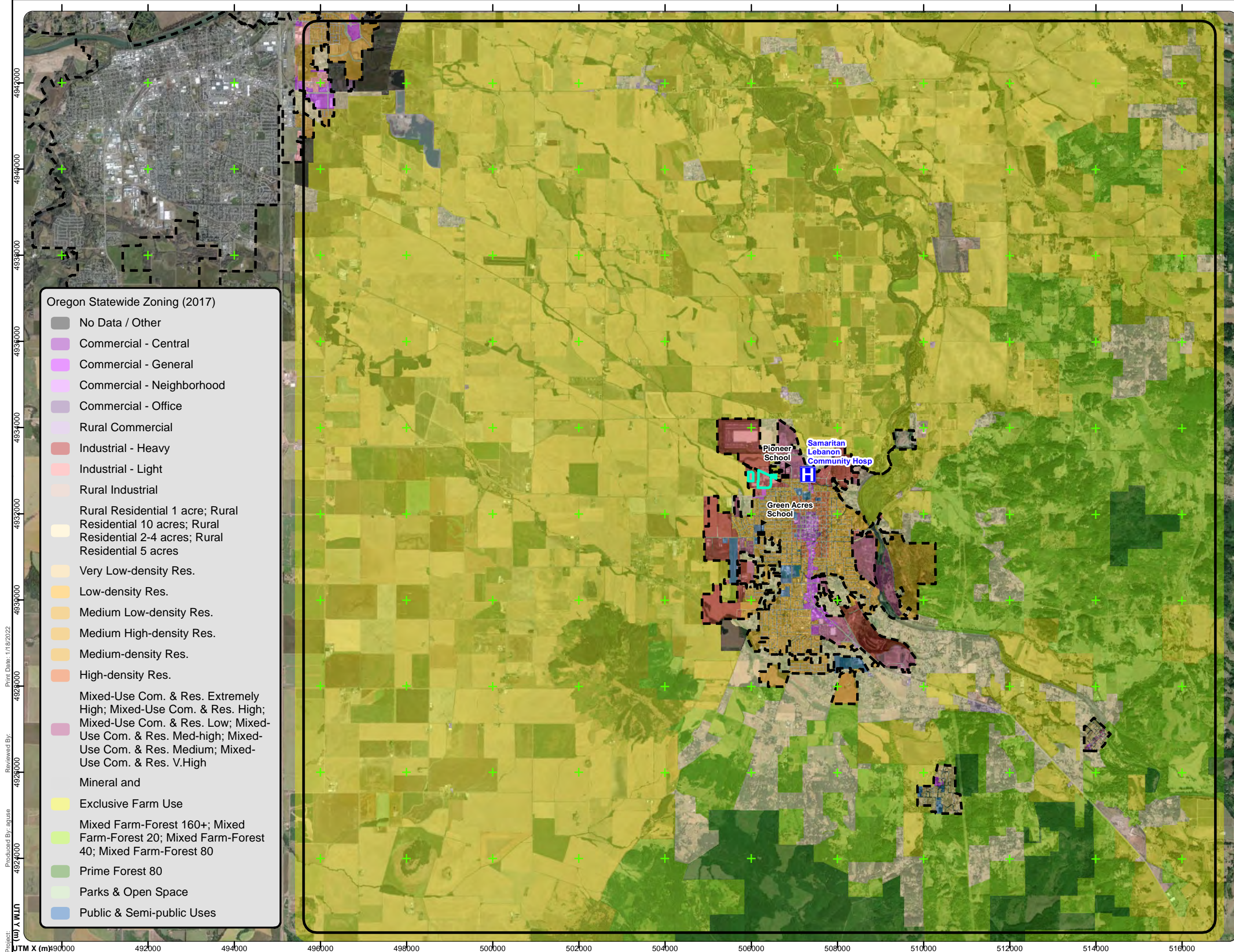


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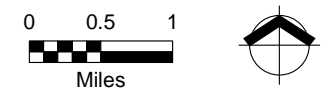
Project: 8006.61
 Produced By: aguse
 4932000
 4932500
 4933000
 4933500
 (u) A.W.L.U.
 Reviewed By: C. Green
 Print Date: 6/17/2022

Figure 5-1
Existing Land-Use
Zoning Classifications
 ENTEK International LLC
 Lebanon, Oregon 97355



- Oregon Statewide Zoning (2017)**
- No Data / Other
 - Commercial - Central
 - Commercial - General
 - Commercial - Neighborhood
 - Commercial - Office
 - Rural Commercial
 - Industrial - Heavy
 - Industrial - Light
 - Rural Industrial
 - Rural Residential 1 acre; Rural Residential 10 acres; Rural Residential 2-4 acres; Rural Residential 5 acres
 - Very Low-density Res.
 - Low-density Res.
 - Medium Low-density Res.
 - Medium High-density Res.
 - Medium-density Res.
 - High-density Res.
 - Mixed-Use Com. & Res. Extremely High; Mixed-Use Com. & Res. High; Mixed-Use Com. & Res. Low; Mixed-Use Com. & Res. Med-high; Mixed-Use Com. & Res. Medium; Mixed-Use Com. & Res. V.High
 - Mineral and
 - Exclusive Farm Use
 - Mixed Farm-Forest 160+; Mixed Farm-Forest 20; Mixed Farm-Forest 40; Mixed Farm-Forest 80
 - Prime Forest 80
 - Parks & Open Space
 - Public & Semi-public Uses

- Legend**
- UTM Grid Guideline
 - School Location (2015-16)
 - Hospital Location (2014)
 - Exposure Assessment Boundary
 - Modeling Domain Extent
 - City Limits (2019)



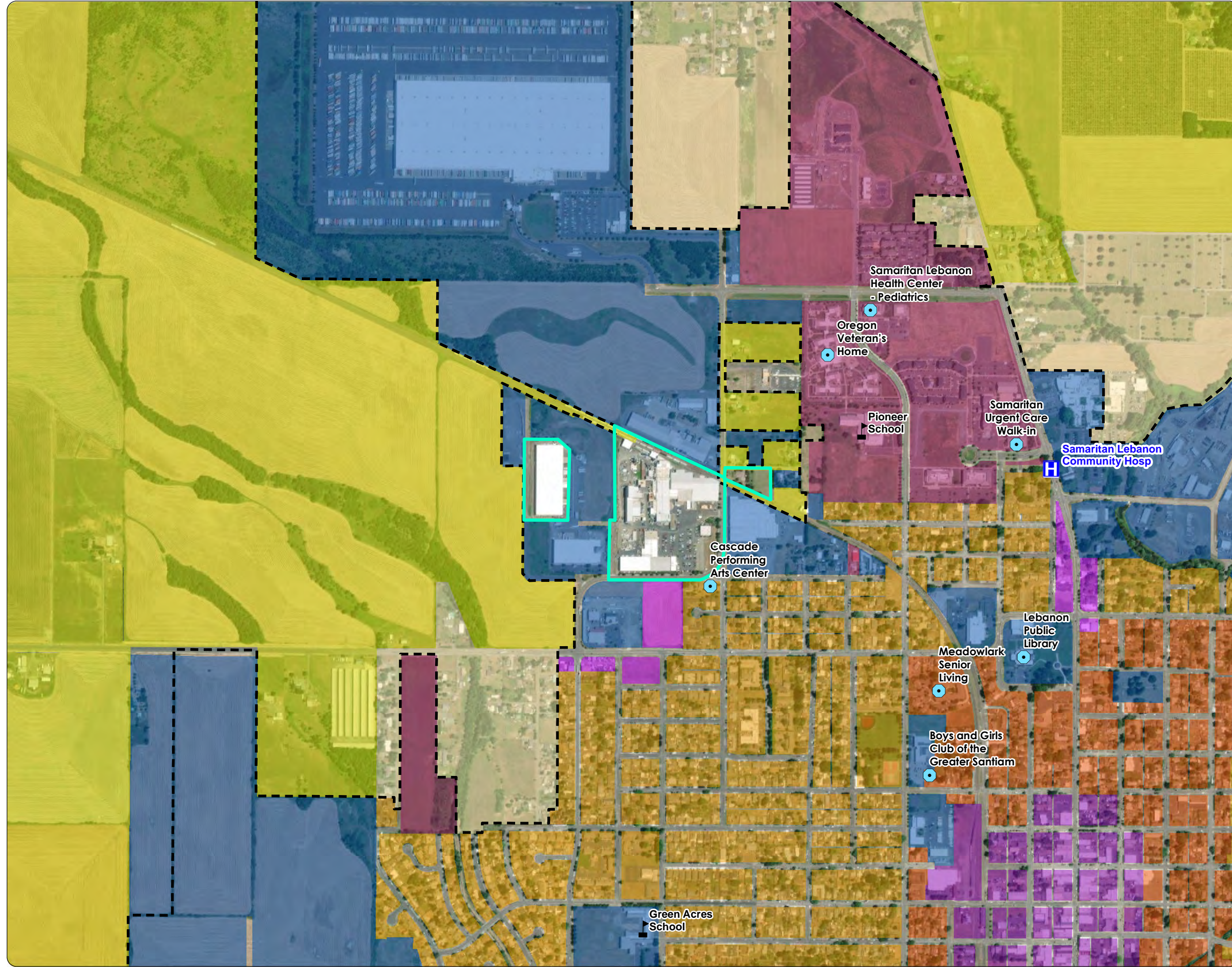
Sources: Aerial photograph obtained from Esri ArcGIS Online. Zoning obtained from the Oregon Dept. of Land Conservation and Development. Schools obtained from Oregon Dept. of Human Services & Oregon Health Authority. Hospitals obtained from Oregon Office of Health Policy & Research.



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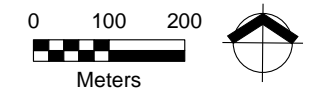
Project: UTM X (m) 490000 492000 494000 496000 498000 500000 502000 504000 506000 508000 510000 512000 514000 516000
 Produced By: aguse
 Reviewed By:
 Print Date: 1/18/2022

Figure 5-2
Existing Land-Use Zoning
Classifications in the
Immediate Area
 ENTEK International LLC
 Lebanon, Oregon 97355



Legend

- School Location (2015-16)
- Hospital Location (2014)
- Additional Sensitive Receptor Location
- Exposure Assessment Boundary
- City Limits (2018)
- Oregon Statewide Zoning (2017)**
- Commercial - Central
- Commercial - General
- Industrial - Heavy
- Rural Residential 1 acre; Rural Residential 10 acres; Rural Residential 2-4 acres; Rural Residential 5 acres
- Low-density Res.
- Medium-density Res.
- High-density Res.
- Mixed-Use Com. & Res. Extremely High; Mixed-Use Com. & Res. High; Mixed-Use Com. & Res. Low; Mixed-Use Com. & Res. Med-high; Mixed-Use Com. & Res. Medium; Mixed-Use Com. & Res. V.High
- Exclusive Farm Use
- Public & Semi-public Uses



Sources: Aerial photograph obtained from Esri ArcGIS Online. Zoning obtained from the Oregon Dept. of Land Conservation and Development. Schools obtained from Oregon Dept. of Human Services & Oregon Health Authority. Hospitals obtained from Oregon Office of Health Policy & Research.










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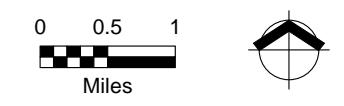
Figure 5-3 Land Use Classifications

ENTEK International LLC
Lebanon, Oregon 97355

Legend

-  UTM Grid Guideline
-  School Location (2015-16)
-  Hospital Location (2014)
-  Exposure Assessment Boundary
-  Modeling Domain Extent
-  Land Use Classification RBC Basis
-  Residential
-  Child
-  Worker
-  Acute-only

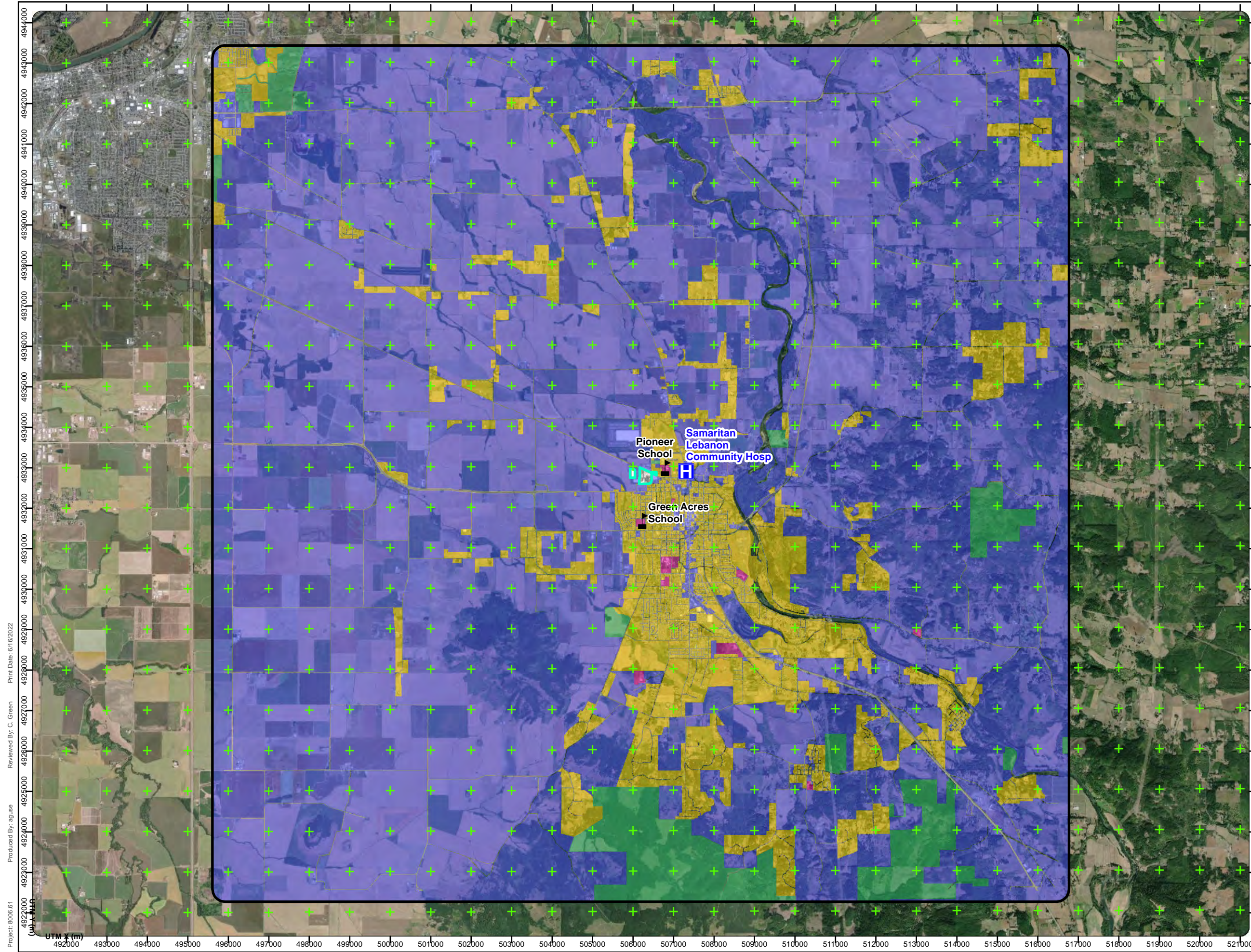
1. Existing land use classifications revised to reflect one of the four risk-based concentration categories presented in Oregon Administrative Rule 340-245-8040 Table 4.
2. Non-taxlot land use areas (e.g., interstate right-of-way) will not be assessed for cancer or noncancer risk.



Sources: Aerial photograph obtained from Esri ArcGIS Online.

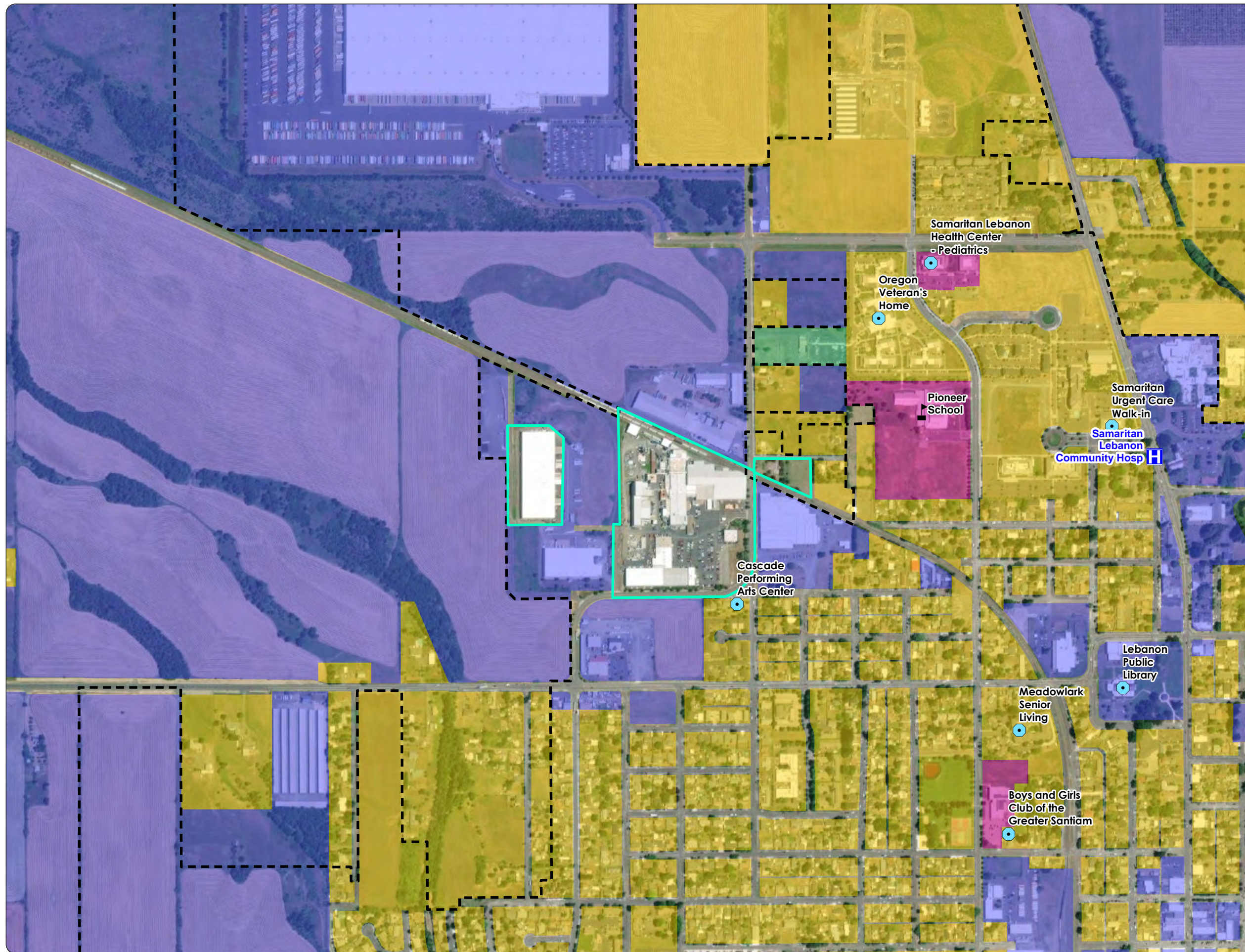


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Figure 5-4
Land Use
Classifications in the
Immediate Area
 ENTEK International LLC
 Lebanon, Oregon 97355



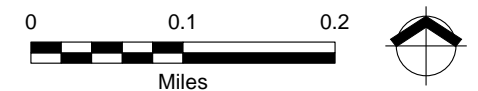
Legend

- School Location (2015-16)
- Hospital Location (2014)
- Additional Sensitive Receptor Location
- Exposure Assessment Boundary
- Modeling Domain Extent
- City Limits (2019)

Land Use Classification RBC Basis

- Residential
- Child
- Worker
- Acute-only

1. Existing land use classifications revised to reflect one of the four risk-based concentration categories presented in Oregon Administrative Rule 340-245-8040 Table 4.
2. Non-taxlot land use areas (e.g., interstate right-of-way) will not be assessed for cancer or noncancer risk.



Sources: Aerial photograph obtained from Esri ArcGIS Online.



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