ODEQ Prevention of Significant Deterioration/Air Contaminant Discharge Permit Application

Appendix D – Air Quality Impact Assessment

Intel Corporation Gordon Moore Park at Ronler Acres/Aloha Project

Submitted to

Oregon Department of Environmental Quality

Submitted by

ATMOSPHERIC DYNAMICS, INC
Meteorological & Air Quality Modeling

Prepared by

Atmospheric Dynamics, Inc.

July 2023

INTRODUCTION AND PROJECT DESCRIPTION

Intel Corporation (Intel) operates the Gordon Moore Park at Ronler Acres (also referred to as Ronler and Ronler Acres in this document) and Aloha semiconductor manufacturing facilities (together, the Facility) in Washington County, Oregon. The Gordon Moore Park at Ronler Acres campus is located at 2501 NE Century Boulevard, Hillsboro, Oregon, which has a Universal Transverse Mercator (UTM) North American Datum (NAD) 83 coordinate of 506601.5 meters Easting, 5043404.5 meters Northing (Zone 10). The Aloha campus is located at 3585 SW 198th Avenue, Aloha Oregon, and has a UTM NAD 83 coordinate of 509003.2 meters Easting, 5037811.5 meters Northing (Zone 10) latitude /longitude of 122.8851359° W, 45.4937841° N. The Aloha campus has been operating since 1976 while the Gordon Moore Park at Ronler Acres campus began operation in 1994. Both campuses are engaged in the production of semiconductor products and are considered co-located for permitting purposes because their production activities are interrelated. Both campuses are regulated under a single Standard Air Contaminant Discharge Permit (ACDP), 34-2681-ST-01, issued by the Oregon Department of Environmental Quality (ODEQ) in 2016 and most recently modified in 2022.

The modeling report is part of the Type 4 Maintenance Area New Source Review (NSR) and Prevention of Significant Deterioration (PSD) permit application. The application is in support of the proposed changes at the Facility which meet the definition of “major modification” in OAR 340-224-0025 (the “Project”). Changes at the Facility include additional fabrication (fab) cleanroom space and increased emissions at the existing fabs due to advances in technology manufacturing and additional manufacturing support operations. The proposed major modification triggers the Maintenance Area NSR requirements in OAR 340-224-0060 and the PSD requirements in OAR 340-224-0070. A common requirement of both sets of requirements is the need to demonstrate that the proposed changes will not cause or contribute to an exceedance of the National Ambient Air Quality Standards (NAAQS) and PSD increments. Modifications subject to Division 224 requirements must be permitted as Type 4 construction approvals.

This modeling supplement describes the modeling steps, methods and assumptions that were performed to support the Type 4 construction approval permit application. The modeling presented in this report is based on the modeling protocol that was submitted and then approved by the ODEQ on June 15th, 2023. The modeling protocol was also reviewed by the United States Environmental Protection Agency (EPA) Region 10, the United States Forest Service (USFS) and the United States Park Service (USPS). The modeling followed the methods presented in the ODEQ *“Recommended Procedures for Air Quality Dispersion Modeling”* (March 2022). Table 1 summarizes the proposed analyses on a pollutant specific basis. The modeling also followed procedures as summarized by the EPA Appendix W modeling guidelines. Additional guidance procedures are summarized below and throughout the text: EPA in its “*Guideline on Air Quality Models*” (including supplements), EPA Memorandum *“Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 National Ambient Air Quality Standard*” (March 2011), EPA Memorandum *“Clarification on the Use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO_2 NAAQS”* (September 2014) “ EPA Memorandum *“Guidance for Ozone and Fine Particulate Matter Permit Modeling”* (July 2022), EPA Memorandum *“Modeling Procedures for Demonstrating Compliance with PM-2.5 NAAQS (March 2010) and the* California Air Pollution Control Officers Association (CAPCOA) “*Modeling Compliance of the Federal 1-Hour NO_2 NAAQS*”(October 2011).

Table 1
Air Quality Modeling Criteria

	NO_x	PM-10	PM-2.5	CO	SO_2
PSD Significant Impact Levels for Class I And Class II Areas	x	x	x	x	
Ambient Air Quality Standards	x	x	x	x	x
Class I and Class II Visibility and Deposition	x	x	x		
Impacts to Soils and Vegetation	x	x	x	x	
Class I and Class II Area Increment	x	x	x		
The Project will also be major for VOCs; this analysis addressed ozone impacts from emissions of NO_x and VOCs. Secondary formation of PM-2.5 and Ozone were also assessed with MERPS.					

A copy of the modeling protocol and the ODEQ protocol approval letter is included in Attachment A. All input and output modeling files will be provided to the ODEQ using an on-line share drive.

Permit Applicability

The locations of the Gordon Moore Park at Ronler Acres and Aloha campuses are shown in Figure 1. The detailed site plans are presented in Figures 2 and 3, respectively. The Gordon Moore Park at Ronler Acres and Aloha campuses are located in Washington County, Oregon. The area in which the campuses are located is designated as attainment or unclassified for all criteria pollutants except carbon monoxide (CO) and ozone, for which the area is designated as maintenance.

The Facility is an existing source that will become a Federal Major Source as a result of the proposed changes because emissions of one or more regulated pollutants will increase above the Federal Major Source levels. A major modification at a facility that will become a Federal Major Source triggers the requirements of Oregon's PSD permitting program for each pollutant for which the area is designated attainment or unclassified (OAR 340-224-0070(3)(a)(A)). These requirements include the obligation to conduct an air quality analysis for each regulated pollutant for which emissions will exceed the netting basis by a Significant Emission Rate (SER) or more. Based on the proposed Plant Site Emission Limits, the Facility is required to perform a PSD air quality impacts analysis in accordance with OAR 340-225-0070(3) for NO_x, PM-10 and PM-2.5.

The proposed modifications also trigger requirements of Oregon's Maintenance Area NSR program because it is located within the Oregon portion of the Portland-Vancouver Interstate Maintenance Area for ozone and the Portland Maintenance Area for CO, and the proposal constitutes a major modification for CO and ozone precursors (VOC and NO_x). Maintenance area NSR requirements are triggered for each major modification of a maintenance pollutant. Major modifications for ozone precursors (NO_x and VOC) constitute major modifications for ozone. A major modification of a maintenance pollutant must comply with the maintenance area NSR requirements at OAR 340-224-0060, including the requirement to demonstrate that it will not cause or contribute to an exceedance of the NAAQS. The Facility will meet its NAAQS compliance obligation in part by ensuring a net air quality benefit in compliance with OAR 340-224-0060(2) by offsetting its CO, NO_x and VOC emissions via an allocation from the growth allowance program. In addition, the Facility modeled its CO emissions and evaluated ozone impacts, which are independent of the net air quality benefit resulting from offsetting those emissions.

ODEQ requires sources[1] to demonstrate compliance with the short-term NAAQS (specifically, 24-hr PM-10 and PM-2.5, 1-hr SO_2 and 1-hr NO_2) if the Facility's Project triggers NSR for any pollutant and the Facility-wide short-term emissions are greater than the Significant Emission Threshold (SETs). This project triggers those requirements for short-term NAAQS. Thus, the short-term NAAQS evaluation for NO_2, PM-10 and PM-2.5 as required by the PSD and Maintenance Area NSR regulations described above was performed. Although the project SO_2 emissions do not require an air quality assessment under the PSD regulations, the short-term Facility wide SO_2 emissions are over the SO_2 SET of three (3) pounds per hour (lbs/hr) and SO_2 NAAQS compliance was evaluated for 1-hr, 24-hr and annual averaging periods.

Project Description and Source Emissions Data

The manufacturing process occurs in a cleanroom environment to avoid micro contamination of the product. Semiconductors are fabricated in batches of silicon wafers and can take anywhere from one to two months to manufacture. Semiconductor manufacturing begins with a silicon wafer substrate. The semiconductor is then built up as a series of layers, with material added or removed in each step. Steps include:

- Oxidation: Involves the generation of a silicon dioxide layer on the wafer surface to provide a base for the photolithography process. This layer also insulates and protects the wafer during subsequent processing.
- Lithography: Starts with the application of a photo sensitive layer onto the wafer. Then, a photomask is placed over the wafer and light is projected onto the wafer to form patterns of exposed and unexposed photoresist (e.g., the electrical pattern). After exposure, the wafer is developed in a solution that dissolves the exposed photoresist, leaving those areas exposed for subsequent processing steps. The unexposed photo-resistant coating remains on the water, thus protecting the surface.
- Ion Implant: Doping the wafer with ions to make it conductive or insulating at selected locations.
- Etching: Wet or dry etching techniques are used to remove unwanted material on certain areas on the wafer. After etching, photoresist is removed using dry or liquid stripping compounds.
- Deposition: Applies additional layers of silicon, silicon dioxide, or other materials to the wafer
- Planar: A surface treatment process which prepares the wafer for subsequent processing steps. A mildly corrosive chemical slurry is used as a polishing compound.

During the fabrication process, many of these steps are repeated multiple times in various sequences with variations in each step. Once the manufacturing is completed, the wafers are tested and cut into individual chips. The semiconductor chips are then sorted, assembled, tested, and packaged.
Manufacturing operations occur 24 hours a day and 365 days a year. However, production output varies with consumer demand and stage of process development.

[1] See Oregon DEQ, "Short-Term NAAQS Compliance Internal Management Directive" signed September 1, 2021 and Oregon DEQ, "Recommended Procedures for Air Quality Dispersion Modeling ", March 2022.

Figure 1
Project Locations

Figure 2
Gordon Moore Park at Ronler Acres General Arrangement

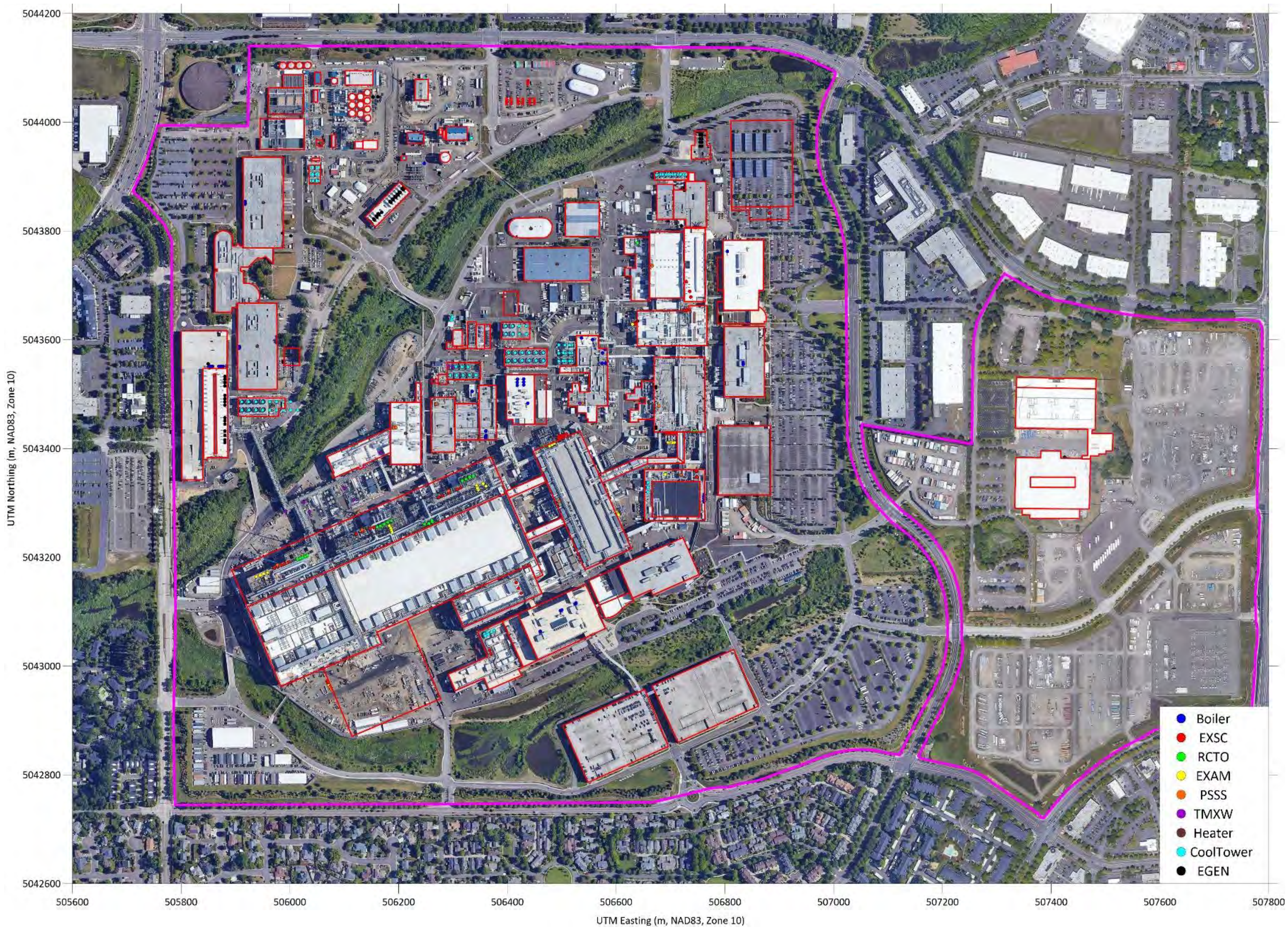
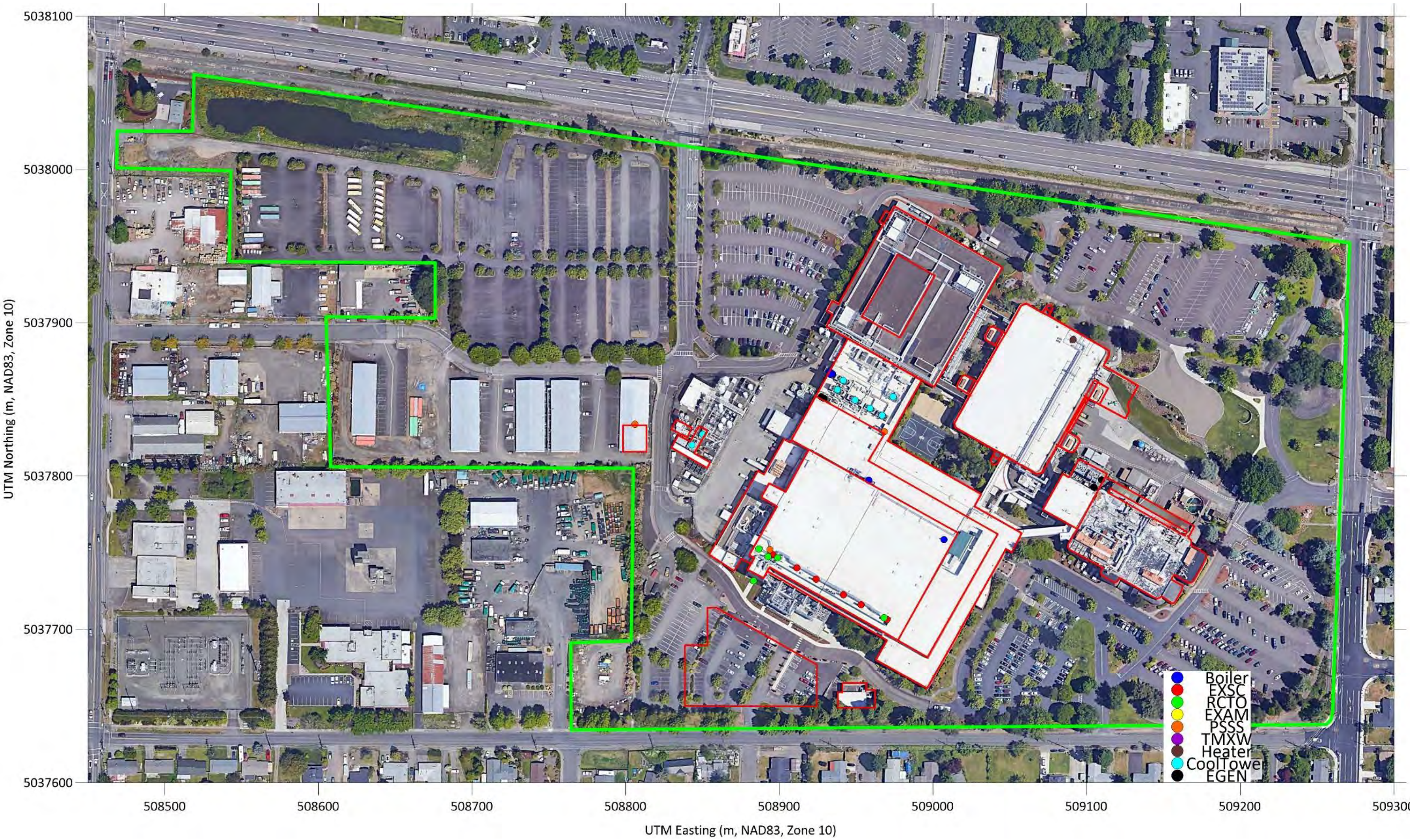


Figure 3
Aloha General Arrangement



There are a number of utility support systems that support Fab manufacturing operations. These include:

- Natural gas-fired rotor concentrator thermal oxidizers (RCTOs) are used to control volatile organic compounds (VOC) emissions from the Fabs.
- Packed-Bed Wet Chemical Scrubbers for controlling acid gases used in the Fab.
- Trimix Ammonia Treatment Systems are used to treat ammonia wastewater.
- Large natural gas-fired boilers (>2.0 million BTU per hour).
- Small natural gas-fired heating units and boilers (<2.0 million BTU per hour).
- Diesel-fired emergency generators and fire pumps.
- Wet cell cooling towers.
- Bulk Chemical Distribution including bulk and specialty gases.

Below is a summary description of the emission points that were used in the modeling analyses. Unless noted below, the sources operate 24 hours per day, 365 days per year.

Rotor Concentrator Thermal Oxidizers (RCTOs)

RCTOs consist of two main components: a concentrator that uses zeolite wheels to adsorb VOCs from the Fab exhaust and a thermal oxidizer that oxidizes the VOCs into water and carbon dioxide. The RCTOs are a source of natural gas combustion byproducts, CO_2, and VOCs that are not adsorbed by the zeolite concentrator. Each RCTO stack was included in the model as a point source. Some of the newer RCTOs exhaust to the acid scrubbers that then pass through a wet electrostatic precipitator (WESP) for additional PM control. A WESP works by charging particles as they enter the unit and collecting them on electrodes within the WESP body. Assumptions used in estimating RCTO air emissions include the following:

- Hourly emissions assume the RCTOs are operating at maximum rated capacity.
- Annual emissions are based on an annual operating capacity of 100% of the maximum rated capacity.
- All PM emissions are assumed to be PM-10 and PM-2.5.

Packed-Bed Wet Chemical Scrubbers (Scrubbers)

Each Fab has several scrubbers that treat acid or ammonia-containing Fab process exhaust. The exhaust passes through a packed bed with reagent flowing through the bed. A substantial portion of the acid or ammonia gases in the exhaust are transferred out of the air stream into the reagent stream. The treated exhaust streams are then sent out to the atmosphere via a manifold with between one (1) and five (5) stacks.

Trimix Ammonia Treatment System (TMXW)

The TMXW system is an ammonia wastewater treatment system that includes gas-phase ammonia abatement. Ammonia wastewater is pH adjusted and fed to an ammonia stripper. The ammonia stripper is a desorption process that removes ammonium ions out of the water to produce gas-phase ammonia. The gas-phase ammonia is exhausted to a two-stage thermal catalytic oxidation/reduction system. The first catalyst converts ammonia to NO_x and CO to carbon dioxide. The second catalyst converts NO_x to nitrogen and water. Air emissions from this system include natural gas combustion byproducts and ammonia. The air emissions exit to ambient air via a stack. Each emission point was modeled separately.

Boilers

The boilers supply hot water to the various buildings and manufacturing processes. All of Intel's boilers are natural gas fired. Air emissions from the boilers are those associated with natural gas combustion. As a result of natural gas combustion, the boilers are a source of criteria pollutant emissions. Assumptions used in calculating boiler air emissions include the following:

- Hourly emissions assume the boilers are operating at maximum rated capacity.
- Annual emissions are based on an annual operating capacity of 30%.

Emergency Generators and Fire Pumps

In addition to backing up all critical Life Safety Systems, emergency generator back-up systems required by code and business continuity needs at the Facility, are located onsite, in the event of an unplanned primary power outage. The generators combust ultra-low-sulfur diesel and are routinely tested to ensure proper operation. For permitting purposes, air emissions are limited to periods when the emergency equipment is tested and maintained. The current permit specifies that no more than ten generators may be run in any single day and the generators can only be run during daylight hours, which is defined as the hours between 8 am and 6 pm. The emergency generators and fire pumps were modeled as described later in this report.

- Hourly emissions assume the engines are operated at full load.
- Annual emissions are based on the emergency generators operating for 25 hours per year.
- Annual emission for the fire pumps are all based on 50 hours per year.

Cooling Towers

The Facility has mechanically induced (i.e., fan-driven) wet-cell cooling towers that are open to the atmosphere. The cooling towers are used to dissipate the large heat loads generated by the factory and the chilled water is used to condition the incoming air to the correct temperature required by the factory. The cooling towers are a source of particulate matter. The total dissolved solids (TDS) entrained in drift droplets emitted from the cooling towers are a source of PM emissions. Cooling towers were modeled in two specific ways:

- Cooling towers with a single fan were modeled using one stack located in the fan center and the maximum design flow and actual fan diameter were used for the stack parameters.
- Some of the multiple fans that are part of a single cooling tower assembly were modeled using a single stack located in the center of the assembly. The maximum design flow from the cooling tower assembly will was divided by the number of fans to get the representative flow. The diameter for the representative stack was assigned the diameter of a single fan.

Lime Silos

Dry lime (calcium hydroxide) used in wastewater treatment operations is delivered to and stored in lime silos. There are five (5) lime silos on site. During filling, the silos are a source of PM emissions as air is displaced by the lime being loaded. Each silo is equipped with an exhaust vent, which is controlled by a fabric filter dust collector. For the five lime silo bin vents, PM-10 and PM-2.5 emissions from all five sources were modeled as a single volume source that was located midpoint between the existing lime silo bin vents. Assumptions used in the modeling include:

- Lime silos will only emit during loading operations which will occur no more than 1 hour per day with only one silo being loaded on any given hour or day. On an annual basis, there will be no more than 52 loading operations per year per silo.
- All emissions of particulate matter are assumed to be PM-10 and PM-2.5 in accordance with ODEQ guidance.

Paved Road Sources

Area source emissions, primarily associated with paved road emissions of particulate matter, created from the on-site road/vehicle travel was also included in the modeling assessments.

- Fugitive dust emissions are assumed to occur 24-hours per day and 8,760 hours per year.

Stack Parameters

The stack parameters (flow rates, temperatures, stack heights, velocities) used in modeling were determined from source testing, manufacturing specification guarantees, or worst-case assumptions. These are listed in Attachment B.

Emissions Summary

Based on the potential to emit emission summary provided in Table 2, the following pollutants are subject to air quality assessments as described in this report: Nitrogen Dioxide (NO_x), Carbon Monoxide (CO), Sulfur Dioxide (SO_2), Particulate Matter with an aerodynamic diameter of 10 microns or less (PM-10), Particulate Matter with an aerodynamics diameter of 2.5 microns or less (PM-2.5 and Volatile Organic Compounds (VOCs). NO_x and SO_2 will also be treated as a precursor to PM-2.5 while NO_x and VOC will be treated as an Ozone precursor.

Table 2
Ronler and Aloha Potential to Emit Summary

Ronler and Aloha Plant Site Emission Limit Summary	NO_x	CO	VOC	TSP as PM	PM-10	PM-2.5	SO_2
	tpy	tpy	tpy	tpy	tpy	tpy	tpy
Boilers	19.69	58.64	8.55	3.89	0.81	0.67	4.04
EGENS/Fire Pumps	52.45	4.29	0.96	0.48	0.48	0.48	0.05
RCTOs	80.73	106.28	150.01	19.05	19.05	19.05	2.10
EXSC Scrubbers	192.68	327.92	36.92	28.25	27.25	25.65	26.77
EXAM Scrubbers	43.45	81.51	86.51	13.55	8.54	8.27	0.77
PSSS Scrubbers	0	0	0	0.71	0.44	0.001	0
Fugitive VOCs	0	0	65.82	0	0	0	0
Heaters	10.41	17.13	0.57	0.26	0.26	0.26	0.27
TMXW	12.23	1.10	0.20	0.09	0.09	0.09	0.09
Lime Silos	0	0	0	0.44	0.44	0.44	0
Cooling Towers	0	0	0	8.81	7.19	0.03	0
Aggregate insignificant activities	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Paved Road Emissions	0	0	0	0.75	0.15	0.04	0
Total	412.6	597.9	350.5	77.3	65.7	56.0	35.1
Current PSEL	197.0	229.0	178.0	41.0	35.0	31.0	39.0

Requested PSEL[a]	402	580	349	67	57	55	39
Increase	205	351	171	26	24	25	0
SER	40	100	40	--	15	10	40
Major Modification	Yes	Yes	Yes	Yes	Yes	Yes	No
Modeling Required	Yes	Yes	NA	NA	Yes	Yes	Yes

[a] Requested PSEL not to include categorically insignificant Activities including Heaters, Paved Roads, and Cooling Towers

PROPOSED AIR QUALITY DISPERSION MODELS

Air Quality Models/Version: The primary EPA dispersion model that was used is the AERMOD modeling system (AERMOD version 22112) with the associated meteorological and receptor processing programs AERSURFACE (version 20060), AERMET (version 22112), AERMINUTE (version 15272), and AERMAP (version 18081). AERMOD was used to quantify pollutant impacts on the surrounding environment based on the emission sources operating parameters and their locations and was used for modeling most Facility operational impacts in both simple and complex terrain. In addition, the Building Profile Input Program for PRIME (BPIP-PRIME version 04274) was used for determining building dimensions for downwash calculations in AERMOD. These models, along with options for their use and how they are used, are discussed below. These models were used for the following:

- Comparison of Facility impacts to Class I and Class II significant impact levels (SILs)
- Significant Monitoring Concentrations (SMCs)
- National Ambient Air Quality Standards (NAAQS)
- PSD Increments for 24-hour PM-2.5, PM-10 and annual NO_2
- Cumulative impacts analyses in accordance with ODEQ and EPA modeling requirements, if required (project impacts greater than SILs)

EXISTING METEOROLOGICAL AND AIR QUALITY DATA

Hourly observations of certain meteorological parameters are used to define the area's dispersion characteristics. This data is used in EPA approved air dispersion models for defining a project's impact on air quality. These data must meet certain criteria established by the EPA and the following discussion details the proposed data and its applicability to this Project.

Project Location/Topography: Both the Gordon Moore Park at Ronler Acres and Aloha Project sites are located in the Tualatin Valley which is a relatively flat river bottom area that is surrounded by terrain to the north, west and east. Very little variation in terrain exists in the valley until the area abuts the mountain ranges surrounding it on three sides.

Nearby Surface Meteorological Stations: The Gordon Moore Park at Ronler Acres site is located in the northeastern portion of the Tualatin Valley, approximately 2.25 kilometers (km) east of the Hillsboro Airport. The Aloha site is located approximately 6.5 km southeast of the Hillsboro Airport. The Hillsboro Airport (WBAN 94261) collects ASOS (Automated Surface Observing System) surface meteorological data such as wind speed and direction, temperature, pressure, cloud heights, and sky cover. ASOS surface meteorological data are generally selected for processing for AERMOD because ASOS hourly data are routinely recorded and archived, generally meet EPA data completeness criteria, instruments are located in unobstructed areas meeting EPA siting criteria, and instrument heights and sensor sensitivities meet EPA instrument specifications. Also, short-term (1-minute) wind direction and speed data are generally available that can be processed by EPA programs to eliminate excessive calm observations and to give hourly averages consistent with EPA modeling requirements. The ASOS surface data, when processed with AERMET as described below, result in data recovery greater than 90 percent for every quarter in the five-year period in accordance with EPA requirements *"Meteorological Monitoring Guidance for Regulatory Modeling Applications," (EPA-454/R-99-005)*. Generally, surface data parameters of wind speed, wind direction, and temperature must individually exceed 90% both by quarter and year, as well as wind speed, direction, and stability (turbulence) parameters combined, before any substitutions. These criteria are equaled for all quarterly/annual periods of the surface data selected for use, which covers the years 2016 through 2020.

Selection of Surface Meteorological Data: As noted above, the Project vicinity and immediate areas of Tualatin Valley are relatively flat, an important consideration in the selection of surface meteorological data for use in assessing the Project's impacts on regional air quality. Under these circumstances (large expanses of relatively flat terrain), the nearest meteorological data meeting EPA siting and instrument criteria would be expected to be the most representative of the Project location. The ASOS data fulfills both criteria, being located in the immediate Project vicinity and meeting EPA siting and instrument criteria. Thus, the Hillsboro Airport ASOS data are proposed as the surface meteorological data for modeling Facility emissions. The close proximity of the ASOS station to the Project sites virtually assures that it could be considered representative, if not the equivalent of onsite data.

Both the ASOS and Ronler Acres/Aloha sites are located in the relatively flat Tualatin Valley at nearly identical distances and orientations from the relatively distant mountains which define the valley boundaries. There are no intervening terrain features between the ASOS location and project site to adversely affect the relative synoptic-scale wind patterns at either location (compared to each other). The current ASOS location from the NCDC Historical Observing Metadata Repository (HOMR) was verified and then refined to its exact location based on Google Earth photos (location is shown below).

Selection of Upper Air Meteorological Data: The most representative radiosonde observations nearest to the Project sites is the Salem Airport (McNary Field), located approximately 65 km south of the Project sites. Climatologically, Salem is similar to the Intel Project sites. Twice daily radiosonde data were available for the proposed modeled years of 2016 through 2020.

Meteorological Data Surface Characteristics: AERMET requires input summaries of the surface characteristics for the area surrounding the Hillsboro ASOS monitoring site. These surface characteristics were calculated with the EPA-program AERSURFACE program based on EPA guidance. AERSURFACE used the 2016 National Land Cover Data (NLCD) from the United States Geological Survey (USGS) to determine land use based on standardized land cover categories. AERSURFACE was executed in accordance with the EPA guidance documents "*AERMOD Implementation Guide," (March 19, 2009)*, and "*AERSURFACE User's Guide*," *(EPA-454/B-20-008, revised February 2020)*. AERSURFACE determines the midday albedo, daytime Bowen ratio, and surface roughness length representative of the surface meteorological station. The ***Bowen ratio*** is based on a simple unweighted geometric mean while ***albedo*** is based on a simple unweighted arithmetic mean for the 10x10 km square area centered on the selected location (i.e., no direction or distance dependence for either parameter). ***Surface roughness length*** is based on an inverse distance-weighted geometric mean for upwind distances up to the EPA-recommended one (1) km radius from the selected location. The circular surface roughness length area (1-km radius) can be divided into any number of sectors as appropriate (EPA guidance recommends that no sector be less than 30º in width).

Twelve 30° sectors were processed to calculate the roughness lengths due to the homogeneity of the area within the EPA-recommended radius of one (1) km. Months were assigned to seasons as follows:

- Late autumn after frost and harvest, or winter with no snow: December, January, February
- Transitional spring (partial green coverage, short annuals): March-June
- Midsummer with lush vegetation: July-August
- Autumn with unharvested cropland: September-November

Temporal variations of monthly precipitation were considered in order to calculate the albedo for AERMET processing in accordance with EPA recommendations. Precipitation data should be measured at the nearest representative location to the surface data with the most complete precipitation record, particularly for the years of meteorology being modeled. Historical precipitation data are measured in the Hillsboro area (at Hillsboro Airport) and the monthly periods between 1991 to 2020 were used as input AERSURFACE and are presented in Table 3.

Site Urban/Rural Classification: Land use surrounding the Intel sites must be determined in order to assess if rural or urban dispersion characteristics should be used. Following Auer (1977) and as summarized in the EPA's "*Guideline on Air Quality Models*", if the land use within an area circumscribed by a three (3) km radius around each facility is industrial, commercial, or developed residential, then these areas are designated as urban. All other types of land use are considered rural.

The most objective approach is to use the 2016 land cover classification data (the same data set as used in AERSURFACE) and designate the "Developed Intensity" areas (IDs 22, 23 & 24) as urban based on Auer's classification. These classes are:

- Developed, Low Intensity (NLDC Code 22) – areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20 to 49 percent of total cover. These areas most commonly include single-family housing units.
- Developed, Medium Intensity (NLCD Code 23) – This classification includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50 to 79 percent of the total cover.
- Developed, High Intensity (NLCD Code 24) – This classification includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses and commercial/industrial. Impervious surfaces account for 80 to 100 percent of the total cover.

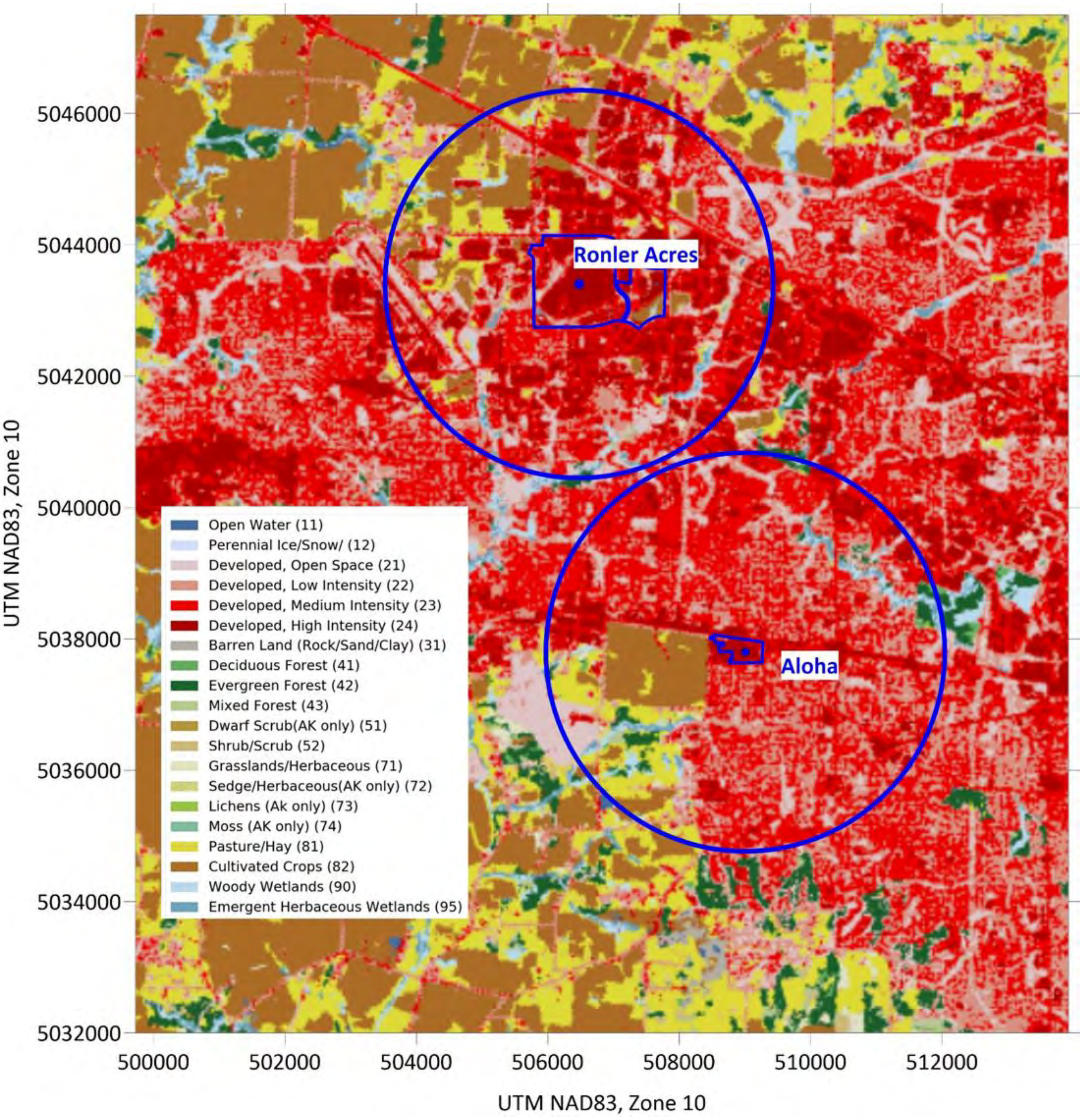
Table 3 Hillsboro Airport 30-year Precipitation Climatology Summary														
Year	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	**ANN**	**SMC**
1991	3.01	3.84	3.67	4.88	2.34	1.7	0.25	0.65	0.39	1.66	5.66	4.76	32.81	
1992	4.65	3.7	1.17	4.06	0.13	0.36	0.77	0.31	1.21	2.47	4.54	6.44	29.81	
1993	4.27	0.87	3.77	5.03	3.52	2.68	1.49	0.16	0	1.08	1.26	7.54	31.67	
1994	4.42	5.06	2.85	1.18	1.15	0.94	0	0.42	0.6	6.48	6.32	6	35.42	
1995	8.63	3.47	5.37	3.96	1.35	1.8	0.98	0.39	1.57	2.91	8.32	7.82	46.57	
1996	7.56	10.23	2.93	4.63	4.34	0.97	0.58	0.13	2.96	4.22	9.21	14.83	62.59	
1997	7.67	2.03	6.33	2.18	2.01	2.07	0.73	1.59	3.15	5.45	5.91	3.34	42.46	
1998	8.36	6.64	4.07	1.3	4.77	1.41	0.32	0	0.87	6.4	9.03	7.07	50.24	
1999	7.48	9.78	4.29	1.5	1.74	1.55	0.66	0.84	0.14	2.49	6.91	3.91	41.29	
2000	6.92	4.35	3.02	1.36	1.91	1.04	0.08	0.75	1.27	3	2.16	3.24	29.1	
2001	1.94	1.58	2.33	1.86	0.85	1.2	0.45	0.79	0.79	3.13	8.54	6.98	30.44	
2002	7.31	3.13	3.49	1.71	1.44	1.3	0.32	0.05	0.83	0.43	2.61	9.88	32.5	
2003	8.29	2.93	5.16	5.91	0.75	0.15	0	0.55	0.94	3.07	4.43	7.93	40.11	
2004	5.9	4.27	1.68	1.79	1.24	0.82	0	2.31	1.37	3.55	2.61	3.72	29.26	
2005	2.27	0.68	4.42	2.56	4.35	1.55	0.24	0.32	1.36	3.68	6.09	9.09	36.61	
2006	11.9	1.99	3.57	2.02	2.7	1.08	0.14	0.08	0.59	0.9	12.88	7.49	45.34	
2007	3.24	3.8	2.39	1.96	1.29	0.97	0.4	0.53	1.73	3.12	3.9	8.94	32.27	
2008	5.38	1.49	3.31	1.94	0.97	0.36	0.09	1.37	0.22	1.69	4.51	7.57	28.9	
2009	4.36	1.08	2.4	1.24	2.92	1.34	0.13	0.72	1.51	3.32	5.72	3.96	28.7	
2010	5.14	4.06	3.76	3.22	3.16	3.52	0.45	0.17	2.21	3.98	5.23	8.16	43.06	
2011	3.59	3.83	5.39	3.42	4.68	0.59	1.23	0	0.26	1.88	5.38	2.33	32.58	
2012	5.79	2.48	6.59	2.38	2.34	2.42	0.09	0.02	0.04	5.45	7.59	7.5	42.69	
2013	1.47	1.87	1.81	2.33	3.98	1.31	0	0.85	6.27	0.87	2.73	1.08	24.57	
2014	2.41	5.06	6.07	3.42	1.7	0.92	0.52	0.14	1.1	6.12	2.83	5.88	36.17	
2015	3.01	4.57	4.68	1.41	0.44	0.54	0.32	0.55	0.86	3.42	4	14.6	38.4	
2016	**7.53**	**3.96**	**5.31**	**1.88**	**0.8**	**1.33**	**0.33**	**0.25**	**0.93**	**8.66**	**6.25**	**4.77**	**42.0**	**Wet**
2017	**4.11**	**10.06**	**6.96**	**3.56**	**1.82**	**1.05**	**0**	**0.13**	**1.39**	**4.04**	**7.38**	**2.92**	**43.42**	**Wet**
2018	**5.17**	**2.15**	**2.79**	**3.32**	**0.11**	**0.65**	**0**	**0**	**0.79**	**3.33**	**2.61**	**4.74**	**25.66**	**Dry**
2019	**3.12**	**4.96**	**1.36**	**3.23**	**1.45**	**0.64**	**0.49**	**0.21**	**3.08**	**1.51**	**1.16**	**5.22**	**26.43**	**Dry**
2020	**7.18**	**1.49**	**2.12**	**0.88**	**1.86**	**2.04**	**0.07**	**0.25**	**1.28**	**1.38**	**5.34**	**5.27**	**29.16**	**Dry**

Sorted Data – The 30-years of climatology were SORTED to determine DRY/AVG/WET months. Generally, the driest and wettest years were used to delineate DRY/WET (AVG was anything in-between). Years which had precipitation less than the 30th percentile were designated dry, years which had precipitation greater than the 70th percentile were designated wet and all other years were designated as average.

Table 4 and Figure 4 shows the land use determination for the Aloha and Gordon Moore Park at Ronler Acres sites. Both sites are over 70 percent urban. Because the area within 3 km is more than 50 percent classified as urban land use, the URBAN option was used for AERMOD in the modeling of the project.

In reviewing the AERMOD Implementation Guide (June 2022), it provides the following recommendations for assigning an urban population number in AERMOD:

Figure 4
Land Use Surrounding the Intel Sites (3 km Radius in Blue)



"For urban areas adjacent to or near other urban areas, or part of urban corridors, the user should attempt to identify that part of the urban area that will contribute to the urban heat island plume affecting the source(s). If this approach results in the identification of clearly defined MSAs, then census data may be used as above to determine the appropriate population for input to AERMOD. Use of population based on the Consolidated MSA (CMSA) for applications within urban corridors is not recommended, since this may tend to overstate the urban heat island effect. Similarly, for application sites that are in isolated areas of dense population but are not representative of the larger MSA, care should be taken to determine the extent of the area the urban area that will contribute to the urban heat island plume affecting the source(s).

For situations where MSAs cannot be clearly identified, the user may determine the extent of the area, including the source(s) of interest, where the population density exceeds 750 people per square kilometer. The combined population within this identified area may then be used for input to the AERMOD model."

Table 4
Land Use Summaries

ID	Description	Class	Ronler	Percent	Aloha	Percent
11	Open Water:	Rural	16	0.1%	3	0.0%
21	Developed, Open Space:	Rural	2892	9.2%	1895	6.0%
22	Developed, Low Intensity:	Urban	6287	20.0%	8781	27.9%
23	Developed, Medium Intensity:	Urban	9523	30.3%	12530	39.9%
24	Developed, High Intensity:	Urban	6855	21.8%	2673	8.5%
31	Barren Land (Rock/Sand/Clay):	Rural	21	0.1%	0	0.0%
41	Deciduous Forest:	Rural	0	0.0%	73	0.2%
42	Evergreen Forest:	Rural	86	0.3%	500	1.6%
43	Mixed Forest:	Rural	35	0.1%	56	0.2%
52	Shrub/Scrub:	Rural	14	0.0%	4	0.0%
71	Grasslands/Herbaceous:	Rural	105	0.3%	95	0.3%
81	Pasture/Hay:	Rural	1825	5.8%	1801	5.7%
82	Cultivated Crops:	Rural	3203	10.2%	2207	7.0%
90	Woody Wetlands:	Rural	339	1.1%	518	1.6%
95	Emergent Herbaceous Wetland:	Rural	222	0.7%	282	0.9%
	Total:		31423		31418	
	Percent Urban			**72%**		**76%**
	Percent Rural			**28%**		**24%**

Dispersion within urban environments has different characteristics than that occurring in a rural environment. The urban boundary layer will behave in a more convective, turbulent manner during the hours just after sunset due to the urban heat island effect. Using the Aloha Project site as general center point, Figure 5 presents the Project locations relative to the city boundaries in the region. The Aloha site is approximately 10 kilometers from the northwestern edge of the Hillsboro city boundary and nine (9) kilometers from the southeastern edge of the Beaverton city boundary. The three (3) cities used for identifying the population are Hillsboro, Aloha and Beaverton. Each of the three (3) cities vastly exceeds the 750 people per square kilometer EPA threshold for identifying the area as urban. The three (3) cities also represent a continuous urban/developed corridor which is aligned with the predominant wind direction. The use of the 2022 census derived population data and population density data are summarized in Table 5.

Table 5
Existing Populations and population density

	Population*	Population Density/km^{2*}
Hillsboro	107,299	1,601.3
Aloha	58,828	2,825.3
Beaverton	97,053	1,920.2
Total	**263,180**	

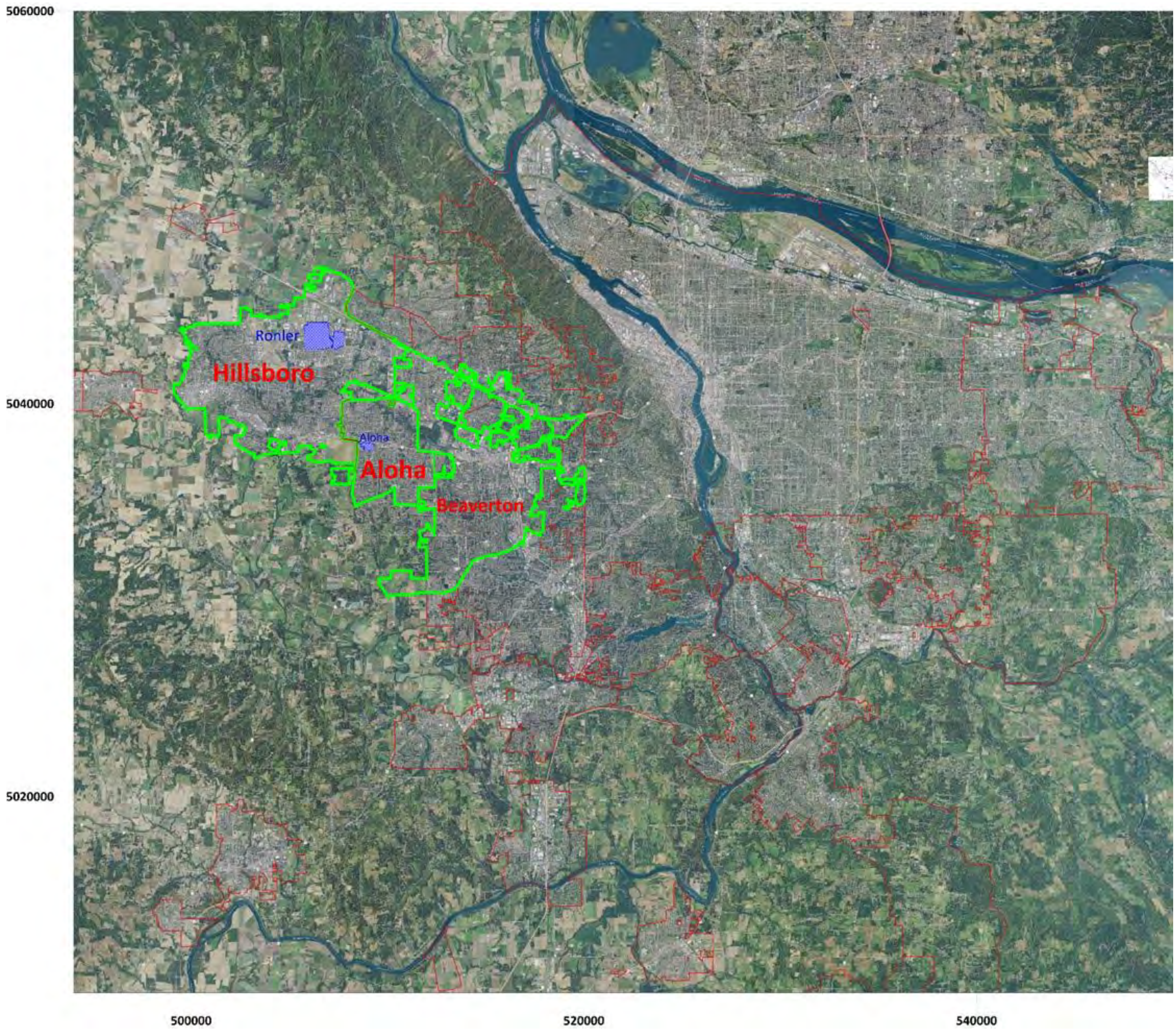
* 2020 /2022 United States Census Bureau Data

Based on the combined population of 263,180, this value was used for the population input into AERMOD. This combined population presents a conservative and appropriate magnitude of the urban heat island effects within the impact areas surrounding both sites.

Meteorological Data Representativeness: The ODEQ approved use of the five (5) years of Hillsboro Airport ASOS surface meteorological data satisfies the need for site-representative data. EPA defines the term "site-representative data" to mean data that would be similar to atmospheric dispersion conditions at the source and at locations where the source may have a significant impact on air quality. Specifically, the meteorological data requirement originates from the Clean Air Act in Section 165(e)(1), which requires an analysis "of the ambient air quality at the facility and in areas which may be affected by emissions from such facility for each pollutant subject to regulation under [the Act] which will be emitted from such facility." This requirement and EPA's guidance on the use of site-representative data are also discussed in Section 8.4.4 of Appendix W to 40 CFR Part 51. The representativeness of meteorological data is dependent upon a determination that the data are free from inappropriate local or microscale influences.: (a) the proximity of the meteorological monitoring site to the area under consideration; (b) the complexity of the topography of the area; (c) the exposure of the meteorological sensors; and (d) the period of time during which the data are collected.

The Hillsboro Airport ASOS surface meteorological monitoring station qualifies as site-representative data for several reasons. First, the Hillsboro Airport meteorological monitoring site is the closest ASOS site and located in very close proximity to the Intel locations, with nearly identical elevations above mean sea level (amsl). Second, both locations are located in the same area of the broad and relatively flat Tualatin Valley. Third, the ASOS monitoring location at the airport was selected to be far enough from wind flow perturbations caused by buildings and other features. Fourth, the period of meteorological data selected at the time of the modeling analyses (2016-2020) would be expected to be the most representative of current conditions, with the same general land uses surrounding the current ASOS location and airport as well as the proposed Project sites. A review of current Google Earth photo-aerials shows that nearby land uses at both locations are similar to the land uses reflected in the 2016 and 2020 NLCD sets. Additionally, these data meet the EPA data recovery requirements for air quality modeling as described earlier.

Figure 5
City Boundaries Used for Developing Urban Population in AERMOD



Representativeness is defined in the document *"Workshop on the Representativeness of Meteorological Observations" (Nappo et. Al., 1982)* as "the extent to which a set of measurements taken in a space-time domain reflects the actual conditions in the same or different space-time domain taken on a scale appropriate for a specific application." Judgments of representativeness should be made only when sites are climatologically similar, as is the case with the meteorological monitoring site and the proposed Project location. In determining the representativeness of the meteorological data set for use in the dispersion models at the Project sites, the consideration of the correlation of terrain features to prevailing meteorological conditions, as discussed earlier, would be nearly identical to both locations since the orientation and aspect of terrain at the proposed Project locations correlates well with the prevailing wind fields as measured by and contained in the meteorological dataset. In other words, the same mesoscale and localized geographic and topographic features that influence wind flow patterns at the meteorological monitoring site also influence the wind flow patterns at the proposed Project sites.

For these reasons, the Hillsboro Airport meteorological data was selected and approved by ODEQ for use in modeling emissions from the proposed Project. This data also satisfied the EPA definition of representative data which is similar to the meteorological and dispersion conditions at the Project sites and the regional area. An annual windrose for the five-year modeling period is shown in Figure 6.

Existing Baseline Air Quality Data: The nearest air quality monitoring sites to the proposed Project are listed in Table 6 which also lists the monitored pollutants and distances to the Project.

Table 6
Ambient Monitoring Site Information

Monitors	Distance from Ronler Acres (km)	Distance from Aloha (km)	Pollutants Monitored	Monitoring Objective
SE Lafayette (SEL) 5824 SE Lafayette St. (EPA# 41-051-0080)	25	22	CO, NO_2, Ozone, PM-10, PM-2.5, SO_2	Population/NAAQS
Tualatin at I-5 (TBC) (EPA# 41-067-0005)	21	15	CO, NO_2, Ozone, PM-2.5	Source/NAAQS
Hare Field (HHF) Grant Street (EPA# 41-067-0004)	5	8	PM-2.5	Population/NAAQS

In addition to the monitoring site data, the ODEQ allows for the use of the *Northwest International Air Quality Environmental Science and Technology Consortium (NW-AIRQUEST)* data for the 2014-2017 period which is considered design data for the 2023 period and can be considered representative of the impact areas. These data sets are summarized in Table 7.

Figure 6
Hillsboro Annual Wind Rose (2016-2020)

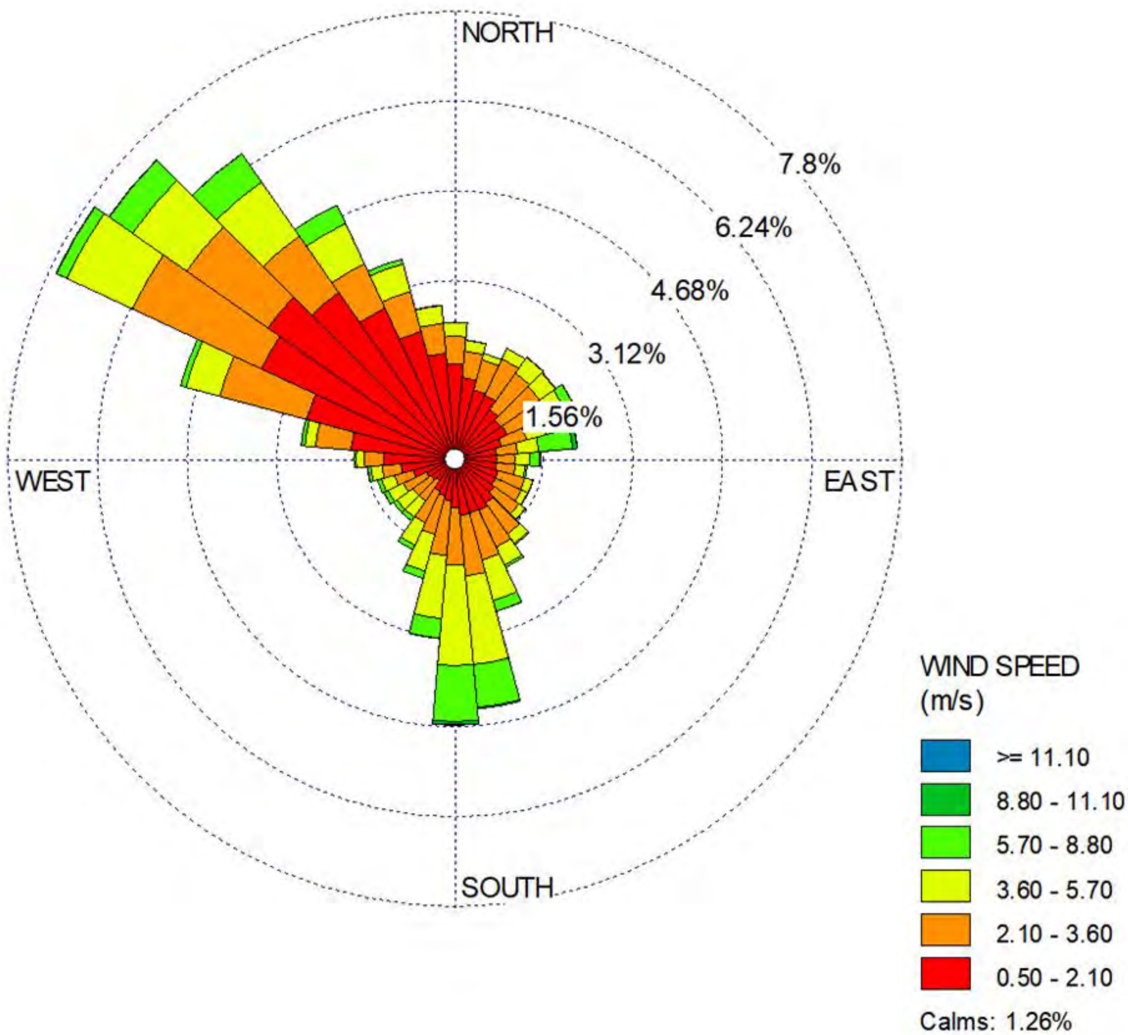


Table 7
Background Monitoring Data

Pollutant	Units	Avg Time	Stations	2018	2019	2020	2021	2022	NW AIRQUEST Design Value
PM-2.5	ug/m^3	24 Hr 1st High	Hare Field	28	36	28	24	47	NA
			Tualatin	19	32	28	20	66	
			S. Lafayette	20	30	31	23	75	
		24 Hr 98th percentile	Hare Field	18	24	18	15	29	19.6
			Tualatin	17	21	18	18	28	
			S. Lafayette	17	20	23	16	27	
		Annual Mean	Hare Field	6.1	6.7	6.1	5.8	7.9	6.3
			Tualatin	7.1	6.8	6.8	6.7	8.5	
			S. Lafayette	6.8	6.5	7.1	6.4	7.9	
PM-10	ug/m^3	24 Hr 1st High	S. Lafayette	54	33	35	31	83	55
		24 Hr 2nd High	S. Lafayette	27	29	35	29	39	
		24 Hr 1st High	Hare Field	ND	35	ND	ND	ND	
		24 Hr 2nd High	Hare Field	ND	32	ND	ND	ND	
CO	ug/m^3	8 Hr 1st High	Tualatin	1145	1145	1145	1145	1260	1306
			S. Lafayette	1832	1832	1718	1947	1947	
		1 Hr 1st High	Tualatin	1603	1489	**	1603	2061	1744
			S. Lafayette	2405	2176	**	2978	2405	
NO_2	ug/m^3	1 Hr 1st High	Tualatin	83	77	79	71	64	NA
			S. Lafayette	88	81	66	68	68	
		1 Hr 98th percentile	Tualatin	72	62	56	56	58	65.7
			S. Lafayette	66	60	55	58	56	
		Annual Mean	Tualatin	23	21	19	17	19	14.2
			S. Lafayette	17	15	12	12	13	
SO_2	ug/m^3	1 Hr 1st High	S. Lafayette	9	8	8	8	8	NA
		24 Hr 1st High	S. Lafayette	3	3	4	5	5	6.0
		1 Hr 99th percentile	S. Lafayette	8	8	5	8	8	12.6
		Annual Mean	S. Lafayette	1.2	0.6	0.6	1.3	1.5	1.20

Notes: Data for 2021-2022 was derived from EPA AIRS Monitored Values Reports. NA = not applicable ND = no data
ODEQ data for 2018-2020 was also supplemented by EPA AIRS data as necessary.
** ODEQ fire data not removed by EPA.

Federal regulations, specifically 40 CFR Part 58 Appendix D, require that a State and Local Air Monitoring (SLAMS) network be designed to meet a minimum of three basic monitoring objectives: Provide air pollution data to the public in a timely manner, support compliance with the National Ambient Air Quality Standards (NAAQS), and support air pollution research. A variety of site types are needed to support these basic objectives, including six (6) general types listed below:

1. Sites are located to determine the highest concentrations expected to occur in the area covered by the network.

2. Sites are located to measure typical concentrations in areas of high population density.
3. Sites are located to determine the impact of significant sources or source categories on air quality.
4. Sites are located to determine general background concentration levels.
5. Sites are located to determine the extent of regional pollutant transport among populated areas.
6. Sites are located to measure air pollution impacts on visibility, vegetation damage, or other welfare-based impacts.

The physical siting of an air monitoring station must conform to 40 CFR Part 58 and its location must achieve a spatial scale of representativeness that is consistent with the monitoring objective and site type.

The spatial scale results from the physical location of the site with respect to the pollutant sources and categories. It estimates the size of the area surrounding the monitoring site that experiences uniform pollutant concentrations. The categories of spatial scale are:

1. Microscale-Defines the concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
2. Middle scale-Defines the concentration typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometer.
3. Neighborhood scale—Defines concentrations within some extended area of the city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers range.
4. Urban scale-Defines concentrations within an area of city-like dimensions, on the order of 4 to 50 kilometers.
5. Regional scale-Defines usually a rural area of reasonably homogeneous geography without large sources and extends from tens to hundreds of kilometers.
6. National and global scales-These measurement scales represent concentrations characterizing the nation and the globe as a whole.

The selection of these monitoring sites is also based on the monitoring stations' objective, which is NAAQS and population exposure for measuring background air quality. These monitoring objectives can be used to support the demonstration of compliance with the NAAQS when coupled with dispersion modeling.

Along with the monitoring objective is the spatial scale of the monitoring site which is used to represent high concentration locations, population and background exposure. The spatial scale of the SE Lafayette monitoring station is summarized below by pollutant:

- NO_2 – Urban which represents highest concentration, population exposure and general background.
- Ozone – Urban which represents highest concentration, population exposure and general background.
- CO – Micro scale which represents highest concentration.
- SO_2 – Urban which represents highest concentration, population exposure and general background.
- PM-10 – Neighborhood which represents highest concentration, population exposure and general background.

- PM-2.5 – Neighborhood which represents highest concentration, population exposure and general background.

The spatial scale for Hare Field is:

- PM-2.5 – Neighborhood scale which is used for highest concentration, population exposure and general background.

The spatial scale for the Tualatin monitoring station is microscale whose primary purpose is to monitor freeway-based concentration data for NO_2, CO, Ozone, and PM-2.5. While microscale is useful for determining highest concentration data, the immediate proximity to Interstate Route 5 (I-5) make this monitoring data better suited to identifying temporal (freeway-based impacts) to air quality based on time of day rather than measuring a true background data set that is not influenced by any one source or source type. As such, the further use of this data set was not considered.

As referenced above, there is also gridded background air quality data based on the NW AIRQUEST data set that covers the Project area. This data set (2014-2017) can also be used as representative background if demonstrated to be appropriate and applicable to a particular Project area. And while the use of the NW AIRQUEST data can be considered conservative for some pollutants and averaging periods, as noted below, this data set does not track the current background air quality trends over the last five (5) years as discussed below.

Based on the goals and objectives of the specific monitors listed in Table 6, the selection of the SE Lafayette and Hare Field monitoring sites were chosen to represent background for use in the dispersion modeling analyses.

In order to select the applicable background monitored data set to use in the modeling analyses, a trend analysis of the background air quality data based on the last five (5) years is summarized below which is based, in part, on the data in Table 7. Background trends for CO and SO_2 are not summarized below as the Project impacts are expected to be less than the applicable significant impact levels (SILs). Additionally, the SE Lafayette monitoring station represents the highest (design value) concentration for CO and the NW AIRQUEST represents the highest design value for SO_2. These locations were used to represent background concentrations as needed for the Project modeling analyses.

The overall trend in background NO_2 for the last five (5) years (2018-2022) at the SE Lafayette monitoring station has been downward for both 1 hour (98^{th} percentile) and annual averages. A similar trend is noted at the Tualatin monitoring site. Note the NW AIRQUEST data is consistent with the 2018 monitoring data and does not reflect the decrease in background over time.

This trend for PM-2.5 is not duplicated as the background concentrations at SE Lafayette, Tualatin and Hare Field have shown a small increase in background monitored concentrations since 2018. While the PM-2.5 trend decreased during the 2021 time period, overall, the trend has been upward. As noted with the NO_2 trends, the NW AIRQUEST data best represents the year 2018 and does not reflect the increase in background over time.

PM-10 trends at the SE Lafayette site show similar increases between the years 2018 and 2022.

Seasonal Background NO_2 Data

For 1-hour NO_2, seasonal hourly background for the 2019-2021 data period was used, in accordance with the procedures found in "*Guidance Concerning the Implementation of the 1-hour NO_2 NAAQS for the PSD Program" (6/29/10)* and *"Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 NAAQS" (3/01/11)*. Complete hourly data from the 2022 data period is not yet available for use so the seasonal hourly background NO_2 for modeling will be the 2019-2021 data period. In accordance with EPA procedures, the third highest value for each hour and season was used to calculate the three-year average of each time period.

Seasonal Hour-Of-Day is determined by organizing all of the NO_2 concentrations by hour of day (1AM, 2AM, 3AM, etc.) for each season of the year in descending order and selecting the 3^{rd} highest NO_2 concentrations for each hour of the day and season.

For example, (1AM)

1. First take all the 1AM values (maximum of 90-92 numbers) for each Season
    a. Winter = December of Previous Year, January, February
    b. Spring = March, April, May
    c. Summer = June, July, August
    d. Autumn = September, October, November
2. Sorting the NO_2 concentrations in descending order (highest to lowest)
3. Take the 3^{rd} highest NO_2 concentrations.
4. This value was used to represent the 1AM 3^{rd} highest or 98^{th}- percentile of available data.
5. The above process is repeated for each hour of the day and season.
6. Repeat steps 1 through 5 for each of the three years under review.
7. Average the three 1AM NO_2 concentrations.
8. This value was used in AERMOD as the NO_2 background concentrations (3yr average of the 98^{th} percentile) for the 1AM hour and season.
9. Repeat step 7 and 8 for each of the hours in the day and season.

This produced the following data in Table 8 which was used as input in the AERMOD analysis for the 1-hour NO_2 NAAQS.

Table 8
Ambient NO_2 Seasonal Hour by Day Concentrations

Hour	Winter	Spring	Summer	Fall	Units
1	21.40	23.50	14.70	19.10	PPB
2	20.50	22.70	13.50	18.40	PPB
3	19.60	22.20	15.20	17.90	PPB
4	20.30	21.70	15.50	17.10	PPB
5	20.00	23.10	17.90	17.30	PPB
6	21.40	22.70	17.90	19.20	PPB
7	23.60	26.50	19.90	21.00	PPB

8	27.50	25.90	17.20	21.30	PPB
9	23.90	22.50	15.50	20.30	PPB
10	22.70	18.90	12.00	17.00	PPB
11	21.60	16.40	13.50	16.70	PPB
12	20.40	14.30	11.10	16.80	PPB
13	18.50	15.00	11.20	18.00	PPB
14	18.10	14.60	12.50	17.80	PPB
15	18.80	13.50	9.20	18.40	PPB
16	19.10	13.60	8.00	20.10	PPB
17	22.30	13.70	10.30	21.10	PPB
18	24.80	15.40	8.40	26.50	PPB
19	28.20	18.30	10.20	30.10	PPB
20	30.00	26.60	14.10	29.80	PPB
21	28.80	30.10	15.50	27.10	PPB
22	28.30	27.90	17.80	25.10	PPB
23	26.90	26.50	16.80	23.70	PPB
24	24.10	24.50	15.10	20.80	PPB

Summary of Selected Data: Based on the monitoring objectives (NAAQS), the spatial scales (Urban and Neighborhood) of the Hare Field and SE Lafayette monitoring stations and the last five (5) years of background trends, these sites were selected as being the most representative for determining the background concentrations to be used in the modeling analyses in place of the NW AIRQUEST design values. For NO_2, Ozone and PM-10 background data, SE Lafayette was used with PM-2.5 background based on Hare Field, which is also the closest PM-2.5 monitoring station to the Project sites. For background CO and SO_2, the SE Lafayette data was also used in the modeling analyses.

The background concentrations used in the modeling analyses are the highest values over the last three (3) year period for 1-and 8-hour CO, 24-hour PM-10, annual NO_2 and 1-hour, 24-hour and annual SO_2. 24-hour and annual PM-2.5 background concentrations are based on the 3-year average in accordance with *"Guidance for Ozone and Fine Particulate Matter Permit Modeling" (07/29/22)*. Table 9 presents the background concentration data used in the dispersion modeling assessments.

Table 9
Background Air Quality Data Summary

Pollutant and Averaging Time	Background Value ($\mu g/m^3$)
PM-10 – 24-hour 3-year 2nd High NAAQS	39.0
PM-2.5$_5$ – 3-Year Average of Annual 24-hour 98th Percentiles NAAQS	20.7
PM-2.5$_5$ – 3-Year Average of Annual Values NAAQS	6.6
CO – 1-hour High NAAQS	2,978

CO – 8-hour High NAAQS	1,947
NO_2 –3-Year Average of Annual 98th Percentile 1-hour Daily Maximum NAAQS	56.3*
NO_2 – Annual Maximum NAAQS	18.3
SO_2 – 3-Year Average of Annual 99th Percentile 1-hour Daily Maxima NAAQS	7.0
SO_2 – 24-hour Maximum NAAQS 24-hour High, 2nd High NAAQS	4.7
SO_2 – Annual Maximum NAAQS	1.1
Notes * Seasonal hourly background concurrent with the 2016-2020 meteorology was used for modeling. Reference value only. Conversion of ppm/ppb measurements to µg/m³ concentrations based on: µg/m³ = ppm x 40.9 x MW, where MW = 48, 28, 46, and 64 for ozone, CO, NO_2, and SO_2, respectively.	

AIR QUALITY MODELING PROCEDURES

The AERMOD dispersion model was used to quantify pollutant impacts on the surrounding environment based on the emission sources and operating parameters. AERMOD was used to determine Facility impacts on Class II areas in the immediate Project vicinity in simple, intermediate, and complex terrain areas during Project operations. AERMOD was also used to assess the Class I significant impact levels (SILs) as discussed later in the summary report. AERMOD was the primary model used for comparison of Project impacts to SILs and demonstration of compliance with NAAQS. Modeling of operational impacts are described below.

AERMOD Model, Options, and Procedures: AERMOD is a steady-state plume dispersion model that simulates transport and dispersion from multiple point, area, or volume sources based on updated characterizations of the atmospheric boundary layer. AERMOD uses Gaussian distributions in the vertical and horizontal for stable conditions, and in the horizontal for convective conditions; the vertical distribution for convective conditions is based on a bi-Gaussian probability density function of the vertical velocity. For elevated terrain AERMOD incorporates the concept of the critical dividing streamline height, in which flow below this height remains horizontal, and flow above this height tends to rise up and over terrain. AERMOD also uses the advanced PRIME algorithm to account for building wake effects. AERMOD input data options are listed below following these EPA modeling guidance documents.

- Final plume rise
- Stack tip downwash
- Regulatory default option (i.e., calm and missing meteorological data processing and elevated terrain heights option)

Flagpole receptors were not used (ground level concentrations only). AERMAP was used to calculate receptor elevations and hill height scales for all receptors from National Elevation Data (NED) data in accordance with EPA guidance. Selection of the receptor grids is discussed below.

GEP Stack Height and Downwash: Stack locations and heights and building locations and dimensions were input to BPIP-PRIME. The first part of BPIP-PRIME determines and reports on whether a stack is being subjected to wake effects from a structure or structures. The second part calculates direction-dependent "equivalent building dimensions" if a stack is being influenced by structure wake effects. The BPIP-PRIME output is formatted for use in AERMOD input files. BPIP-PRIME included all of the point source locations. Figures 7 and 8 present the buildings and building names that were input in to BPIP-PRIME. The individual building elevations can be found in the BPIP-PRIME input/output files.

Receptor Selection: Receptor and source base elevations were determined from United States Geological Survey (USGS) National Elevation Dataset (NED) data. The NED data was processed with the EPA-model AERMAP for the receptor locations selected. All coordinates (both sources and receptors) are referenced to UTM North American Datum 1983 (NAD83, Zone 10). AERMAP is capable of interpolating the elevation data in the NED data for both receptor elevations and hill height scales.

The NED data are available in 1/3-arcsecond (about 10 meter) and 1-arcsecond (about 30 meter) grid node spacing. Areas that contain receptor grids with 100 meter spacing or less between adjacent receptors used the10 meter NED data. Other areas that contain only receptor grids of greater than 100 meter spacing utilized the 30 meter NED data. For purposes of determining hill height scales, the NED datasets used were extended 5-km past the outside of the coarse receptor grid described below for 30-meter NED data and 2-km past the outside of the intermediate/downwash receptor grids described below for 10-meter NED data.

Cartesian coordinate receptor grids were used to provide adequate spatial coverage surrounding the Project area for assessing ground-level pollution concentrations, to identify the extent of significant impacts, and to identify maximum impact locations. For the full impact analyses, a nested grid was developed to fully represent the initial location and extent of significance area(s) and maximum impact area(s). The nested grid was comprised of the following:

- Receptors were placed along the proposed Project fencelines with a spacing of about 25 meters or less between adjacent receptors.
- The downwash receptor grid with a receptor spacing of 25 meters was extended from the Project fencelines out to 300 meters from the Project.
- The first intermediate receptor grid with 50-meter receptor spacing was extended from the downwash receptor grid out to 1000 meters from the Project fencelines.
- The second intermediate receptor grid with 100-meter receptor spacing was extended from the first intermediate receptor grid outwards to two (2) kilometers (km) from the Project fencelines in all directions.
- The first coarse grid with 200-meter receptor spacing extended out five (5) km from the Project in all directions.
- A second course grid with 500 meters spacing extended outwards ten (10) km from the Project fencelines in all directions.
- Additional grids with 1,000 meters spacing were developed to close off the 1-hour NO2 SIL isopleth of 7.5 ug/m^3.
- When maximum impacts occur in areas outside the 25-meter spaced receptor grid, additional refined receptor grids with 25-meter resolution were placed around the maximum impacts and extended as necessary to determine maximum impacts.

Figure 7
Gordon Moore Park at Ronler Acres Building Names for BPIP-PRIME

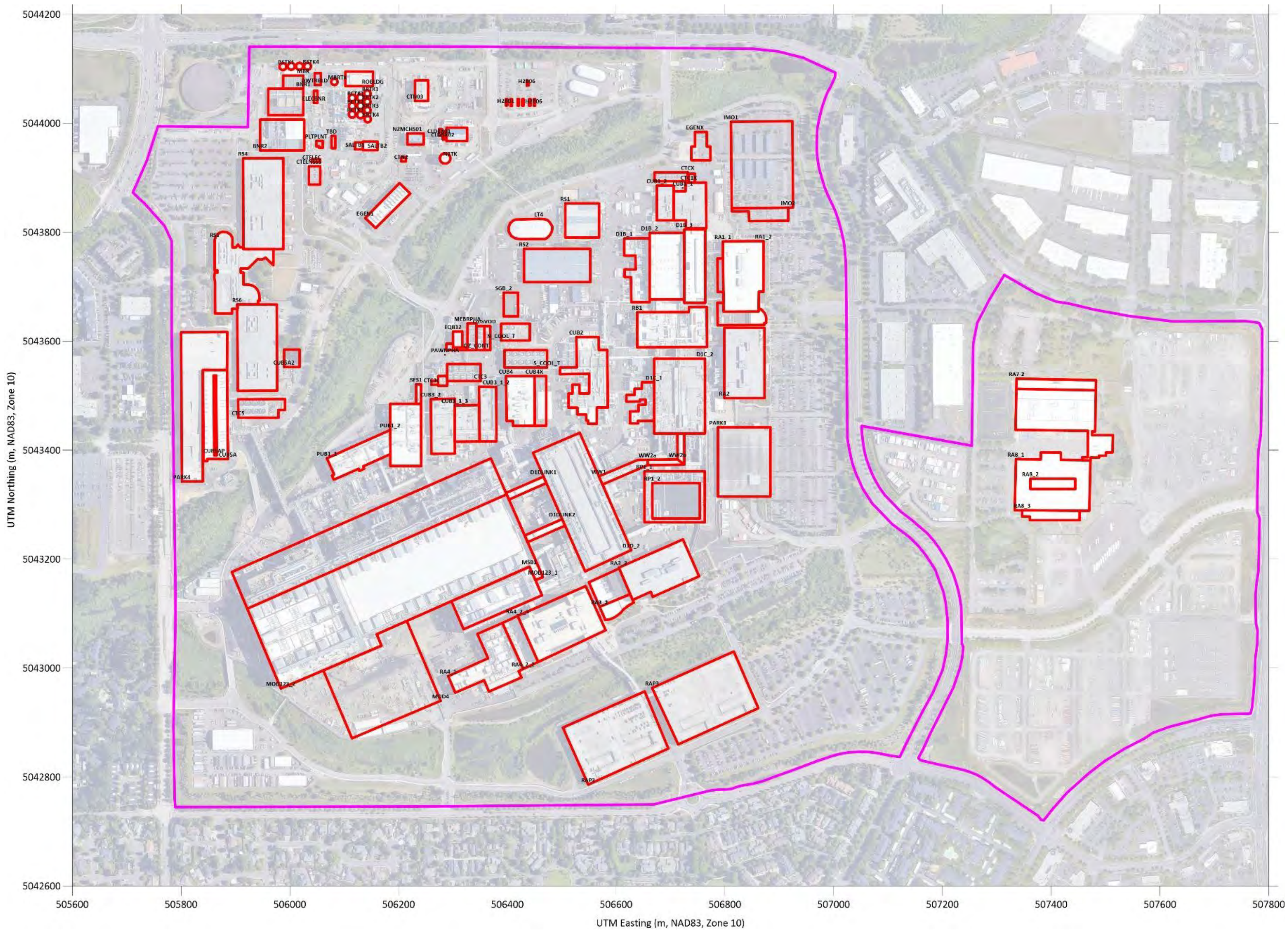
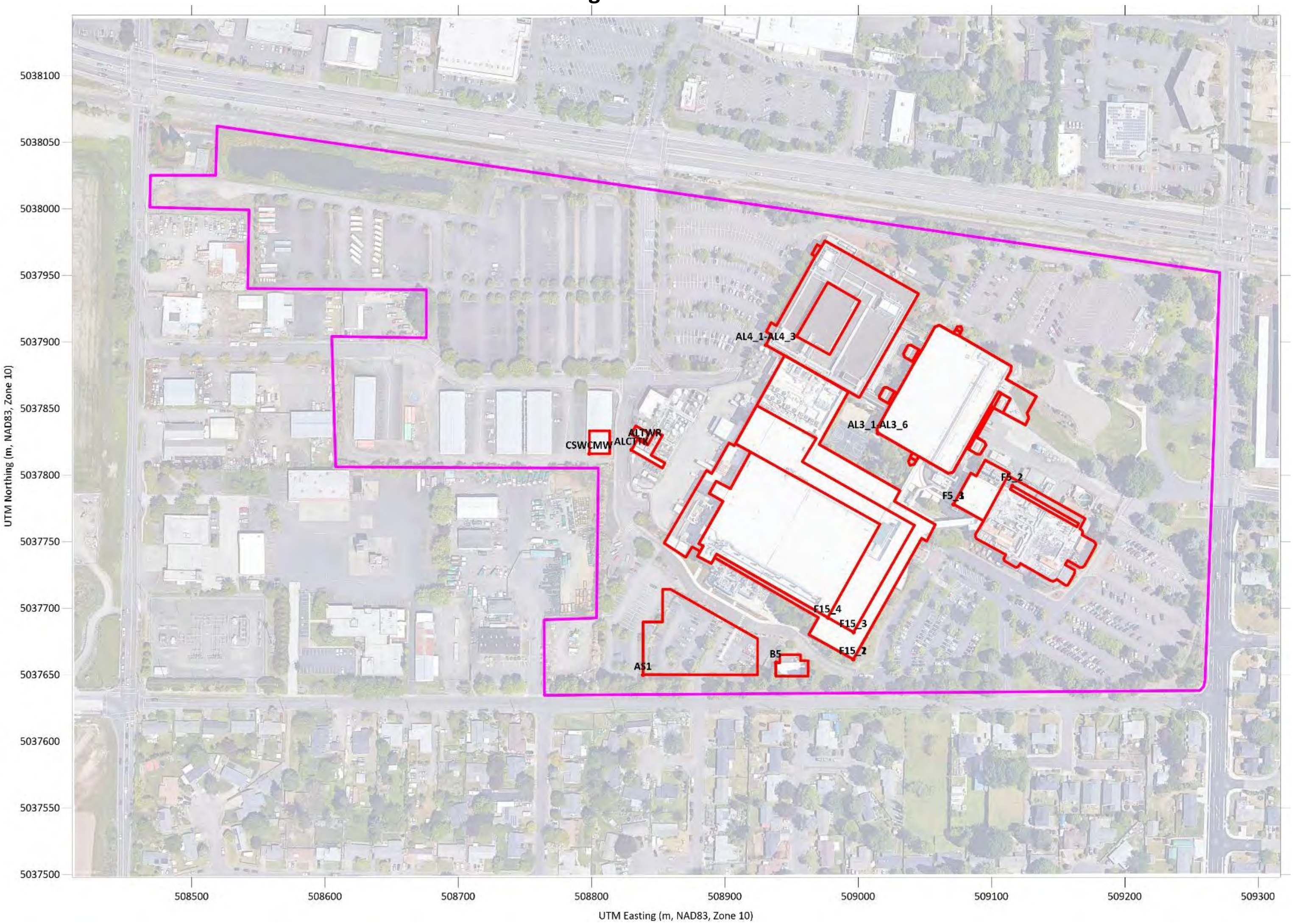


Figure 8
Aloha Building Names for BPIP-PRIME



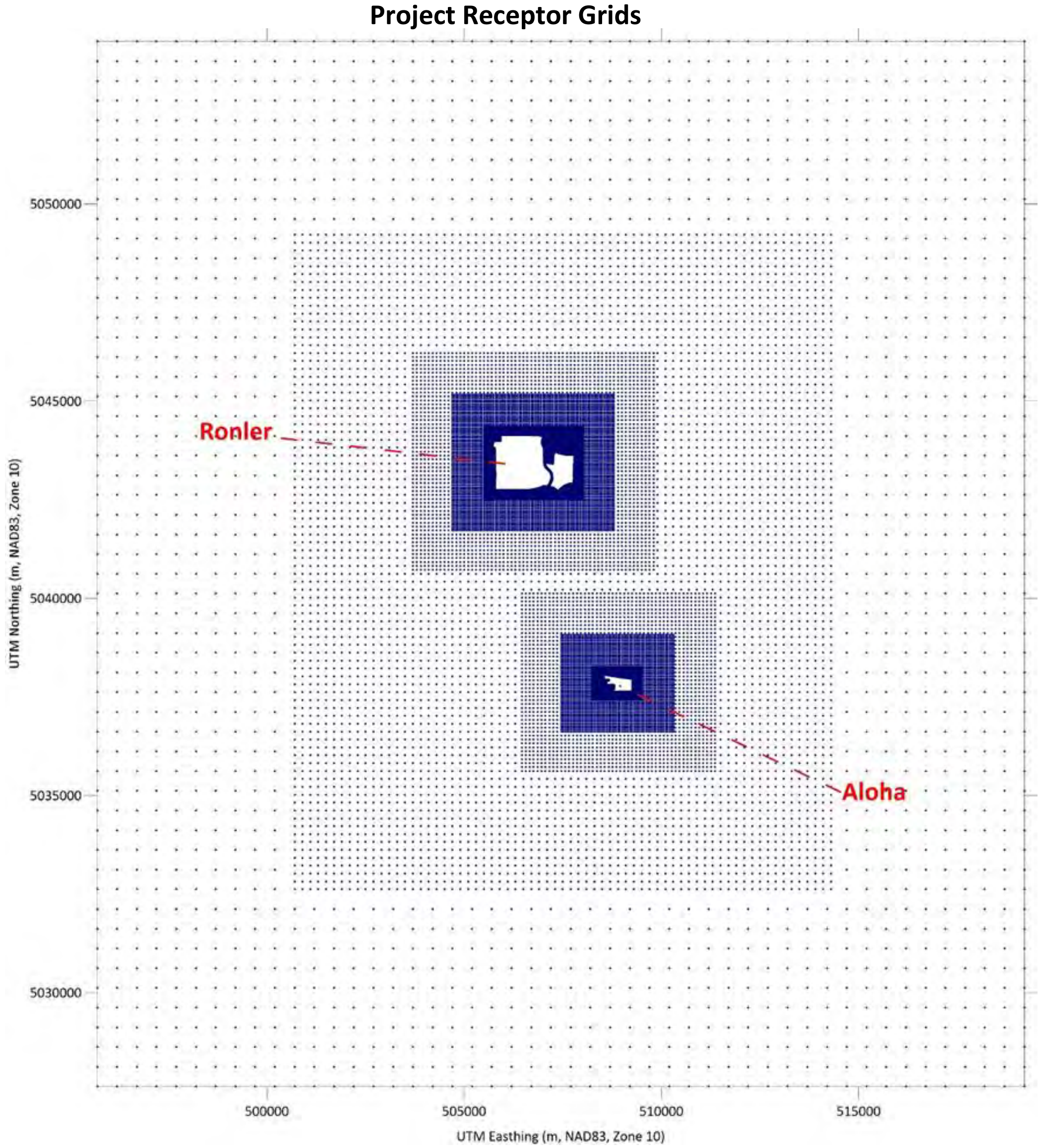
Ambient concentrations within the Facility fencelines were not calculated.

Figure 9 depicts the receptor grids based on the discussion above.

Steady-State Emission Sources

Modeled concentrations from normal operations were based on continuous operation of all sources at the Project, except for the emergency diesel generators and fire pumps. For the continuous source operations, with Scrubbers, RCTOs, Boilers, Heaters, Generators, Cooling Towers and the ammonia waste TMWX, each short-term averaging period (1-,8- and 24-hour) utilized the maximum hourly emission rates. Annual emissions were based on full time operation or utilized annual capacity factors.

Figure 9
Project Receptor Grids



In summary:

- EXSC, EXAM, PSSS, RCTO and TMXW operate 24 hours per day and 8,760 hours per year.
- RCTOs at an annual operating capacity at 100%
- Boiler operation is up to 24 hours per day with a 30% annual capacity factor.
- Emergency generator testing occurs up to 60 minutes per day, 10 engine tests per day and 25 hours per year. Fire pump testing is up to 50 hours per year. The modeling procedures for the emergency generators are discussed below.
- Cooling towers operate 24-hours per day and 8,760 hours per year.
- Lime silos will only emit during loading operations which will occur no more than 1 hour per day with only one silo being loaded on any given hour or day. On an annual basis, there will be no more than 52 loading operations per year per silo.
- Fugitive dust emissions are assumed to occur 24 hours per day and 8,760 hours per year.

All the sources were modeled as point sources with the fugitive emissions modeled as an area source and the lime silo as a volume source. All the source coordinates are based on UTM NAD 83, Zone 10. Table 10 presents the emission source naming scheme used in AERMOD along with the modeled pollutants which were assessed in this report. This naming scheme is used in the detailed source/emissions tables provided in Attachment B as well as in the modeling input/output files that are provided to the ODEQ.

Table 10
Emission Source Names and Types

Emission Source	Model ID	PSD Pollutants Subject to AQ Assessment
Rotary Concentrator Thermal Oxidizers (RCTOs)	TO	NO_x, CO, PM-10, PM-2.5, SO_2, VOC
RCTO with Wet Electrostatic Precipitator (WESP)	TI, TW	NO_x, CO, PM-10, PM-2.5, SO_2, VOC
Scrubbers:		
Acid Gas (EXSC) Scrubbers	SC	NO_x, CO, PM-10, PM-2.5, SO_2, VOC
EXSC with WESP	SI, SW	NO_x, CO, PM-10, PM-2.5, SO_2, VOC
Ammonia (EXAM) Scrubbers	AM	NO_x, CO, PM-10, PM-2.5, SO_2, VOC
Process Specific Support System (PSSS) Scrubbers	PS, SC	PM-10, PM-2.5
Boilers	BO	NO_x, CO, PM-10, PM-2.5, SO_2, VOC
Building Heaters and Small Boilers	HE	NO_x, CO, PM-10, PM-2.5, SO_2, VOC
Emergency Generators and Fire Pumps	EG, FI	NO_x, CO, PM-10, PM-2.5, SO_2, VOC
Trimix Ammonia Treatment System (TMXW)	TM	NO_x, CO, PM-10, PM-2.5, SO_2, VOC
Lime Silos	LIME	PM-10, PM-2.5
Cooling Towers	CT	PM-10, PM-2.5
Paved Road	PR	PM-10, PM-2.5

Intermittent Emission Sources

The fire pumps and emergency generators operate intermittently, for a limited number of hours in the year for maintenance and readiness testing. Intel's current air permit specifies that no more than ten (10) generators may be run in a day and the generators can only be run during daylight hours, which is defined as hours between 8:00 am and 6:00 pm. To evaluate compliance with short-term and long-term air quality standards, these sources were modeled using annualized emissions (hourly emission rate times the number of hours run per year divided by 3,650) for all hours of the day.

The emergency generators typically run up to 25 hours per year, with 50 hours for the emergency fire pumps. As explained in EPA's March 1, 2011, memorandum, *"Additional Clarification Regarding*

Application of Appendix W Modeling Guidance for the 1-hour National Ambient Air Quality Standard"[2] it is unlikely that emissions from the intermittently operated emergency generators will coincide with the worst-case meteorological conditions and modeled 1-hr NO_2 impacts can be significantly overestimated. As such, EPA also suggests in their March 1, 2011, memo that these types of intermittent sources can be excluded from compliance demonstrations for the 1-hour NO_2 standard. Nonetheless, Intel included emergency generator emissions in the 1-hour NO_2 standard compliance demonstration using the EPA modeling procedures (annualized emissions for NO_2) and the Monte Carlo methodology described below.

Since the generators only run intermittently, they pose a challenge to accurately reflect potential ambient air quality impacts. One approach recommended by EPA[3] is to model impacts from intermittent sources based on an annualized hourly emission rate, rather than the maximum hourly emissions. This approach would account for potential worst-case meteorological conditions combined with continuous operation of the emergency generators at an average hourly emission rate. This approach was used for the SIL evaluation and for the 1-hour NO_2 NAAQS. Additionally, the Monte Carlo method, which accounts for the statistical variation in intermittent operations, was also used to assess the 1-hour NO_2 NAAQS. Both analyses are presented in the summary tables that follow.

NO_2 Modeling Procedures

NO_2 impacts were assessed using a conservative Tier 2 analysis using the Ambient Ratio Method Version 2 (ARM2), adopted in the *Guidance Concerning the Implementation of the 1-hour NO_2 NAAQS for the PSD Program" (6/29/10)*. ARM2 adjusts the modeled NO_x concentrations based on an empirical relationship between ambient NO_X and ambient NO_2 concentrations. ARM2 was also used for the intermittent source operations modeling using the EPA annualized emissions methodology.

A Tier 3 analysis was additionally used to assess the intermittent source 1-hour NO_2 concentrations using the Monte Carlo method. Here, the plume volume molar ratio method (PVRMR) was used with concurrent ambient ozone data collected at the SE Lafayette monitoring site. As the source of the background air quality data to be used in the modeling analysis, SE Lafayette has been shown above to be representative of the Project sites. The use of hourly ozone data requires that it be based on the same years as the AERMOD meteorology data. NO_2/NO_x ratios were based on Cummins (the engine manufacturer) supplied data for the 3,000 horsepower engines (or larger) at 0.05. All other diesel equipment used a 0.10 NO_2/NO_x ratio from the EPA ISR database.

Intermittent Source Modeling Procedures

For the 1-hour short-term averaging times, AERMOD was used to determine the worst-case group of engines from the specific engine source groups listed in Table 11. This table represents the typical testing schedule for the different groupings of generators. As noted earlier, no more than 10 engines will be tested in any one day. For determining the 1-hour NO_2 and SO_2 modeled concentrations, each of the 20 groups were modeled as separate source groups with all of the engines within each source group assumed to be running. Thus, depending on the source group that is being modeled, anywhere from three (3) to

[2] EPA Memorandum, "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 , National Ambient Air Quality Standard", March 1, 2011.
[3] Ibid

seven (7) engines could be tested in any one hour. The engines are only tested between the hours of 8:00 AM and 6:00 PM (10 hours per day).

For the 1-hour NO_2 NAAQS using the EPA methodology, the engine emission rates were based on the maximum hourly rate which was then prorated to an annual average emission rate, assuming 25 hours per year of usage. For the Monte Carlo method, the maximum hourly emission rate was used. In both cases, the engines were at 100 percent load. For the 1-hour CO and SO_2 averaging period, the maximum hourly emission rate was used with the source groups listed in Table 11.

Additional short-term periods of 1, 8 and 24-hours were also modeled with AERMOD, but to determine the worst-case group of engines, a different method was utilized. As noted, each of the 20 engine source groups are made up of anywhere from three (3) to seven (7) engines. Up to 10 engines can be tested during each day. Rather than trying to identify which 10 engines out of the 20 source groups would be tested for the 8 and 24-hour averaging periods, each engine was assumed to operate for up to 10 hours. Thus, each engine became a specific source group, and each engine was assumed to operate up to 10 hours a day with all the 10 hours of emissions emitted from a single stack (8:00 AM to 6:00PM) to conservatively represent up to 10 different engines operating one hour each in any one day as appropriate for 8-hour and 24-hour averaging times (i.e., 8 engines for 8-hour averaging times and 10 engines for 24-hour averaging times). Please note for the 8-hr CO runs, to account for 10 engines in the 8-hour period, the hourly CO emission rate was ratioed by 10/8. Thus, the worst-case engine location could be determined from the analysis with all emissions occurring from a single engine (representative of the 8 and/or 10 engines being tested) for comparisons with the 8-and 24-hour short-term standards. The worst-case engine was then used for all subsequent modeling for the 1 and 8-hour CO averages and 24-hour SO_2 and PM-10/PM-2.5 averages.

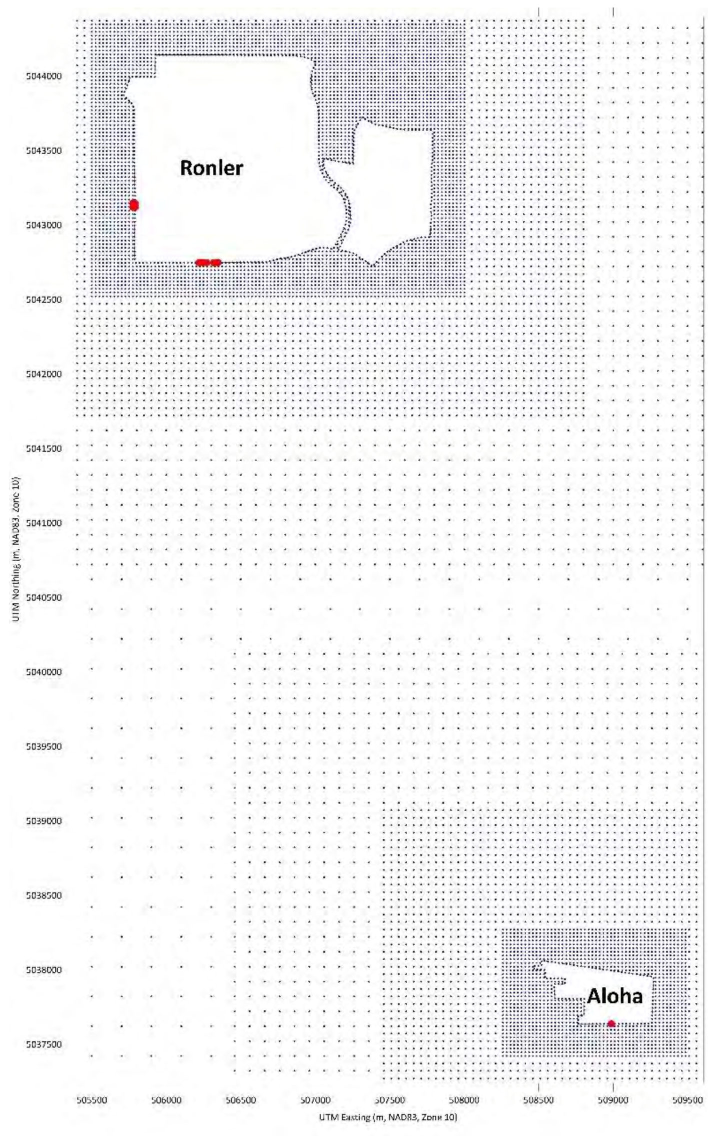
Identifying the Combined Maximum Impact Location – Screening Modeling Procedures

While either the maximum modeled single engine or group of engines from Table 11 was identified from modeling just those 20 groups in AERMOD, the location may not correspond to the maximum location of the steady state source impact locations, which is important to identify to determine the overall maximum modeled concentrations. So, to determine the combined maximum impact for the 1, 8 and 24-hour averaging periods, where the intermittent sources would contribute the highest concentration to the steady state source impact location(s), the top 10 receptor locations where the steady state sources maximum impact occurred were input into AERMOD based on the following:

- All 20 engine source groups were input to determine the 1-hour NO_2 concentration using the EPA 1-hour method (annual average emissions rates).
- Each individual engine input as an individual source group with the maximum 1-hour emission rate (1-hr SO_2 and CO).
- Each individual engine input as an individual source group with the maximum 8-hour emission rate ratioed by 10/8 (8-hr CO) to account for 10 engines tested in 8 hours.
- Each individual engine input as an individual source group with 1-hours of the maximum hourly emission rate (24-hr SO_2 and PM-10, PM-2.5).

To illustrate this screening procedure, the top ten locations of the steady state 24-hour PM-2.5 concentrations, based on the form of the NAAQS, are presented in Figure 10. All engine source groups or the single engines as individual source groups were then run in AERMOD at these ten receptor locations. The engine groups or single engine that resulted in the highest concentration was then selected to be used in the subsequent modeling analyses for the SILs, NAAQS, and PSD increment assessments. Note, the Monte Carlo analysis was treated as a separate modeling procedure and is not associated with this screening method.

Figure 10
Locations of the 10 Maximum 24-Hour PM-2.5 H8H Receptors



Using this procedure, the 1-hour NO_2 screening results identified engine source group G03 (with six (6) engines tested during the same hour between 8:00 AM and 6:00 PM) as contributing the highest concentration to the steady state maximum source impact location(s). Group G03 was then used in the assessment of the project SILs, PSD increment and NAAQS analyses.

Table 11 Monte Carlo Generator Groups			
Group ID	**Engine Count**	**Day**	**Generator IDs**
G01	5	1	EGR1_01-EGR1_04, EGRB1_01
G02	7	2	EGDC_01-EGDC_05, EGRP1_01 EGRP1_02
G03	6	3	EGDD_01-EGDD_06
G04	4	4	EGRS4_01, EGRS6_01, EGRS6_02, EGDD_07
G05	6	5	EGE1_01-EGE1_06
G06	6	6	EGE1_07-EGE1_13
G07	6	7	EGE1_14-EGE1_18
G08	4	8	EGE1_19-EGE1_21, EGC5_16
G09	4	9	EGC5_17-EGC5_20
G010	4	10	EGC5_21, EGC5_01-EGC5_03
G011	4	11	EGC5_04-EGC5_07
G012	4	12	EGC5_08-EGC5_11
G013	4	13	EGC5_12-EGC5_15
G014	5	14	EGDB_01-EGDB_03, EGDA_01-EGDA_02
G015	3	15	EGDA_03, EGDA_04, EGDA_05
G016	3	1	EGDA_06-EGDA_08
G017	5	15	EGF15_01-EGF15_03, EGF5_01, EGF5_02
G018	4	4	FIPH1_01, FIPH2_01, FIRS4_01, FIC5_01
G019	2	8	EGIW_01-EGIW_02
G020	4	14	EGN2_01, EGIW_03, EGRS8_01, EGH2_01
Total Engines	90		

For the remaining pollutants and averaging periods, Table 12 presents engine groups or individual single engine (based on 10 hours of emissions) that was identified as contributing the highest concentrations.

Table 12 Identified Generator Groups from the Screening Modeling			
Group ID	**Engine ID[1]**	**Pollutant**	**Averaging Period[2]**
G17	-	CO	1-HR
-	EGF15_01	CO	8-HR
-	EGRS6_01	PM-10	24-HR
-	EGRS6_01	PM-2.5	24-HR
G17		SO_2	1-HR
-	EGF15_01	SO_2	24-HR
G03		NO_2	1-HR

[1] 1-hr CO, SO_2 and NO_2 used the specific source groups in Table 11.
[2] Annual modeling used all 90 diesel engines for the SIL, NAAQS and Increment Analyses

1-Hour NO_2 Using the Monte Carlo Analysis

For 1-hr NO_2, a Monte Carlo Simulation was also used as requested by the ODEQ to estimate the NO_2 impacts from running intermittent emergency generators. In permitting, AERMOD design values (e.g. 98 percentile) are added to background design values. In the case of generators which run infrequently (~1% of the time), the impacts of the generators are statistically likely not to occur on the high background hours. Thus, modeling the generators as continuous source greatly overestimates the occurrences of exceedances as the high modeled impacts are added to the high background under all conditions. A Monte Carlo simulation is used to model the probability of different outcomes in a process that cannot easily be predicted due to the intervention of random variables. For example, the specific hour/day that a set of generators will run is generally unknown. The operation of the generators may or may not correspond to a poor dispersion period, as the occurrence of these events is essentially random.

For this approach, continuous sources were run with the seasonal diurnal NO_2 background to calculate the continuous high-eighth-high (98^{th} percentile) NO_2 concentration at each receptor, which provides a conservative estimate for the continuous source contribution. Next, the model is run without background for the 20 groups of generators, for the 10-hour daylight period. It is assumed that all generators within each source group are running at the same time. The groups are shown in Table 11. The output is hourly NO_2 concentrations for the 20 generator groups for a 5-year period. It is assumed that the 20 groups are tested over 15 days. Thus, five of the days will have two generator groups run on different hours.

For a Monte Carlo Simulation, fifteen randomly selected days for each month are pulled from the 5-year block for that month. The days correspond to the generator groups (e.g. day 1 = group 1, day 2 = group 2, etc.). For each day, an hour is randomly selected between 8:00 AM and 6: 00 PM that generators will run. For days with a second group, another different hour is selected for the second generator group (same day though). The higher of the two concentrations is saved.

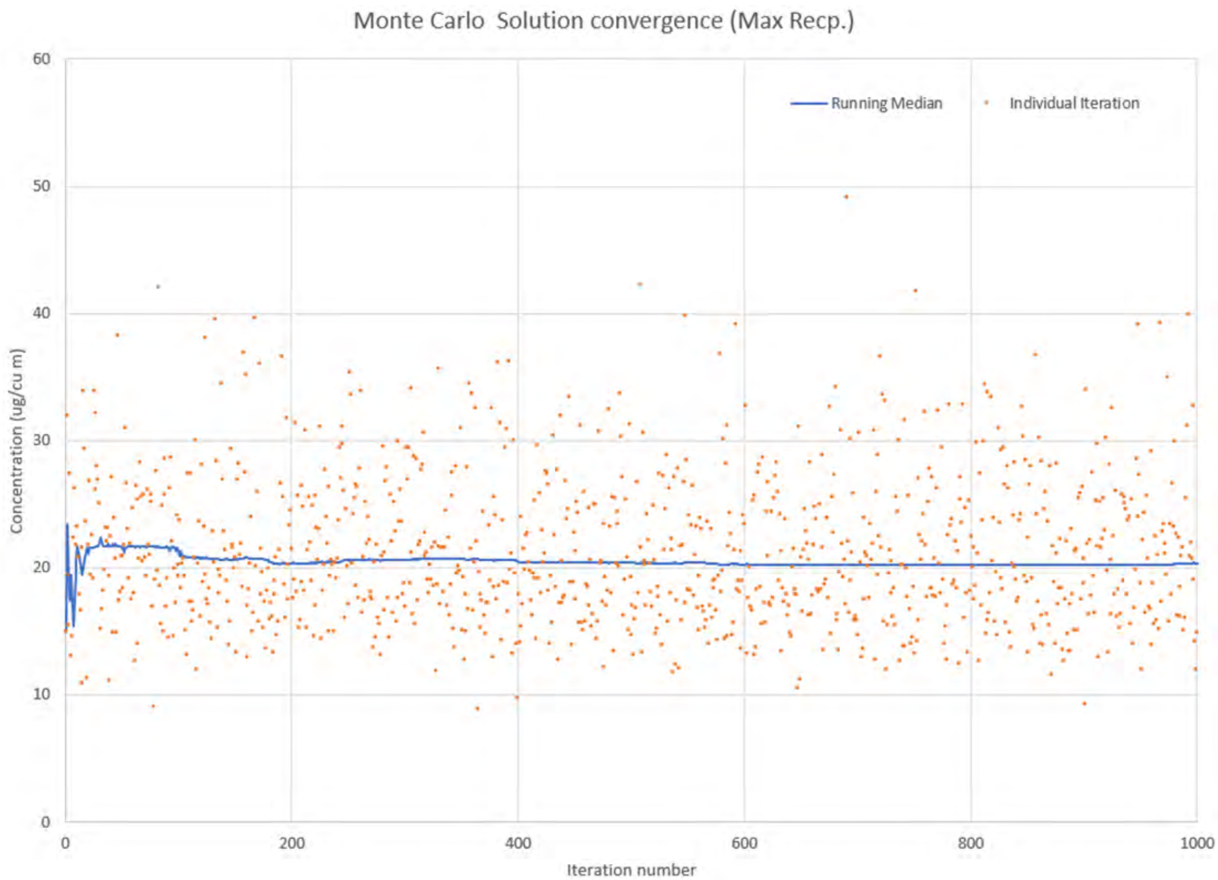
The above process is repeated for each month for all of the years of meteorology. Once the selection process is completed, the highest eight daily concentrations in each year are found and ranked from highest to lowest. The three year highest-eighth-high values are averaged on a receptor basis and saved.

This process is repeated 1000 more times (giving 1001 iterations). To demonstrate, Figure 11 shows the convergence of the median value as more iterations are added to the median for the receptor with the higher generator impact. Within a couple hundred iterations, the median stabilizes and is near the final value. After about 400 iterations, the running median value is within 99% of the final value. Thus, the use of 1001 iterations should provide a stable median value.

The results are tabulated and then the median value is determined at each receptor. The median values are then added to the continuous source modeled contributions, on a receptor-by-receptor basis to provide the design values at each receptor. The seasonal hour by day background NO_2 is added in with the steady state sources in AERMOD.

The Monte Carlo Simulation calculations were executed in an Excel macro-enabled spreadsheet which was provided to the ODEQ. The combined concentration spreadsheet calculations will be provided to the ODEQ.

Figure 11
Convergence Criteria



MERP Analysis for Secondary PM-2.5 and Ozone Formation

The EPA developed a Tier 1 demonstration tool for ozone and PM-2.5 precursor emissions called Modeled Emission Rates for Precursors (MERPs). The development of the tool and related guidance is summarized in a memorandum from EPA dated April 30, 2019, with a subject, "Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for ozone (O_3) and PM-2.5 under the PSD Permitting Program." The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutant impacts from specific or hypothetical sources. The ODEQ used the air quality modeling results presented in EPA MERPs memorandum to derive MERPs for hypothetical sources located in the Western U.S.

MERPs can be used to demonstrate that projected impacts from a proposed source are less than the applicable SILs or when included with the modeling results, would not cause or contribute to a violation of a NAAQS or PSD increment for that pollutant.

The MERP is based on a hypothetical source emission rate, the modeled concentration from that emission rate, and the relevant SILs for O_3 and PM-2.5 (1 ppb for O_3, 1.2 µg/m^3 for 24-hr PM-2.5, and 0.2 µg/m^3 for annual PM-2.5). The lowest MERP value for each precursor identifies the most conservative condition. EPA provides a lookup table (MERPs View Qlik) which contains MERP data for the United States, from which, for the Tier I analysis, the smallest MERP values were used for the 8-hour O_3 impact assessment and the 24-hour and annual PM-2.5 assessments. ODEQ recommends the use of the Morrow, Oregon site, which is located near Arlington on the Columbia River. For the Tier I analysis, the smallest MERP values were used for the 8-hour O_3 impact assessment and the 24 and annual PM-2.5 assessment.

The MERP analysis used the following emissions data as input which is based on the project total PSEL:

- NO_x - 402 tpy
- VOC - 349 tpy
- PM-2.5 - 55 tpy
- SO_x - 39.0 tpy

The basic form of the equations for PM-2.5 is:

$$S = SIL\left[\frac{Q_{NOx}}{MERP_{NOx}} + \frac{Q_{SOx}}{MERP_{SOx}}\right]$$

For O_3, the equation takes the form of:

$$S = SIL\left[\frac{Q_{NOx}}{MERP_{NOx}} + \frac{Q_{VOC}}{MERP_{VOC}}\right]$$

where:

S = final concentration

SIL = significant impact level

- 24-hr PM-2.5 = 1.2 *u*g/m^3
- Annual PM-2.5 = 0.2 *u*g/m^3
- 8-hr O^3 = 1 ppb

Q = mass emissions in tons per year

MERP = MERP in tons per year from Table 13 for each applicable precursor

Table 13 provides the MERPs View Qlik data for Morrow, Oregon based on a hypothetical 500 ton per year source with a stack height of 10 meters. This data along with the project specific PSEL data and applicable SILs were used in the equations to determine secondary PM-2.5 and ozone formation. A copy of the MERP data from View Qlik is also provided in Attachment B.

Table 13
MERP View Qlik Data

State	County	Metric	Precursor	Emissions TPY	Stack Height	MERP TPY	Max Concentration ug/m^3
Oregon	Morrow	8-hr Ozone	NO_x	500	10	258	1.939569
Oregon	Morrow	8-hr Ozone	VOC	500	10	1,087	0.46018
Oregon	Morrow	Annual PM-2.5	NO_x	500	10	7,942	0.012591
Oregon	Morrow	Annual PM-2.5	SO_2	500	10	11,877	0.008419
Oregon	Morrow	Daily PM-2.5	NO_x	500	10	3,003	0.19979
Oregon	Morrow	Daily PM-2.5	SO_2	500	10	2,314	0.259274

Stack height in meters

PM-2.5 24-hr avg. analysis

- For NO_x the lowest MERP is 3,003 for a hypothetical 500 tpy source and a concentration of 0.19979 *ug*/m^3
- For SO_x the lowest MERP is 2,314 for a hypothetical 500 tpy source and a concentration of 0.25927 *ug*/m^3
  Secondary 24-hr PM-2.5 formation = 0.181 µg/m^3

Annual PM-2.5

- For NO_x the lowest MERP is 7,942 for a hypothetical 500 tpy source and a concentration of 0.01259 *ug*/m^3
- For SO_x the lowest MERP is 11,877 for a hypothetical 500 tpy source and a concentration of 0.00842 *ug*/m^3
  Secondary annual PM-2.5 formation = 0.0108 µg/m^3

O_3 8-hr avg. analysis

- For NO_x the lowest MERP is 258 for a hypothetical 500 tpy source and a concentration of 1.9396 ppb
- For VOC the lowest MERP is 1,087 for a hypothetical 500 tpy source and a concentration of 0.46018 ppb
  Primary 8-hr O_3 formation = 1.88 ppb

Table 14 below compares the results of the MERP analysis to the applicable SILs, and only the 8-hr O_3 resultant concentration is significant. This significant concentration was then added to the background O_3 concentration of 61.3 ppb to produce a Project total of 63.18 ppb, which is below the 8-hr O_3 standard of 70 ppb. Thus, any additional impacts to the background ozone concentration will comply with the NAAQS.

Based on the results of the MERP analysis, the calculated secondary PM-2.5 concentrations were added to all modeled PM-2.5 results from AERMOD for both 24-hr and annual averaging periods.

Table 14 Results of MERP Analyses with Comparison to PSD SILs			
Pollutant	**Avg. Period**	**MERP Concentration**	**Class II PSD SILs**
O_3	8-Hour	1.88 ppb	1 (ppb)
PM-2.5	24-hr Max	0.181 μg/m^3	1.2 (μg/m^3)
	Annual Max	0.0108 μg/m^3	0.2 (μg/m^3)

<u>Modeled Impacts on Class II Areas</u>

The following sections present the analyses for determining the changes to ambient air quality concentrations in the region of the Project. These analyses are based on the requirements in OAR 340-225-0050. The modeling includes the results of the diesel engine screening assessment to determine the worst-case emergency engine impacts during routine reliability testing which were combined with the project SIL modeling and refined modeling assessments used to calculate the proposed Project changes to ambient air quality, and increment/cumulative assessments.

Federal major source baseline and minor source baseline dates for NO_2, SO_2, PM-10, PM-2.5 and CO have already been triggered in the Project region. For determining the Project modeled concentrations which are then compared to the applicable SILs, NAAQS and PSD increments, all sources at the Gordon Moore Park at Ronler Acres and Aloha campuses were used, which includes both existing sources and the proposed new sources. No sources were excluded in any of the subsequent modeling analyses.

Emissions and stack parameters for all of the sources at Gordon Moore Park at Ronler Acres and Aloha are listed in Attachment B. These were used in all of the modeling inputs. Stack parameters (e.g., stack height, exit temperature, stack diameter, and stack exit velocity) were based on the parameters provided by Intel. Stack locations for the existing and proposed sources were matched to show their actual location based on the proposed Facility plot plan and the most recent aerial imagery.

<u>Class II SILs and SMC Analyses</u>

OAR 340-200-0020 and 340-225-0050 prescribes the use of the Significant Impact Levels (SILs) to establish the "significant impact area" (SIA), which is used to identify the appropriate geographic area in which a multi-source NAAQS and increment impacts analysis should be conducted. The "impact area" is identified by drawing a circle around the site with a radius equal to the distance to the farthest location where an exceedance of the SIL is modeled to occur. The impact area is the geographical area for which the required air quality analyses for the NAAQS and PSD increments are carried out. This area includes all locations where the significant increase in the potential emission of a pollutant from a new or modified source, or significant net emission increase from a modification, will cause a significant ambient impact (i.e., equal or exceed the applicable SIL). This impact area is then also used in a multi-source cumulative impacts analysis to "guide the identification of other sources to be included in the modeling analyses."

To assess the Class II significance levels of the modeled concentrations, the following averaging periods were used:

- 1-hour NO_2 and SO_2 SIL was based on the 5-year average of the maximum daily 1-hour NO_2 concentrations modeled each year at each receptor.
- Annual NO_2 and SO_2 SIL was based on the maximum annual average concentration for the five (5) year period modeled for each receptor.
- 1-hour and 8-hour CO SILs were assessed based on the maximum modeled concentration at each receptor over the five (5) year period modeled for each receptor.
- Annual SO_2 SIL was based on the maximum annual average concentration over the five (5) year period modeled for each receptor.
- 24-hour PM-2.5 SIL was based on the 5-year average of the maximum 24-hour PM-2.5 concentrations modeled each year at each receptor.
- 24-hour PM-10 SIL was based on the maximum 24-hour concentration over the five (5) years modeled for each receptor.
- Annual PM-2.5 SIL was based on the 5-year average of the annual average concentration modeled each year at each receptor.

Proposed PM-2.5 SIL

The proposed Class I and Class II PM-2.5 SILs for this project are identical to the EPA established SILs. With respect to reliance on the PM-2.5 SILs, EPA has cautioned that reliance on the SILs alone to demonstrate that a source will not cause or contribute to a violation of the PM-2.5 NAAQS is inadequate. However, EPA stated that permitting authorities have the discretion to select and utilize a PM-2.5 SIL value if there is sufficient justification for the selected SIL value and justification in the manner in which it will be used. The SIL values for PM-2.5 in EPA regulations can also continue to be used if the permitting authority also takes background concentrations of PM-2.5 into account. For this Project, the difference between the PM-2.5 NAAQS and the monitored PM-2.5 background concentrations in the area is greater than the SILs. Based on the data in Table 17, over 41 percent of the available standard is still available. Thus, given the amount of available PM-2.5 standard in the Project region, the applicant with ODEQ approval used the EPA PM-2.5 SILs for both Class I and Class II modeling assessments.

SIL Results

Following the requirements of OAR 340-225-0050, the maximum concentrations from the SIL analyses are summarized in Table 15. Only the 1 and 8-hr CO modeled CO concentrations were less than the applicable SILs and no further analyses of CO is required. All other criteria pollutants exceeded the Class II SILs. For SO_2, the Project does not trigger the requirements of PSD and the modeling analyses for this pollutant was not taken any further other than to add in the background SO_2 concentration data from the ambient monitors identified in the previous section.

To calculate the size of the combined "impact area" from both campuses, the center point between the Gordon Moore Park at Ronler Acres and Aloha sites was used to measure maximum distance from the Project for the furthest significant impact for each significant pollutant. It's noted that for the 1-hour NO_2 SIL, the modeling results extended outward by 18.7 km. Based on EPA modeling guidelines which focus on the 10 km distances for cumulative 1-hour NO_2 assessments, the use of the 18.7 km radius significant impact area (SIA) for the multisource NAAQS and increment assessments would be considered conservative. Table 15 lists the areal extent of the SIAs for each pollutant and averaging period. Attachment C includes figures that display the areal extent of the SIA for each pollutant and averaging period.

Table 15 Air Quality Impact Results for Significant Impact Levels*				
Pollutant	**Averaging Period**	**Maximum Concentration ($\mu g/m^3$)**	**Class II SIL ($\mu g/m^3$)**	**Significant Impact Area Radius (km)**
Steady State and Intermittent Source Operating Conditions*				
NO_2 [a]	1-hr 5-year Avg of Max's	116.15	7.5	18.71
	Annual Max	13.25	1.0	8.53
CO	1-hour Max	708.80	2,000	N/A
	8-hour Max	199.60	500	N/A
PM-10	24-hour Max	9.28	1	6.35
	Annual Max	2.09	0.2	6.39
PM-2.5[b]	24-hr 5-yr Avg of Max's	7.59	1.2	6.94
	5-yr Avg of Annual Concentrations	1.74	0.2	6.95

[a] NO_2 1-hour and annual impacts evaluated using ARM2. Emergency generators included using EPA modeling procedure.

[b] PM-2.5 modeled concentrations were adjusted by the MERP results to account for secondary PM-2.5 formation.

* All sources (new and existing)

ODEQ regulation (OAR 340-224-0070(1)(a) also requires an applicant to provide preconstruction monitoring data for purposes of use in the Source Impacts Analysis. However, a source is exempt from this requirement if its modeled impact for each applicable pollutant in any area is less than the pollutant-specific SMC, which EPA has generally established as five times the lowest detectable concentration of a pollutant that could be measured by available instrumentation. As noted in OAR 340-224-0070(1)(a)(B), "*DEQ may exempt the owner or operator of a source from preconstruction monitoring for a specific regulated pollutant if the owner or operator demonstrates that the air quality impact from the emissions increase would be less than the amounts listed below, or that modeled competing source concentrations plus the general background concentration of the regulated pollutant within the source impact area, as defined in OAR 340 division 225, are less than the following significant monitoring concentrations….*". Table 16 lists the SMCs for each applicable pollutant. The maximum Project modeled concentration of 7.59 ug/m^3 exceeds the SMC for the 24-hour PM-2.5 averaging period. As noted, the Project is not subject to PSD for SO_2.

Even if a source's potential impact exceeds the corresponding SMC, that does not necessarily mean the applicant must install and operate a new monitor at the Project. Rather, according to EPA guidance, an applicant may satisfy the preconstruction monitoring obligation in one of two ways: (i) Where existing ambient monitoring data is available from representative monitoring sites, the permitting agency may deem it acceptable for use in the Source Impacts Analysis; or (ii) where existing, representative data are not available, then the applicant must obtain site-specific data.

Table 16 Significant Monitoring Concentrations*	
CO: 8-hr average	575 μg/m^3
PM-10: 24-hr average	10 μg/m^3
PM-2.5 24-hr average*	4 μg/m^3
NO_2: annual average	14 μg/m^3
SO_2: 24-hr average	13 μg/m^3
Note: The 24-hour PM-2.5 SMC has been vacated. *Only the proposed new sources were assessed for the SMC	

As a general matter, the permitting agency has substantial discretion "to allow representative data submissions (as opposed to conducting new monitoring) on a case-by-case basis." OAR 340-224-0070(1)(a)(vii) states "*With DEQ's approval, the owner or operator may use representative or conservative background concentration data in lieu of conducting preconstruction air quality monitoring if the source demonstrates that such data is adequate to determine that the source would not cause or contribute to a violation of an ambient air quality standard or any applicable PSD increment.*" In determining whether existing data are representative, EPA guidance has emphasized consideration of three factors: monitor location, data quality and currentness of the data. The permitting agency also may approve use of data from a representative "regional" monitoring site for purposes of the NAAQS compliance demonstration.

As noted in Table 16, the PM-2.5 SMC has been vacated. Nevertheless, Intel has proposed utilizing existing monitoring data from the nearby Hare Field as a current and representative estimate of background concentrations. The spatial scale for Hare Field is neighborhood scale which is used for highest concentration, population exposure and general background. Additionally, for PM-2.5 the spatial coverage, currentness and representative conditions to the Project of the existing monitoring stations would satisfy the ODEQ and EPA requirements for waiving the preconstruction monitoring requirements for this pollutant. Intel has utilized representative existing monitoring data as the basis for its preconstruction air quality analyses.

In addition to the SILs and SMC's, a preliminary analysis was performed to determine if the SIL is protective of the NAAQS for applicable pollutants and averaging periods, consistent with the ODEQ Recommended Procedures document. This analysis is done by subtracting the ambient background from the NAAQS to determine if the SIL, as a significance threshold, is protective. As shown in Table 17, the preliminary NAAQS review values are significantly greater than the SILs, which indicates there is sufficient headroom between ambient background and the NAAQS for the SILs to be an appropriate test.

Table 17 Comparison of SILs to Background					
Pollutant	**Ave Time.**	**Background ($\mu g/m^3$)**	**Class II SIL ($\mu g/m^3$)**	**Background + SIL ($\mu g/m^3$)**	**NAAQS ($\mu g/m^3$)**
PM-2.5	24	20.7	1.2	21.9	35
PM-2.5	Annual	6.6	0.2	6.9	12
PM-10	24	39.0	1	40.0	150
NO_2	1	56.3	7.5	63.7	188
NO_2	Annual	18.1	1	19.1	100
CO was modeled to be less than the 1 and 8-hr SILs. SO_2 not subject to PSD.					

Project Only National Ambient Air Quality Impact Analyses

In evaluating the impacts of the proposed Project on ambient air quality, the modeled concentrations of the Project were added to the monitored background concentrations and compared to national ambient standards for SO_2, NO_2, PM-10 and PM-2.5. These results are summarized in Table 18 and only represent the Intel sources plus background. For the 1-hour NO_2 NAAQS analyses which include the intermittent sources, both the EPA modeling methodology and Monte Carlo results are presented.

All of the maximum concentrations occurred in the immediate vicinity of proposed Project, either on the Facility fencelines or on the downwash receptor grid. Figure 8 presents the locations of the maximum impacts by pollutant. These maximum concentrations for all five (5) years of meteorological data modeled were used for comparison to the NAAQS. The form of the NAAQS includes the High Sixth-High (H6H) values for the 24-hour PM-10; the 5-year average of the annual 98th percentile 1-hour daily maxima for the 1-hour NO_2 NAAQS and, for PM-2.5, the 5-year average of the annual 98th percentile 24-hour impacts and the 5-year average of the annual impacts. Sources of fugitive dust (PM-10 and PM-2.5) were included and modeled as area sources. Compliance with the NAAQS was demonstrated for all pollutants and averaging times.

Table 18 Intel Facility Sources (New+Existing) Modeling Results					
Pollutant	**Averaging Period**	**Modeled Concentration ($\mu g/m^3$)**	**Background ($\mu g/m^3$)**	**Total ($\mu g/m^3$)**	**National Ambient Air Quality Standards ($\mu g/m^3$)**
NO_2	1-hr 5-yr Avg of 98th%	EPA Method 163.54 [a]	-	163.54	188
	1-hr 5-yr Avg of 98th%	Monte Carlo 170.89 [b]	-	170.89	188
	Annual Max	13.25	35.6	48.85	100
SO_2	1-hr 5-yr Avg of 99th%	39.97	7.0	46.97	196

	24-hr Avg	18.38	4.7	23.08	1,300
	Annual Max	3.83	1.1	4.93	80
PM-10	24-hour H6H	7.78	39.0	46.78	150
PM-2.5[c]	24-hr 5-yr Avg of 98^{th}%	4.50	20.7	25.38	35
	5-yr Avg of Ann Conc's	1.73	6.6	8.35	12.0

[a] NO_2 1-hour and annual impacts evaluated using the ARM2. Seasonal hour by day added in model.
[b] NO_2 1-hur evaluated with PVMRM with the NO_2/NO_x ratios as described previously. Background from seasonal hour by day in AERMOD.
[c] PM-2.5 24-hour and annual concentration adjusted by 0.181 and the annual by 0.0108 to reflect secondary PM-2.5 formation.

<u>Multisource Increment and NAAQS Modeling Analyses</u>

The multisource increment and cumulative NAAQS analysis was prepared by using the following basic methodology:

- Establish the radial extent of the SIA based upon the modeled impacts for each pollutant standard. The distance from the source to the furthest impact that is equal to or above an applicable SIL establishes the radius of the area to evaluate. These are summarized in Tables 15 and Table 19
- Obtain from the local air agencies, emission inventories and stack parameters of significant and competing sources within the area to be evaluated. This inventory was provided by the ODEQ based on a radial distance from the source of 50 kilometers.
- Include an additional screening area beyond the furthest distance of the SIA to include significant sources that could contribute to modeled background.
- Model all the sources together to determine the air quality impacts within the SIA for comparison with the increment.
- Add in a monitored background for the NAAQS analyses and if the sum is below the standard, the Project does not contribute to exceedances of the standard.
- If the sum is above the increment or standard, perform a culpability analysis to determine if the Project's emissions contribute a significant impact (in both time and/or space) to the modeled exceedances.

Under EPA's PSD regulations and OAR 340-225-0050, an applicant must conduct a "source impact analysis", which demonstrates that "allowable emission increases from the source in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of: (1) Any NAAQS in any region; or (2) Any applicable maximum allowable increase (increment) over the baseline concentration in any area."

If a source's modeled impact at any offsite location exceeds the relevant SIL, the source owner must then conduct a "multi-source" (or "cumulative") air quality analysis to determine whether or not the source's emissions will cause or contribute to a violation of the relevant NAAQS or applicable PSD increment. The PSD increment consumption analysis assures that, in those locations currently meeting the federal NAAQS (i.e., those deemed "attainment" or "unclassifiable"), the concentration of a given pollutant cannot increase by an amount greater than the "maximum allowable increase" specified by the Clean Air Act and/or the PSD regulations for the particular pollutant since the baseline date.

EPA in the 2003 Appendix W to 40 CFR part 51 (68 FR 18439/18440) Modeling guidance prescribes the use of the SILs to establish the SIA, which is used to identify the appropriate geographic area in which a multi-source NAAQS and increment impacts analysis should be conducted. The impact area is the geographical area for which the required air quality analyses for the NAAQS and PSD increments are carried out. Per EPA Appendix W guidance, the larger impact area was then surveyed to identify other "nearby sources", which also should be included in the cumulative impact's analysis. Both Appendix W and the EPA Draft NSR Workshop Manual (October 1990) require that the cumulative and increment impacts analysis to include "nearby sources", which includes "[a]ll sources expected to cause a significant concentration gradient in the vicinity of the source or sources under consideration." Appendix W further instructs that the "impact of nearby sources should be examined at locations where interactions between the plume of the point source under consideration and those of nearby sources (plus natural background) can occur". Emphasizing that "[t]he number of sources is expected to be small except in unusual situations".

This area additionally included all sources out to a 50 km distance from the edge of the SIA (called the screening area or Range of Influence (ROI)) where the significant increase in the potential emission of a pollutant from a new source, or significant net emission increase from a modification, will cause a significant ambient impact (i.e., equal or exceed the applicable SIL). This impact area is then also used in a multi-source cumulative impacts analysis to "guide the identification of other sources to be included in the modeling analyses."

The center point between the Gordon Moore Park at Ronler Acres and Aloha campus was chosen as the center point for each of the SIAs. For NO_2, the maximum extent of receptors with modeled 1-hour NO_2 impacts greater than or equal to the SIL of 7.5 $\mu g/m^3$ (based on the five-year average of maximum annual 1-hour impacts) extended outwards to 18.7 kilometers (km). For the other pollutant SILs, the SIA extended outwards from 6.3 to 8.5 km. For each pollutant and averaging period, for both the increment and NAAQS analyses, all receptors within the maximum radius of each of the SIAs were included in the modeling analysis. Thus, each SIA receptor grid used in the modeling for the significant impacts contains both the significant receptor locations as well as those receptors that are within the maximum radius of the SIA. These receptor grids are summarized in Table 19 and are also included in Attachment C which contains a listing of the receptor file names that were used within each of the SIAs.

Table 19
Listing of SIA Receptor Grids

Pollutant	Averaging Period	Class II SIL (ug/m3)	Significant (Y/N)	Max Distance (m)	Number of Receptors within SIL Radius	Receptors Falling Within SIL Radius File Name	Number of Receptors Exceeding SIL	Receptors Exceeding SIL File Name
CO	1-HR	2000	N	-	-	-	-	-
	8-HR	500	N	-	-	-	-	-
SO_2	1-HR	7.8	Y	-	-	-	-	-
	24-HR	5	Y	-	-	-	-	-
	Annual	1	Y	-	-	-	-	-
PM-10	24-HR	1	Y	10,224	19,936	Intel-Hillsboro-24HR-PM10-Radius.ROU	16,594	Intel-Hillsboro-24HR-PM10-Exceed.ROU
PM-10	Annual	0.3	Y	8,233	18,644	Intel-Hillsboro-ANNUAL-PM10-Radius.ROU	12,690	Intel-Hillsboro-ANNUAL-PM10-Exceed.ROU
PM-2.5	24-HR	1.2	Y	6,941.5	19,874	Intel-Hillsboro-24HR-PM25-Radius.ROU	10,475	Intel-Hillsboro-24HR-PM25-Exceed.ROU
PM-2.5	Annual	0.2	Y	6,952.0	16,892	Intel-Hillsboro-ANNUAL-PM25-Radius.ROU	6,451	Intel-Hillsboro-ANNUAL-PM25-Exceed.ROU
NO_2	1-HR	7.5	Y	18,709.2	21,662	INTEL-1STSIL-1HR-NO2-Radius.ROU	21,599	INTEL-1STSIL-1HR-NO2-Exceed.ROU
	Annual	1	Y	8,531.5	18,899	Intel-Hillsboro-ANNUAL-NO2-Radius.ROU	13,709	Intel-Hillsboro-ANNUAL-NO2-Exceed.ROU

Based on the previous results of the SIL analyses as summarized in Table 15, increment consumption for 24-hour and annual PM-2.5, 24-hour and annual PM-10 and annual NO_2 were assessed. There are no PSD increments for 1-hour NO_2 and SO_2 was not emitted at the major (PSD) source levels. It should be noted that the annual PM-10 NAAQS has been revoked but the annual increment remains in place. Table 20 presents the Class II PSD increment limits used in the modeling analyses.

The major and minor source baseline dates for NO_2, PM-10 and PM-2.5 have already been triggered, so the increment modeling analyses included developing an initial list of increment consuming sources in the airshed. ODEQ provided an emission inventory of all NO_2 sources within 50 km and 20 km for the PM-10 and PM-2.5 sources of the Project. The inventory listed 221 individual sources and contained the source locations, PSEL emission rates and stack parameters. A complete copy of this inventory is provided in Attachment C.

Table 20 PSD Class II Increments		
Pollutant/Avg. Period		Class II Increment (µg/m^3)
NO_2	1-hour Annual	- 25
PM-10	24-hour Annual	30[a] 17
PM-2.5	24-hour Annual	9[a] 4
[a] Not to be exceeded more than once per year		

The ODEQ emissions inventory is based on the source's permitted emission limits and does not include any information on the source's actual emissions. PSD increment modeling is based on actual emissions so as to establish the actual expansion or contraction of the available increment. As such, it was assumed that in the absence of a distinct increment (actual emission) inventory, all provided background sources were to be considered as increment consuming sources using the permitted PSEL's from each source. This results in an overestimate of the increment consumption in the air basin.

To limit the total number of sources used in the increment and cumulative NAAQS analyses, sources were excluded from the ODEQ lists if their emissions of NO_x, PM-10 and PM-2.5 were less than one (1) ton per year. Sources with Basic or General permits were also excluded from the inventory as these permit types reflect small or insignificant source activities that do not require dispersion modeling. These small sources would not be expected to cause a significant concentration gradient within the SIA nor would they be expected to significantly contribute to the modeled concentrations within the SIA. The removal of these sources will still result in conservative modeling results. Sources where the primary emissions were VOCs were also excluded from the multisource analyses. Sources with emissions based primarily on CO were also excluded from consideration as the Project impacts are all less than the CO 1-hour and 8-hour SILs. Additionally, sources in Multnomah and North Clackamas Counties were excluded due to the blocking effect of the West Hills and would not be expected to impact the areas near the Project locations. This resulted in a list of 26 facilities as shown in Table 21.

Several adjustments were made to the competing source lists. If a combustion source had PM-10 emissions but no PM-2.5 emissions (or vis versa), it was assumed the PM-2.5 emissions were the same as the PM-10 emissions. For non-combustion sources like road dust, material handling, and storage piles, the missing PM-2.5 emissions were scaled from the PM-10 emission using the appropriate EPA AP-42 PM-2.5 and PM-10 particle size multipliers. The coordinates provided by DEQ represent an approximate facility location which, in some cases, did not represent the actual stack location. Adjustments to the facility coordinates were made using Google maps to better identify actual stack locations. These 26 facilities represent 33 individual stacks which were modeled for both increment consumption and for the NAAQS. The 33 individual stacks are presented in Table 22.

The ODEQ emissions inventory included multiple emission points for many of the sources, with emissions and either actual or default stack parameters. Where appropriate, emission points with common stack parameters were merged into a single emission point. Aggregate Insignificant Activities emissions were merged into one of the other source's emission points. All emission points were modeled as point sources using the stack parameters provided by ODEQ. Short term emission rates were based on an annualized hourly emission rate. Table 22 shows the final list of competing source emission points used in the increment and NAAQS analyses. Additional details of the sources as input into AERMOD are presented in Attachment C.

Table 21
Increment and NAAQS Source List

Permit Number	Model ID	X(m)	Y(m)	D (km)	NO_x (TPY)	PM-2.5 (TPY)	PM-10 (TPY)	Source Name
34-2813	1	505425.8	5043934	1.00	1.15	0.00	0.00	"Jireh Semiconductor Incorporated"
34-0241	2	506473.2	5044990	1.38	1.97	0.03	0.03	"Flexential Colorado Corp"
34-0183	3	508014	5043820	1.45	20.90	0.70	0.70	"STACK Infrastructure, Inc."
34-2790	4	505870.9	5044457	1.50	1.99	0.00	0.00	"Tokyo Ohka Kogyo America, Inc."
34-0222	5	505596.5	5045037	1.52	2.05	0.00	0.00	"QTS Investment Properties Hillsboro, LLC"
34-0055	6	504994.8	5042902	1.57	2.50	0.06	0.06	"Qorvo US, Inc."
34-9507	7	505463.5	5044497	1.91	2.62	0.35	0.35	"Genentech, Inc."
34-0186	8	506407	5046058	2.34	21.63	1.50	1.50	"Beaver Ventures LLC"
34-0235	9	504885	5043965	4.30	1.07	0.00	0.00	"NTT Global Data Centers HI, LLC"
34-2639	10	510829	5045802	5.31	1.11	0.03	0.03	"Portland Community College"
34-2753	11	504242.9	5037930	5.59	42.80	0.87	0.87	"Clean Water Services"
34-0004	12	502344	5037386	7.34	19.12	2.78	5.95	"Hillsboro Landfill Inc."
34-2804	13	513703	5038745	8.71	1.69	0.17	0.17	"Analog Devices, Inc."
34-2638	14	514063	5038512	9.14	2.54	0.06	0.06	"Tektronix, Inc."
34-2783	15	516615	5036641	12.30	3.40	0.58	0.58	"Bimbo Bakeries USA, Inc."
34-2756	16	493752	5040722	12.95	0.00	1.87	1.87	"DMH, Inc."
34-0009	17	517194	5036298	12.98	2.08	0.00	0.00	"International Paper Company"
34-2678	18	493642	5039988	13.23	1.70	0.00	0.00	"TTM Technologies North America, LLC"
34-9514	19	518751	5030570	17.88	1.33	0.00	0.00	"Regenyx LLC"
34-0007	20	519559	5029639	19.11	0.00	4.48	4.48	"Fought & Company, Inc."
34-0063	21	516283	5025853	20.23	2.97	0.00	0.00	"Lam Research Corporation"
34-2623	22	518784	5027415	20.30	29.51	0.00	0.00	"Clean Water Services"
34-2066	23	485113.2	5034818	22.82	36.70	0.00	0.00	"Stimson Lumber Company"
36-9504	24	503921	5015168	28.44	1.32	0.00	0.00	"City of Newberg"
36-5034	25	487440	5008513	39.79	170.67	0.00	0.00	"Cascade Steel Rolling Mills, Inc."
36-0011	26	481137	5000753	49.65	51.70	0.00	0.00	"Riverbend Landfill Co."
Total TPY					424.5	13.5	16.6	

D=distance from the Ronler Campus
Coordinates are UTM NAD 83, Zone 10

Based on the radial distances of the SIAs, the competing source list provided by the ODEQ was input into each model run for the multisource NAAQS and increment analyses, based on the specific SIA receptor grids listed in Table 19. The inventory contained sources that were based on the maximum potential emissions (PTE) with the total modeled tons provided in Table 21. While increment analyses use actual emissions, the use of PTE is considered conservative and will overestimate the increment consumption in the area.

Figure 12 presents the locations and names of the cumulative sources from Table 21 used in the increment and NAAQS modeling assessments. The 1-hr NO_2 isopleth of 7.5 *u*g/m^3 represents the largest SIA with an 18.71 km radius which was used in the figure for reference.

Figure 12
Cumulative Source Inventory Location

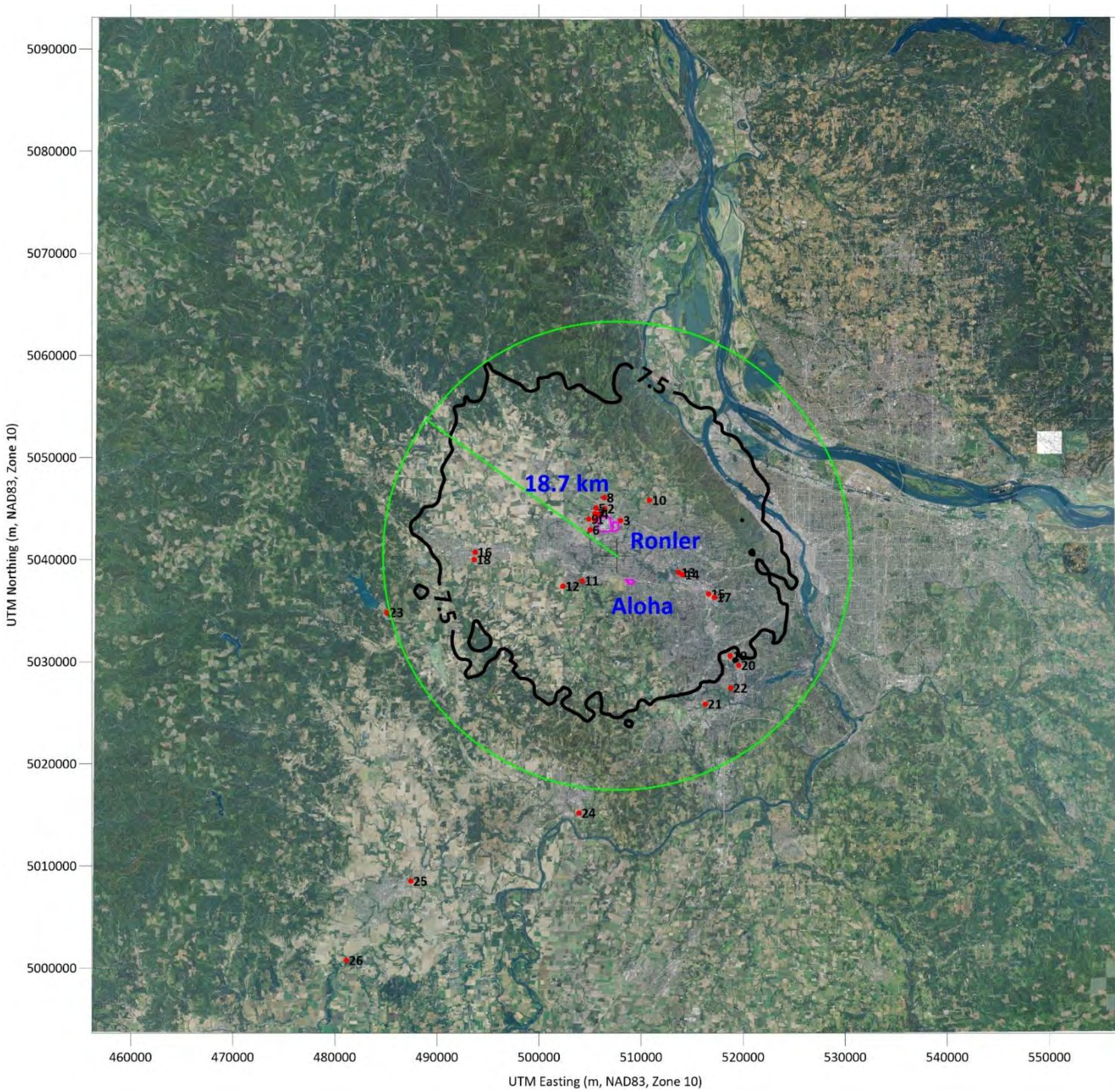


Table 22 Modeled NAAQS/Increment Source Emission Points and Stack Parameters											
Permit Number	Model ID	X (m)	Y(m)	Z(m)	H(m)	Temp (K)	Vel (m/s)	Diam (m)	NOX (TPY)	PM-10 (TPY)	PM-2.5 (TPY)
34-2813	CS01x01	505426	5043934	65.21	18.29	422.04	11.28	2.44	1.15	0.00	0.00
34-0241	CS02x01	506473	5044990	63.83	18.29	422.04	11.28	2.44	1.97	0.03	0.03
34-0183	CS03x01	508014	5043820	67.58	18.29	422.04	11.28	2.44	20.90	0.70	0.70
34-2790	CS04x01	505871	5044457	65.68	18.29	422.04	11.28	2.44	1.99	0.00	0.00
34-0222	CS05x01	505596	5045037	60	18.29	422.04	11.28	2.44	2.05	0.00	0.00
34-0055	CS06x01	504995	5042902	56.95	18.29	422.04	11.28	2.44	2.50	0.06	0.06
34-9507	CS07x01	505463	5044497	64.3	18.29	422.04	11.28	2.44	2.62	0.35	0.35
34-0186	CS08x01	506407	5046058	66.99	18.29	422.04	11.28	2.44	21.63	1.50	1.50
34-0235	CS09x01	504885	5043965	65.08	18.29	422.04	11.28	2.44	1.07	0.00	0.00
34-2639	CS10x01	510829	5045802	79.95	18.29	422.04	11.28	2.44	1.11	0.03	0.03
34-2753	CS11x01	504243	5037930	48.41	18.29	422.04	11.28	2.44	42.80	0.87	0.87
34-0004	CS12x01	502344	5037386	56.28	6.10	295.37	2.13	15.24	0.00	3.62	0.46
34-0004	CS12x02	502344	5037386	56.28	18.29	422.04	11.28	2.44	19.12	2.32	2.32
34-2804	CS13x01	513703	5038745	62.28	18.29	422.04	11.28	2.44	1.69	0.17	0.17
34-2638	CS14x01	514063	5038512	59.64	18.29	422.04	11.28	2.44	2.54	0.06	0.06
34-2783	CS15x01	516615	5036641	60.64	18.29	422.04	11.28	2.44	3.40	0.58	0.58
34-2756	CS16x01	493752	5040722	55.09	18.29	422.04	11.28	2.44	0.00	1.87	1.87
34-0009	CS17x01	517194	5036298	67.27	18.29	422.04	11.28	2.44	2.08	0.00	0.00
34-2678	CS18x01	493642	5039988	52.86	18.29	422.04	11.28	2.44	1.70	0.00	0.00
34-9514	CS19x01	518751	5030570	48.41	12.19	295.37	12.19	1.52	1.33	0.00	0.00
34-0007	CS20x01	519559	5029639	70.81	12.19	295.37	12.19	1.52	0.00	4.48	4.48
34-0063	CS21x01	516283	5025853	44.25	18.29	422.04	11.28	2.44	2.97	0.00	0.00
34-2623	CS22x01	518784	5027415	41.71	18.29	422.04	11.28	2.44	29.51	0.00	0.00
34-2066	CS23x01	485113	5034818	65.06	34.99	453.71	11.80	1.71	36.70	0.00	0.00
36-9504	CS24x01	503921	5015168	51.15	18.29	422.04	11.28	2.44	1.16	0.00	0.00
36-9504	CS24x02	503921	5015168	51.15	12.19	295.37	12.19	1.52	0.16	0.00	0.00
36-5034	CS25x01	487440	5008513	45.63	18.29	422.04	11.28	2.44	7.51	0.00	0.00
36-5034	CS25x02	487440	5008513	45.63	12.19	295.37	12.19	1.52	0.76	0.00	0.00
36-5034	CS25x03	487440	5008513	45.63	15.24	322.59	31.70	3.75	115.00	0.00	0.00
36-5034	CS25x04	487440	5008513	45.63	22.86	307.04	3.05	3.75	16.50	0.00	0.00
36-5034	CS25x05	487440	5008513	45.63	22.86	645.54	7.53	1.74	30.90	0.00	0.00
36-0011	CS26x01	481137	5000753	37.27	9.14	611.26	8.38	1.92	11.30	0.00	0.00
36-0011	CS26x02	481137	5000753	37.27	9.75	922.04	7.55	1.52	40.40	0.00	0.00

The results of the increment consumption analysis are presented in Table 23 and demonstrate that the Project will not exceed the allowed PSD increments.

Table 23
PSD Class II Increment Results

Pollutant	Avg. Period	Modeled Concentration (µg/m^3)	PSD Class II Increment (µg/m^3)
NO_2	Annual	13.37	25
PM-10	24-hr (H2H)	8.63	30
	Annual	2.10	17
PM-2.5	24-hr (H2H)	7.25	9
	Annual	1.92	4

H2H = high second high on an annual basis. Increment not to be exceeded more than once per year.
PM-2.5 includes secondary formation.

While the cumulative source inventory is the same for both the increment and NAAQS analyses, the averaging period for the NAAQS is different than the PSD increment. The results of the cumulative modeling analysis, with all existing and proposed Intel Facility sources combined with the sources listed in Table 22 were then added to the applicable background monitored data to calculate a total cumulative modeled concentration(s). Table 23 presents the multisource NAAQS analysis which demonstrates that the Project will not exceed the applicable ambient air quality standards for any pollutant.

Table 23
Air Quality Impact Results for
Cumulative Modeling Analysis – National Ambient Air Quality Standards

Pollutant	Avg. Period	Modeled Concentration (µg/m^3)	Background (µg/m^3)	Total (µg/m^3)	National Ambient Air Quality Standard (µg/m^3)
NO_2	1-hr 5-yr Avg of 98th%	N/A	--	184.54	188
	Annual	13.37	35.60	48.97	100
PM-10	24-hr H6H	7.8	39.0	46.80	150
	Annual	-	-	-	-
PM-2.5	24-hr 98th%	4.68	20.7	25.39	35
	Annual	1.74	6.6	8.34	12

NO_2 impacts were evaluated using the ARM2 with hourly seasonal background values added consistent with EPA modeling guidelines (so separate modeled and background values not available). Monte Carlo results are not required for multisource NAAQS.
Secondary PM-2.5 formation from MERPs included in PM-2.5 results.

Soils and Vegetation

Regulatory Overview and Background

OAR 340-225-0050 requires that an analysis of the impact to soils and vegetation of significant commercial or recreational value that would occur as a result of the Project be conducted. The regulation indicates that the owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value. EPA has also requested on past PSD permit applications that the analysis of soils and vegetation impacts be supplemented pursuant to the following Environmental Appeals Board case: *In re: Indeck-Elwood, LLC*; PSD Appeal No. 03-04; PSD Permit No. 197035AAJ (decided September 27, 2006) ("Indeck"). The Indeck case contemplates the need for additional analysis beyond a "screening analysis" with respect to soil and vegetation for a PSD application. Accordingly, the Indeck case was reviewed for applicability to this Project. As an initial matter, key aspects of the Indeck case are not directly applicable. For example, the Project utilizes clean, state-of-the-art, gas-fired sources located within developed city limits, while the Indeck facility is a proposed large-scale coal-fired power plant located approximate to a prairie reserve of national importance.

Although a more rigorous analysis is provided herein, we note that the Project will have substantially lower air quality impacts than would a coal-fired power plant. The key holding of Indeck is that an agency should consider requiring more than a "screening analysis" to evaluate soil and vegetation impacts to the extent that the 1990 New Source Review (NSR) Manual would result in a different significance conclusion. In particular, the Indeck case contemplates an inventory of applicable soils and vegetation and consideration of site-specific effects where appropriate to identify potential impacts. *See*, *e.g.,* Indeck, pp. D.4-5 and D.11-12.

Following the review of Indeck, ADI prepared a soils and vegetation analysis to ensure the analysis reflected the methodology in the 1990 NSR Manual (EPA, 1990). The guidance in the 1990 NSR Manual, Section II.C Soils and Vegetation Analysis, is brief, less than one page long. The key components of the analysis are to develop an inventory of the soils and vegetation types with commercial or recreational value found in the area, and to analyze the impacts from *regulated pollutants* that are proposed to be emitted by the Facility. This requirement only applies to regulated pollutants that are to be emitted from the Facility in *significant amounts*. While an example related to fluorides is provided in Section II.C, an additional example analysis provided in Section III.C of the NSR Manual clearly states "…the sensitivity of the various soils and vegetation types to each of the applicable pollutants that will be emitted by the facility *in significant amounts*." (pg D.11, emphasis added).

Extent of the Analysis

The maximum modeled CO 1-hour and 8-hour concentrations for the Project impacts did not exceed the EPA SILs and are thus, not expected to impact any type of plant species. The maximum modeled NO_2 impacts for 1-hour and annual did exceed the EPA SILs with the SIL radius extending outwards to 8.5 km for the annual NO_2 averaging period and 18.7 km for the 1-hour extent. The maximum 1-hour and annual NO_2 impact locations all fell within 150 meters of the Gordon Moore Park at Ronler Acres fenceline. Because pollutant concentrations associated with the Project are highest within the immediate area of the Project and rapidly drops off with distance, the analysis for the SIA provide conservative pollutant concentration values in regard to the regional Project impact. In addition, the SIA includes land use, terrain, soil type, and flora that is typical of Washington and Multnomah Counties. The SIA area in Figure 12 and those presented in Attachment C encompasses industrial land, undeveloped land, the Hillsboro airport, agriculture and commercial/light industrial properties.

Vegetation Types

Several agricultural crops are grown within the vicinity of each of the Project sites. These crops include primarily commercial corn and wheat (summer and winter) production. Agricultural lands are adjacent to the Project sites towards the east, west and south. Agricultural lands extending outwards within the NO_2 SIA also include barley, alfalfa, hops, grapes, blueberries, etc.

Within the defined 1-hour and annual NO_2 SIA, the non-commercial vegetation communities in the immediate surrounding areas can generally be classified as mixed forest, developed land and shrubland. No known federal or state sensitive plant species were identified. No designated critical habitat areas for federally listed species were identified.

The document developed by the U.S. Department of Agriculture (USDA) entitled, *A Screening Procedure to Evaluate Air Pollution Effects in Region 1 Wilderness Areas, 1991* was utilized for this assessment to determine the potential impacts of the modeled NO_2 concentrations. The 1991 document includes plant species specific pollutant concentration thresholds for western U.S. species, as well as other information that complements the 1980 EPA guidance. The two referenced guidance documents have been reviewed to identify the most appropriate threshold values (if available) for this region based upon the species identified that have significant commercial or recreational value.

Although the reference documents do not provide values for all of the identified species or pollutants, they do provide information about the alfalfa and barley field crops which are two of the lesser secondary crops in the vicinity of the Project area. Based upon the information provided in Appendix B in *A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils and Animals*, the alfalfa and barley crops were found to be rated as “sensitive” to NO_2. The “sensitive” rating means that the lowest damage threshold is applied. Based upon this information, the proposed impact analysis was based upon compliance with the threshold levels for “sensitive” vegetation that are identified in Table 3.1 of *A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils and Animals*. In that table, the total modeled air concentrations for the proposed Project plus ambient background concentrations are compared to the criteria to evaluate impacts. The total concentrations for both 1-hour and annual NO_2 are well below the significance criteria of 3,760 ug/m^3 and 94 ug/m^3 respectively. Since no thresholds were exceeded, there is no potential for adverse impact on vegetation. This approach uses the most stringent level of damage threshold to assure conservative results, thus additional evaluation of impacts of air pollutants to vegetation is unnecessary.

Attachment D contains a listing of the commercial and non-commercial plant species in the Project area.

Soil Types

Soils on and around the two Project sites are primarily loams, silt loams, and silty clay loams which include Aloha silt loam, Willamette silt loam, Woodburn silt loam, Amity silt loam, and Verboort silty clay loam. Attachment D contains a complete listing of the soil types found in the vicinity of the Project.

Nitrogen Deposition

In addition to the ambient pollutant exposure levels, plants have the potential to be affected by intake of air pollutants that have deposited and subsequently accumulated in the soil. Compared to the amount of published information on the effects of atmospheric pollution on plants and animals, relatively little has been reported on their effects on soils. Often the effect on soils can be seen in plants and animals such that the impacts to soil are secondary. For instance, if contaminated soil causes vegetative damage, the result could be increased erosion, increase in solar radiation reaching the ground, higher soil temperature and moisture stress. In agricultural and populated areas, intentional human actions taken to improve soils and assist vegetation growth, such as fertilization and application of insecticides, tend to have a much more direct and profound effect on soils than airborne pollutants. Nitrogen can be added to soil as a result of atmospheric deposition. Nitrogen deposition in soil can have beneficial effects to vegetation if they are currently lacking these elements. At levels above plant requirements, gaseous emission impacts on soils can cause acidic conditions to develop. Soil acidification and eutrophication can occur as a result of atmospheric deposition of nitrogen.

To calculate nitrogen depositional impacts from operation of the Project, the *Near Field Nitrogen Deposition Modeling Guidance (November 2013)* was followed. The primary purpose of any screening analysis is to produce a preliminary or conservative estimate of potential impacts (EPA, 2005). Using non-reactive (no chemistry) dispersion models such as AERMOD to complete a deposition analysis by assuming all NO_x emissions are converted into depositional nitrogen provides a conservative methodology.

A threshold at which harmful effects from nitrogen deposition on plant communities has not been firmly established. Research conducted in the South San Francisco Bay Area indicates that intensified annual grass invasions can occur in areas with nitrogen deposition levels of 11–20 kg/ha/yr. A Nitric Acid depositional value of 0.05 m/s was applied to the average of the SIA annual NO_2 concentrations, in order to calculate the rate of deposition. The use of 0.05 m/s deposition velocity is consistent with Class I nitrogen deposition analysis. The levels of nitrogen deposition in the area around the Project are estimated at 5.89 kg/ha-yr, far below levels necessary to cause adverse effects.

Furthermore, the level of nitrogen deposition from the Project on plant-available nitrogen would actually be less than the calculated amount because the deposition will be distributed in small amounts during the year and not all of the nitrogen added to the soil during each deposition event is available for plant use because of losses associated with soil processes. Therefore, it is unlikely that there would be significant impacts to biological resources from nitrogen deposition.

Soil Acidification

As noted above, nitrogen deposition acts as a plant nutrient that can benefit soils, especially soils such as the sandy loam that exists in the Project area. However, this soil amendment can also be detrimental where it benefits non-native plants competing with native vegetation. No sensitive vegetative communities have been identified in the vicinity of Project that would be expected to be negatively impacted by nitrogen deposition.

Soil Eutrophication

Eutrophication is an increase in the concentration of chemical nutrients in an ecosystem to an extent that increases the primary productivity of the ecosystem. Atmospheric deposition of nitrogen can facilitate eutrophication of the soil and vegetation community.

A measure of the existing ambient deposition (wet + dry) in the area was obtained from the closest representative monitors in the National Atmospheric Deposition Program (NADP) monitoring network (https://nadp.slh.wisc.edu/) at the Columbia River Gorge monitoring site (WA98) in Skamania County, Washington. This monitor is operated by the USFS. The most recent background deposition is based on dry plus wet deposition data 1.894 kg/ha/yr for 2021. Since the Project incremental annual nitrogen is was calculated at 5.89 kg/ha-y, the addition of the background for a total deposition rate of 7.79 kg/ha-yr is still below the threshold needed for adverse effects. Thus, the effects of deposition on eutrophication are considered to be insignificant.

Class I Impact Assessment

OAR 340-225-0070 requires PSD sources to assess compliance with Air Quality Related Values (AQRVs) if the source could impact visibility or deposition. This requirement is also summarized in EPA's Draft NSR Workshop Manual, where an impact analysis must be performed for any PSD source which "may affect" a Class I area. Thee AQRV requirement includes any PSD source located within 100 km of a Class I area. However, Class I areas typically within 300 km are included in this type of analysis. OAR 340-225-0700 requires the ODEQ to provide notice of PSD permit applications to the EPA and Federal Land Managers. This notification was completed by the ODEQ and was incorporated into the ODEQ comments on the modeling protocol.

Intel is now a major source for criteria pollutant emissions and is therefore automatically subject to PSD permitting requirements. The nearest Class I area is Mount Hood, located 80 km from the Gordon Moore Park at Ronler Acres (see Figure 13). Eight (8) additional Class I areas are identified within 300 km of the Project. The Class I coordinates are based on the National Park Service (NPS) Class I receptor list converted from latitude/longitude to UTM NAD83 coordinates.

Following OAR 340 division 25 and the FLAG Workshop procedures (June 2010) for PSD sources greater than 50 km from a Class I area, the use of the Screening Procedure Q/D was utilized to determine if the Project could screen out of a formal AQRV assessment for visibility and nitrogen deposition (Q is the total emissions in tons per year and D is the distance in kilometers to the Class I area). Following these procedures in, Q is calculated as the sum (in tons/year) of emissions of NO_x and PM-10 based on the maximum 24-hour net emissions increase for each pollutant from the proposed Project. The actual baseline emissions were not included in the proposed increase, as per FLAG with ODEQ concurrence. There will be no increase in SO_2 emissions over the existing PSEL so this pollutant was not included in the calculation of Q. The existing PSEL emissions and the proposed hourly increases converted to tons are summarized in Table 24.

The screening calculation takes the form of:

*Q = sum (NO_x+PM-10) in lbs/hr (for 24-hours) for the worst-case day * 365 days/year*

Table 24 Existing and Proposed Emissions Profiles			
	NO_x tpy	PM-10 tpy	Q tons
Current PSEL	197.0	35.0	-
Proposed Increase without Emergency Generators	184.0*	24*	-
Proposed Increase Emergency Generators Only (worst-case day)	124.1*	1.17*	-
Total for Q/D Calculation	308.10	25.17	333.27
Total PTE	403.0	59	
* Based on worst case day multiplied by 365 days and converted to tons per year			

All the non-emergency sources are steady state and operate almost continuously 24-hours per day. The emergency diesel generators are limited to 25 hours per year, with no more than 10 engines being tested during any day. To determine the worst-case daily emissions for the emergency generators, the 10 highest emitting engines' emissions were summed to calculate a pound per day (lb/day) emission rate. This was then multiplied by 365 days and converted to tons per year (tpy) to calculate the engines contribution to the total emissions (Q). As an example, for NO_x:

> Each emergency generators at 68 lb/hr each or 10 engines on a daily basis at 680 lb/day
> 680 lb/day * 365 day/yr * 1 ton/2000 lb = 124.1 tpy

This is repeated for PM-10 but with a different set of 10 engines which have a higher PM-10 emission rate.

> Each emergency generators at 0.641 lb/hr each or 10 engines on a daily basis at 6.41 lb/day
> 6.41 lb/day * 365 day/yr * 1 ton/2000 lb = 1.17 tpy

Using this procedure on the emergency generators which is then added to the steady state Q, the total Facility Q based on the increase in NO_x and PM-10 is:

> Q = sum (NO_x+PM-10) in maximum lbs/day (for the worst-case day including emergency generators) * 365 days/year * 1 ton/2000 lbs = 333.27 tons

The results of the Q/D scenarios are presented in Table 25. If Q/D is less than 10, then the AQRV analysis can be waived as a requirement. All of the Class I areas have a Q/D ratio less than threshold of 10. In accordance with OAR 340-225-0070, the Federal Land Managers (FLMs) of Class I areas potentially affected by the project were notified by ODEQ of the pending permit application. In the FLM responses, the U.S Forest Service and the National Park Service, as FLMs, have both stated that an analysis of AQRVs is not required for their respective Class I areas and the Columbia River Gorge National Scenic Area.

In addition to the above AQRV analysis, OAR 340-225-0060 requires Class I SILs modeling to be performed to determine if a Class I increment and NAAQS analyses would be required for the major source pollutants.

TABLE 25 NEARBY CLASS I AREAS AND Q/D SCREENING RESULTS		
Class I Areas	**Minimum Distance (km)**	**Q/D***
Mt Hood OR (MOHO)	80	4.2
Mt Jefferson OR (MOJE)	116	2.9
Mt Adams WA (MOAD)	121	2.8
Goat Rocks WA (GORO)	145	2.3
Mt Washington WA (MOWA)	150	2.2
Mt Rainier WA (MORA)	153	2.2
Three Sisters OR (THSI)	167	2.0
Diamond Creek (DC)	223	1.5
Crater Lake (CR)	279	1.2
*Q/D based on worst case day.		

PSD Class I SILs AERMOD Analyses

OAR 340-225-0060 requires that the Project must demonstrate compliance with the NAAQS and increments in PSD Class I areas. This requirement is only applicable if the Project exceeds the Class I SILs. Therefore, Class I SILs modeling were assessed for the Class I areas listed in Table 25 using the procedures in OAR 340-225-0030 (Procedures) and 340-225-0040 (Air Quality Models). Modeling was performed for the Project emissions only and then compared to the applicable Class I SILs in OAR 340-200-0020. The Class I receptor grid and elevations given by the National Park Service Air Resources Division on the webpage were used:

http://www.nature.nps.gov/air/Maps/Receptors/index.cfm

These receptors were converted to UTM NAD83 coordinates by the US Army Corps of Engineers CORPSCON program for Class I areas within 50 km of the Project site(s).

The EPA Modeling Guidelines suggest that the use of AERMOD be limited to distances of less than approximately 50 km, beyond which the CALPUFF dispersion model is typically used to assess the long-range transport of pollutants. Since the requirement to assess AQRVs for each of these areas was waived, an alternative modeling approach with AERMOD was used for assessing Class I SILs for each Class I area that is located at a distance greater than 50 km. The proposed approach utilizes a ring of receptors at 50 km distance from the Project, with receptors placed at two (2) degree intervals over the entire 360-degree circle of receptors. For each of these receptors, the receptor heights were based on a range of elevations that correlate with each of the nine (9) Class I areas listed in Table 25. 100-meter elevation intervals were used starting at the lowest elevation up to the highest. Using this grid, the Class I SILs listed in Table 26 were assessed. If any of the Class I areas have impacts that exceed the SILs, then the CALPUFF modeling will be used to reassess these SILs and, if needed, would also be used to assess PSD Class I area increments and NAAQS. Figure 13 presents the AERMOD receptor grids developed used in the Class I SIL analysis.

Single source impacts on secondary PM-2.5 tend to decrease as distance from the source increases (Baker et al., 2016), which means peak source impacts presented as PM-2.5 in the NAAQS air quality assessment may not provide relevant information for the spatial scales involved between Project sources and Class I areas. Given that Project source impacts will be lower at greater distances, the MERPs listed in Table 14 would overestimate the secondary PM-2.5 formation as the source and Class I areas are not in close proximity.

Using the distance correction outlined in the memorandum from EPA dated April 2019, *"Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone (O_3) and PM2.5 under the PSD Permitting Program."*, the hypothetical source concentrations from MERPs View Qlik were selected based on the distance to the nearest Class I area, Mount Hood, at 80 km. Using the Morrow, Oregon site, this produced the following secondary PM-2.5 formations based on the modeled hypothetical source and resultant MERP concentration from the MERP View Qlik output:

- 24-hr = 0.0903 *u*g/m^3
- Annual = 0.0039 *u*g/m^3

Attachment C contains the MERP View Qlik distance dependent concentrations for the 80 km distance. These were added to the Class I SIL modeling results for comparisons with the Class I SILs. Additional distance dependent MERP analyses were not made as the closest Class I area used in the analysis would be considered conservative.

Using the Class I modeling grid, the Class I SILs were assessed with the maximum results listed in Table 26. These are the maximum 24-hour and annual impacts over the 5-years modeled at all of the receptors. The results of the Class I SIL analysis demonstrate that all modeled impacts, including secondary PM-2.5 formation, will be less than the applicable Class I SIL. Thus, no Class I increment, or NAAQS analysis is required at any of the areas.

Figure 13
Class I Areas and the AERMOD Receptors

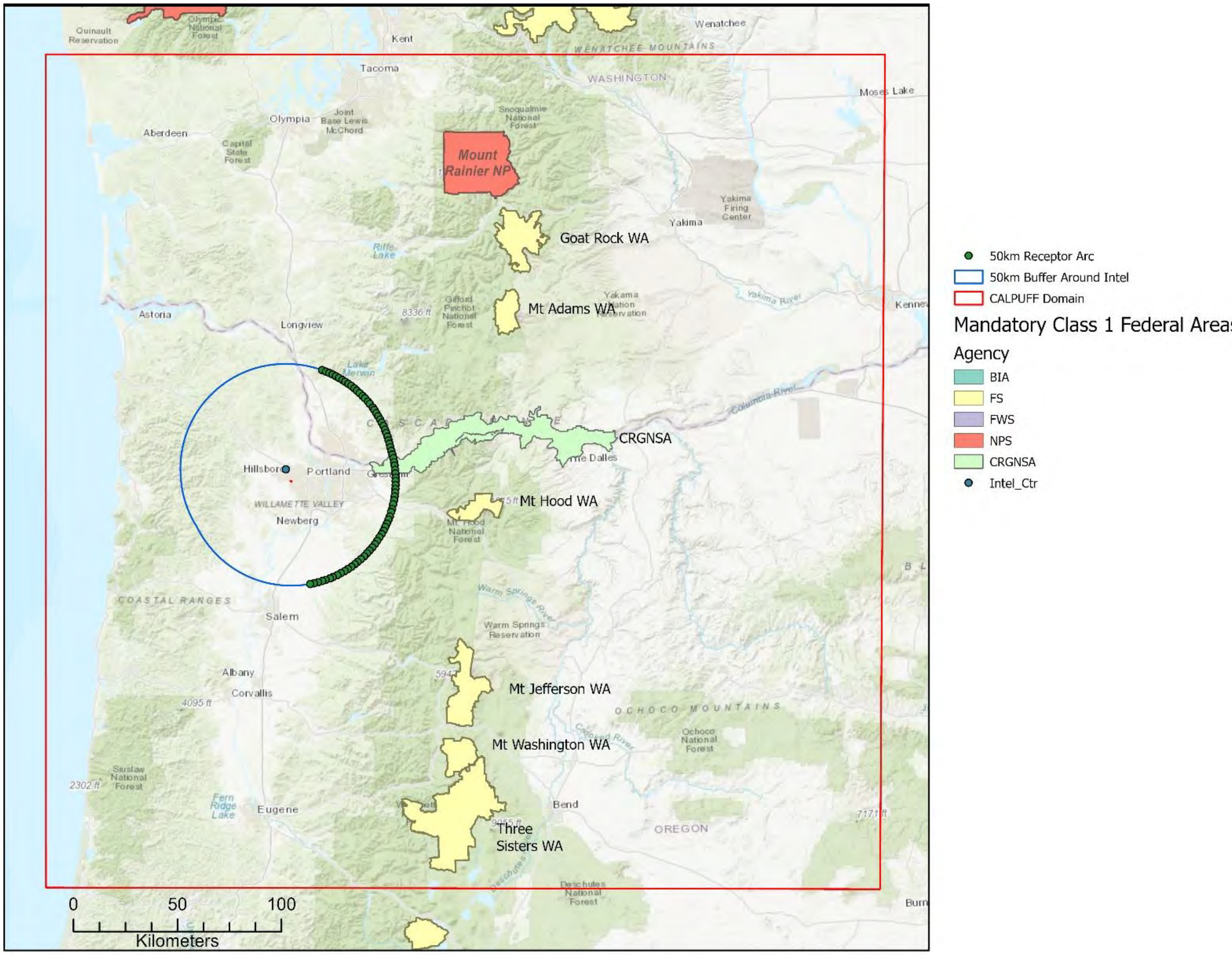


TABLE 26 Criteria Pollutant Class I SILs and Increments				
Pollutant	**Averaging Interval**	**Maximum Modeled Impact on Receptor Ring (50 km) (µg/m³)**	**Class I Significant Impact Level (µg/m³)**	**Class I PSD Increment (µg/m³)**
NO_2	Annual	0.00308	0.1	2.5
PM-10	24-Hour Annual	0.0619 0.0062	0.3 0.2	25 5
PM-2.5	24-Hour Annual	0.128 0.009	0.27 0.05	2 1
Secondary PM-2.5 were added to the primary PM-2.5 modeled concentrations.				

Conclusion

In summary, the dispersion modeling assessment used all the existing and new source emissions in the SILs, PSD increment and NAAQS analyses. Based on these modeling results which utilized the data presented in this Air Quality Impact Assessment, the project will comply with all NAAQS and PSD increments and will not cause or contribute to exceedances of any ambient standard or limit. The applicable requirements of OAR 340 divisions 224 and 225 addressed herein have been completed.

Attachment A

ODEQ Modeling Protocol and Approval Letter

ODEQ Air Contaminant Discharge Permit Application

Air Quality Modeling Protocol

Intel Corporation Ronler Acres/Aloha Project

Submitted to

Oregon Department of Environmental Quality

Submitted by

ATMOSPHERIC DYNAMICS, INC
Meteorological & Air Quality Modeling

Prepared by

Atmospheric Dynamics, Inc.

April 2023

INTRODUCTION AND PROJECT DESCRIPTION

Intel Corporation (Intel) operates the Ronler Acres and Aloha semiconductor manufacturing facilities (Facility) in Washington County, Oregon. The Ronler Acres campus is located at 2501 NE Century Boulevard, Hillsboro, Oregon, which has a Universal Transverse Mercator (UTM) North American Datum (NAD) 83 coordinate of 506601.5 meters Easting, 5043404.5 meters Northing (Zone 10). The Aloha campus is located at 3585 SW 198th Avenue, Aloha Oregon, and has a UTM NAD 83 coordinate of 509003.2 meters Easting, 5037811.5 meters Northing (Zone 10) latitude /longitude of 122.8851359° W, 45.4937841° N. The Aloha campus has been operating since 1976 while the Ronler Acres campus began operation in 1994. Both campuses are engaged in the production of semiconductor products and are considered co-located for permitting purposes because their production activities are interrelated. Both campuses are regulated under a single Standard Air Contaminant Discharge Permit (ACDP), 34-2681-SI-02, issued by the Oregon Department of Environmental Quality (DEQ) in 2016 and most recently modified in 2022.

Intel is submitting a Type 4 Maintenance Area New Source Review (NSR) and Prevention of Significant Deterioration (PSD) permit application due to proposed changes at the Facility meeting the definition of "major modification" in OAR 340-224-0025. Changes at the Facility include additional fabrication (fab) cleanroom space (D1X MOD4 and D1A expansion), and increased emissions at the existing fabs due to advances in technology manufacturing and additional manufacturing support operations. The proposed major modification will trigger the Maintenance Area NSR requirements in OAR 340-224-0060 and the Prevention of Significant Deterioration (PSD) requirements in OAR 340-224-0070. A common requirement of both sets of requirements is the need to demonstrate that the proposed changes will not cause or contribute to an exceedance of the National Ambient Air Quality Standards. Modifications subject to Division 224 requirements must be permitted as Type 4 construction approvals.

This modeling protocol describes the Class I and Class II modeling steps, methods and assumptions that will be performed to support the Type 4 construction approval permit application. The modeling will be based on the ODEQ *"Recommended Procedures for Air Quality Dispersion Modeling"* (March 2022). Table 1 summarizes the proposed analyses on a pollutant specific basis. The modeling will follow procedures as summarized by the United States Environmental Protection Agency (EPA) Appendix W modeling guidelines. Additional guidance procedures are summarized below and throughout the text: U.S. Environmental Protection Agency (EPA) in its "*Guideline on Air Quality Models*" (including supplements), EPA Memorandum *"Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 National Ambient Air Quality Standard*" (March 2011), EPA Memorandum *"Clarification on the Use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO_2 NAAQS"* (September 2014) " EPA Memorandum *"Guidance for Ozone and Fine Particulate Matter Permit Modeling"* (July 2022), EPA Memorandum *"Modeling Procedures for Demonstrating Compliance with PM2.5 NAAQS (March 2010) and the* California Air Pollution Control Officers Association (CAPCOA) "*Modeling Compliance of the Federal 1-Hour NO_2 NAAQS*"(October 2011).

TABLE 1 AIR QUALITY CRITERIA					
	NO_x	PM10	PM2.5	CO	SO_2
PSD Significant Impact Levels for Class I And Class II Areas	x	x	x	x	
Ambient Air Quality Standards	x	x	x	x	x
Class I and Class II Visibility and Deposition	x	x	x		
Impacts to Soils and Vegetation	x	x	x	x	
Class I and Class II Area Increment	x	x	x		
The project will also be major for VOCs and will include an analysis of ozone impacts from emissions of NOx and VOCs. Secondary PM2.5 and Ozone will also be assessed with MERPS.					

Permit Applicability

The locations of the Ronler Acres and Aloha campuses are shown in Figure 1. The site plans are presented in Figures 2 and 3, respectively. The Ronler Acres and Aloha campuses are located in Washington County, Oregon. The area in which the campuses are located is designated as attainment or unclassified for all criteria pollutants except carbon monoxide (CO) and ozone, for which the area is designated as maintenance.

The current Facility is an existing source that will become a Federal Major Source as a result of the proposed changes because emissions of one or more regulated pollutants will increase above the Federal Major Source level. A major modification at a facility that will become a Federal Major Source triggers the requirements of Oregon's PSD permitting program for each pollutant for which the area is designated attainment or unclassified. OAR 340-224-0070(3)(a)(A). These requirements include the obligation to conduct an air quality analysis for each regulated pollutant for which emissions will exceed the netting basis by a Significant Emission Rate (SER) or more. Based on the proposed Plant Site Emission Limits, the Facility is required to perform a PSD air quality analysis for NO_x, PM10 and PM2.5.

The proposed modifications also trigger requirements of Oregon's Maintenance Area New Source Review (NSR) program because it is located within the Oregon portion of the Portland-Vancouver Interstate Maintenance Area for ozone and the Portland Maintenance Area for CO, and the proposal constitutes a major modification for CO and ozone precursors (VOC and NO_x). Maintenance area NSR requirements are triggered for each major modification of a maintenance pollutant. Major modifications for ozone precursors (NO_x and VOC) constitute major modifications for ozone. A major modification of a maintenance pollutant must comply with the maintenance area NSR requirements at OAR 340-224-0060, including the requirement to demonstrate that it will not cause or contribute to an exceedance of the NAAQS.. The Facility will meet its NAAQS compliance obligation in part by ensuring a net air quality benefit in compliance with OAR 340-224-0060(2) by fully offsetting its CO, NO_x and VOC emissions via an allocation of growth allowance. In addition, the Facility will model its CO emissions and evaluate ozone impacts independent of the net air quality benefit resulting from offsetting those emissions.

Oregon DEQ is requiring sources[1] to demonstrate compliance with the short-term NAAQS (specifically, 24-hr $PM_{2.5}$, 1-hr SO_2 and 1-hr NO_2) if the facility's project triggers NSR for any pollutant and the facility-wide short-term emissions are greater than the Significant Emission Threshold (SETs). Intel will be conducting a short-term NAAQS evaluation for NO_2 and $PM_{2.5}$ as required by the PSD & Maintenance Area NSR regulations described above. Although the project SO_2 emissions do not require an air quality assessment under the PSD regulations, the short-term facility wide SOs emissions will be over the SO_2 significant emissions threshold (SET) of three (3) pounds per hour (lbs/hr) and SO_2 NAAQS compliance will be evaluated.

Project Description

The manufacturing process occurs in a cleanroom environment to avoid micro contamination of the product. Semiconductors are fabricated in batches of silicon wafers and can take anywhere from one to two months to manufacture. Semiconductor manufacturing begins with a silicon wafer substrate. The semiconductor is then built up as a series of layers, with material added or removed in each step. Steps include:

- Oxidation: Involves the generation of a silicon dioxide layer on the wafer surface to provide a base for the photolithography process. This layer also insulates and protects the wafer during subsequent processing.
- Lithography: Starts with the application of a photo sensitive layer onto the wafer. Then, a photomask is placed over the wafer and light is projected onto the wafer to form patterns of exposed and unexposed photoresist (e.g., the electrical pattern). After exposure, the wafer is developed in a solution that dissolves the exposed photoresist, leaving those areas exposed for subsequent processing steps. The unexposed photo-resistant coating remains on the water, thus protecting the surface.
- Ion Implant: Doping the wafer with ions to making it conductive or insulating at selected locations.
- Etching: Wet or dry etching techniques are used to remove unwanted material on certain areas on the wafer. After etching, photoresist is removed using dry or liquid stripping compounds.
- Deposition: Applies additional layers of silicon, silicon dioxide, or other materials to the wafer
- Planar: A surface treatment process which prepares the wafer for subsequent processing steps. A mildly corrosive chemical slurry is used as a polishing compound.

During the fabrication process, many of these steps are repeated multiple times in various sequences with variations in each step. Once the manufacturing is completed, the wafers are tested and cut into individual chips. The semiconductor chips are then sorted, assembled, tested, and packaged.

Manufacturing operations occur 24 hours a day and 365 days a year. However, production output varies with consumer demand and stage of process development. Significant technology revisions occur approximately every 2 years.

There are a number of utility support systems that support fab manufacturing operations. These include:

- Natural gas-fired rotor concentrator thermal oxidizers (RCTOs) are used to control volatile organic compounds (VOC) emissions from the Fabs.

[1] See Oregon DEQ, "Short-Term NAAQS Compliance Internal Management Directive" signed September 1, 2021 and Oregon DEQ, "Recommended Procedures for Air Quality Dispersion Modeling", March 2022.

- Packed-Bed Wet Chemical Scrubbers for controlling acid gases used in the Fab.
- Trimix Ammonia Treatment Systems are used to treat ammonia wastewater.
- Large natural gas-fired boilers (>2.0 million BTU per hour)
- Small natural gas-fired heating units and boilers (<2.0 million BTU per hour)
- Diesel-fired emergency generators and fire pumps
- Wet cell cooling towers
- Bulk Chemical Distribution including bulk and specialty gases.

Below is a summary description of the emission points that will be used in the modeling analyses.

Rotor Concentrator Thermal Oxidizers (RCTOs)

RCTOs consist of two main components: a concentrator that uses zeolite wheels to adsorb VOCs from the Fab exhaust and a thermal oxidizer that oxidizes the VOCs into water and carbon dioxide. The RCTOs are a source of natural gas combustion byproducts, CO_2, and VOCs that are not adsorbed by the zeolite concentrator. Each RCTO stack will be included in the model as a point source.

Some of the newer RCTOs exhaust to the acid scrubbers that then pass through a wet electrostatic precipitator (WESP) for additional PM control. A WESP works by charging particles as they enter the unit and collecting them on electrodes within the WESP body.

Packed-Bed Wet Chemical Scrubbers (Scrubbers)

Each Fab has several scrubbers that treat acid or ammonia-containing Fab process exhaust. The exhaust passes through a packed bed with reagent flowing through the bed. A substantial portion of the acid or ammonia gases in the exhaust are transferred out of the air stream into the reagent stream. The treated exhaust streams are then sent out to the atmosphere via a manifold with between one and five stacks.

Boilers

The boilers supply hot water to the various buildings and manufacturing processes. All of Intel's boilers are natural gas fired. Air emissions from the boilers are those associated with natural gas combustion.

Emergency Generators and Fire Pumps

In addition to backing up all critical Life Safety Systems, emergency generators back-up systems required by code and business continuity needs at the Facility in the event of an unplanned primary power outage. The generators combust ultra-low-sulfur diesel and are routinely tested to ensure proper operation. For permitting purposes, air emissions are limited to periods when the emergency equipment is tested and maintained. Readiness testing is limited to 25 hours per year for the emergency generators and 50 hours per year for the emergency fire pumps. The permit specifies that no more than ten generators may be run in a day and the generators can only be run during daylight hours, which is defined as the hours between 8 am and 6 pm.

Ammonia Treatment System (TMXW)

The TMXW system is an ammonia wastewater treatment system that includes gas-phase ammonia abatement. Ammonia wastewater is pH adjusted and fed to an ammonia stripper. The ammonia stripper is a desorption process that removes ammonium ions out of the water to produce gas-phase ammonia. The gas-phase ammonia is exhausted to a two-stage thermal catalytic oxidation/reduction system. The first catalyst converts ammonia to NOx and CO to carbon dioxide. The second catalyst converts NOx to nitrogen and water. Air emissions from this system include natural gas combustion byproducts and ammonia. The air emissions exit to ambient air via a stack. Each emission point will be modeled separately.

Lime Silos

Dry lime (calcium hydroxide) used in wastewater treatment operations is delivered to and stored in lime silos. There are five lime silos on site. During filling, the silos are a source of PM emissions as air is displaced by the lime being loaded. Each silo is equipped with a vent controlled by a fabric filter dust collector. For the five lime silo bin vents, PM10 and PM2.5 emissions from all five sources will be modeled as a single volume source that will be located midpoint between the existing lime silo bin vents.

Cooling Towers

The Facility has mechanically-induced (i.e., fan-driven) wet-cell cooling towers that are open to the atmosphere. The cooling towers are used to dissipate the large heat loads generated by the factory and the chilled water is used to condition the incoming air to the correct temperature required by the factory. The cooling towers are a source of particulate matter. Cooling towers will be modeled in two specific ways:

1. Cooling towers with a single fan will be modeled using one stack located in the fan center and the maximum design flow and actual fan diameter will be used for the stack parameters.
2. Multiple fans that are part of a single cooling tower assembly will be modeled using a single stack located in the center of the assembly. The maximum design flow from the cooling tower assembly will be divided by the number of fans to get the representative flow. The diameter for the representative stack will be the diameter of a single fan.

PROPOSED AIR QUALITY DISPERSION MODELS

Air Quality Models/Version: The primary EPA dispersion model proposed for use is the AERMOD modeling system (AERMOD version 22112) with the associated meteorological and receptor processing programs AERSURFACE (version 20060), AERMET (version 22112), AERMINUTE (version 15272), and AERMAP (version 18081). AERMOD will be used to quantify pollutant impacts on the surrounding environment based on the emission sources operating parameters and their locations and will be used for modeling most facility operational impacts in both simple and complex terrain. In addition, the Building Profile Input Program for PRIME (BPIP-PRIME version 04274) will be used for determining building dimensions for downwash calculations in AERMOD. These models, along with options for their use and how they are used, are discussed below. These models will be used for the following:

- Comparison of facility impacts to significant impact levels (SILs), Significant Monitoring Concentrations (SMCs), and the National Ambient Air Quality Standards (NAAQS) and
- Cumulative impacts analyses in accordance with EPA modeling requirements, if required (project impacts greater than SILs), for NAAQS and PSD Class I and Class II increments.

EXISTING METEOROLOGICAL AND AIR QUALITY DATA

Hourly observations of certain meteorological parameters are used to define the area's dispersion characteristics. This data is used in EPA approved air dispersion models for defining a project's impact on air quality. These data must meet certain criteria established by the EPA and the following discussion details the proposed data and its applicability to this project.

Project Location/Topography: Both the Ronler Acres and Aloha project sites are located in the Tualatin Valley which is a relatively flat river bottom area that is surrounded by terrain to the north, west and east. Very little variation in terrain exists in the valley until the area abuts the mountain ranges surrounding it on three sides.

Nearby Surface Meteorological Stations: The proposed Ronler Acres project is located in the northeastern portion of the Tualatin Valley, approximately 2.25 kilometers (km) east of the Hillsboro Airport. The Aloha site is located approximately 6.5 km southeast of the Hillsboro Airport. The Hillsboro Airport (WBAN 94261) collects ASOS (Automated Surface Observing System) surface meteorological data such as wind speed and direction, temperature, pressure, cloud heights, and sky cover. ASOS surface meteorological data are generally selected for processing for AERMOD because ASOS hourly data are routinely recorded and archived, generally meet EPA data completeness criteria, instruments are located in unobstructed areas meeting EPA siting criteria, and instrument heights and sensor sensitivities meet EPA instrument specifications. Also, short-term (1-minute) wind direction and speed data are generally available that can be processed by EPA programs to eliminate excessive calm observations and to give hourly averages consistent with EPA modeling requirements. The ASOS surface data, when processed with AERMET as described below, result in data recovery greater than 90 percent for every quarter in the five-year period in accordance with EPA requirements *"Meteorological Monitoring Guidance for Regulatory Modeling Applications," (EPA-454/R-99-005)*. Generally, surface data parameters of wind speed, wind direction, and temperature must individually exceed 90% both by quarter and year, as well as wind speed, direction, and stability (turbulence) parameters combined, before any substitutions. These criteria are equaled for all quarterly/annual periods of the surface data selected for use, which covers the years 2016 through 2020.

Selection of Surface Meteorological Data: As noted above, the project vicinity and immediate areas of Tualatin Valley are relatively flat, an important consideration in the selection of surface meteorological data for use in assessing the projects impacts on regional air quality. Under these circumstances (large expanses of relatively flat terrain), the nearest meteorological data meeting EPA siting and instrument criteria would be expected to be the most representative of the project location. The ASOS data fulfills both criteria, being located in the immediate project vicinity and meeting EPA siting and instrument criteria. Thus, the Hillsboro Airport ASOS data are proposed as the surface meteorological data for modeling facility emissions. The close proximity of the ASOS station to the project site virtually assures that it could be considered representative, if not the equivalent of onsite data.

Both the ASOS and Ronler Acres/Aloha sites are located in the relatively flat Tualatin Valley at nearly identical distances and orientations from the relatively distant mountains which define the valley boundaries. There are no intervening terrain features between the ASOS location and project site to adversely affect the relative synoptic-scale wind patterns at either location (compared to each other). The current ASOS location from the NCDC Historical Observing Metadata Repository (HOMR) was verified and then refined to its exact location based on Google Earth photos (location is shown below).

Selection of Upper Air Meteorological Data: The most representative radiosonde observations nearest to the project site is the Salem Airport (McNary Field), located approximately 65 km south of the Intel project sites. Climatologically, Salem is similar to the Intel project sites. Twice daily radiosonde data were available for the proposed modeled years of 2016 through 2020.

Meteorological Data Surface Characteristics: AERMET requires input summaries of the surface characteristics for the area surrounding the Hillsboro ASOS monitoring site. These surface characteristics were calculated with the EPA-program AERSURFACE program based on EPA guidance. AERSURFACE uses 2016 National Land Cover Data (NLCD) from the United States Geological Survey (USGS) to determine land use based on standardized land cover categories. AERSURFACE was executed in accordance with the EPA guidance documents "*AERMOD Implementation Guide," (March 19, 2009)*, and "*AERSURFACE User's Guide*," *(EPA-454/B-20-008, revised February 2020)*. AERSURFACE determines the midday albedo, daytime Bowen ratio, and surface roughness length representative of the surface meteorological station. The ***Bowen ratio*** is based on a simple unweighted geometric mean while ***albedo*** is based on a simple unweighted arithmetic mean for the 10x10 km square area centered on the selected location (i.e., no direction or distance dependence for either parameter). ***Surface roughness length*** is based on an inverse distance-weighted geometric mean for upwind distances up to the EPA-recommended one (1) km radius from the selected location. The circular surface roughness length area (1-km radius) can be divided into any number of sectors as appropriate (EPA guidance recommends that no sector be less than 30º in width).

Twelve 30° sectors were processed to calculate the roughness lengths due to the homogeneity of the area within the EPA-recommended radius of one (1) km. Months were assigned to seasons as follows:

- Late autumn after frost and harvest, or winter with no snow: December, January, February
- Transitional spring (partial green coverage, short annuals): March-June
- Midsummer with lush vegetation: July-August
- Autumn with unharvested cropland: September-November

Temporal variations of monthly precipitation must be considered to calculate the albedo for AERMET processing in accordance with EPA recommendations. Precipitation data should be measured at the nearest representative location to the surface data with the most complete precipitation record, particularly for the years of meteorology being modeled. Historical precipitation data are measured in the Hillsboro area (at Hillsboro Airport) and the monthly periods between 1991 to 2020 were used as input AERSURFACE and are presented in Table 2.

Site Urban/Rural Classification: Land use surrounding the Intel sites must be determined in order to assess if rural or urban dispersion characteristics should be used. Following Auer (1977) and as summarized in the EPA's "*Guideline on Air Quality Models*", if the land use within an area circumscribed by a three (3) km radius around each facility is industrial, commercial, or developed residential, then these areas are designated as urban. All other types of land use are considered rural.

Table 2
Hillsboro Airport 30-year Precipitation Climatology Summary

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	SMC
1991	3.01	3.84	3.67	4.88	2.34	1.7	0.25	0.65	0.39	1.66	5.66	4.76	32.81	
1992	4.65	3.7	1.17	4.06	0.13	0.36	0.77	0.31	1.21	2.47	4.54	6.44	29.81	
1993	4.27	0.87	3.77	5.03	3.52	2.68	1.49	0.16	0	1.08	1.26	7.54	31.67	
1994	4.42	5.06	2.85	1.18	1.15	0.94	0	0.42	0.6	6.48	6.32	6	35.42	
1995	8.63	3.47	5.37	3.96	1.35	1.8	0.98	0.39	1.57	2.91	8.32	7.82	46.57	
1996	7.56	10.23	2.93	4.63	4.34	0.97	0.58	0.13	2.96	4.22	9.21	14.83	62.59	
1997	7.67	2.03	6.33	2.18	2.01	2.07	0.73	1.59	3.15	5.45	5.91	3.34	42.46	
1998	8.36	6.64	4.07	1.3	4.77	1.41	0.32	0	0.87	6.4	9.03	7.07	50.24	
1999	7.48	9.78	4.29	1.5	1.74	1.55	0.66	0.84	0.14	2.49	6.91	3.91	41.29	
2000	6.92	4.35	3.02	1.36	1.91	1.04	0.08	0.75	1.27	3	2.16	3.24	29.1	
2001	1.94	1.58	2.33	1.86	0.85	1.2	0.45	0.79	0.79	3.13	8.54	6.98	30.44	
2002	7.31	3.13	3.49	1.71	1.44	1.3	0.32	0.05	0.83	0.43	2.61	9.88	32.5	
2003	8.29	2.93	5.16	5.91	0.75	0.15	0	0.55	0.94	3.07	4.43	7.93	40.11	
2004	5.9	4.27	1.68	1.79	1.24	0.82	0	2.31	1.37	3.55	2.61	3.72	29.26	
2005	2.27	0.68	4.42	2.56	4.35	1.55	0.24	0.32	1.36	3.68	6.09	9.09	36.61	
2006	11.9	1.99	3.57	2.02	2.7	1.08	0.14	0.08	0.59	0.9	12.88	7.49	45.34	
2007	3.24	3.8	2.39	1.96	1.29	0.97	0.4	0.53	1.73	3.12	3.9	8.94	32.27	
2008	5.38	1.49	3.31	1.94	0.97	0.36	0.09	1.37	0.22	1.69	4.51	7.57	28.9	
2009	4.36	1.08	2.4	1.24	2.92	1.34	0.13	0.72	1.51	3.32	5.72	3.96	28.7	
2010	5.14	4.06	3.76	3.22	3.16	3.52	0.45	0.17	2.21	3.98	5.23	8.16	43.06	
2011	3.59	3.83	5.39	3.42	4.68	0.59	1.23	0	0.26	1.88	5.38	2.33	32.58	
2012	5.79	2.48	6.59	2.38	2.34	2.42	0.09	0.02	0.04	5.45	7.59	7.5	42.69	
2013	1.47	1.87	1.81	2.33	3.98	1.31	0	0.85	6.27	0.87	2.73	1.08	24.57	
2014	2.41	5.06	6.07	3.42	1.7	0.92	0.52	0.14	1.1	6.12	2.83	5.88	36.17	
2015	3.01	4.57	4.68	1.41	0.44	0.54	0.32	0.55	0.86	3.42	4	14.6	38.4	
2016	**7.53**	**3.96**	**5.31**	**1.88**	**0.8**	**1.33**	**0.33**	**0.25**	**0.93**	**8.66**	**6.25**	**4.77**	**42.0**	**Wet**
2017	**4.11**	**10.06**	**6.96**	**3.56**	**1.82**	**1.05**	**0**	**0.13**	**1.39**	**4.04**	**7.38**	**2.92**	**43.42**	**Wet**
2018	**5.17**	**2.15**	**2.79**	**3.32**	**0.11**	**0.65**	**0**	**0**	**0.79**	**3.33**	**2.61**	**4.74**	**25.66**	**Dry**
2019	**3.12**	**4.96**	**1.36**	**3.23**	**1.45**	**0.64**	**0.49**	**0.21**	**3.08**	**1.51**	**1.16**	**5.22**	**26.43**	**Dry**
2020	**7.18**	**1.49**	**2.12**	**0.88**	**1.86**	**2.04**	**0.07**	**0.25**	**1.28**	**1.38**	**5.34**	**5.27**	**29.16**	**Dry**

Sorted Data - The 30-years of climatology were SORTED to determine DRY/AVG/WET months. Generally, the driest and wettest years were used to delineate DRY/WET (AVG was anything in-between). Years which had precipitation less than the 30th percentile were designated dry, years which had precipitation greater than the 70th percentile were designated wet and all other years were designated as average.

The most objective approach is to use the 2016 land cover classification data (the same data set as used in AERSURFACE) and designate the “Developed Intensity” areas (IDs 22, 23 & 24) as urban based on Auer’s classification. These classes are:

- Developed, Low Intensity (NLDC Code 22) - areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20 to 49 percent of total cover. These areas most commonly include single-family housing units.
- Developed, Medium Intensity (NLCD Code 23) – This classification includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50 to 79 percent of the total cover.
- Developed, High Intensity (NLCD Code 24) – This classification includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row

houses and commercial/industrial. Impervious surfaces account for 80 to 100 percent of the total cover.

Table 3 and Figure 4 shows the land use determination for the Aloha and Ronler sites. Both sites are over 70 percent urban. Because the area within 3 km is more than 50 percent classified as urban land use, the URBAN option will be used for AERMOD modeling of the Facility and the urban population of the modeling domain should be used within the model as well. Typically, the population value should be equal to the population of the counties contained within the modeling domain. The modeling domain includes receptors in Washington, Clackamas, Yamhill, and Multnomah counties. Since the grid does not cover the complete area of each of these counties, only the populations of Washington, Clackamas, and Multnomah counties were considered. Using the latest U.S. Census Bureau estimates of population (2020), the total population for these three counties is 1.8 million; this population will be input to AERMOD for use in the urban modeling of the Facility.

Table 3
Land Use Summaries

ID	Description	Class	Ronler	Percent	Aloha	Percent
11	Open Water:	Rural	16	0.1%	3	0.0%
21	Developed, Open Space:	Rural	2892	9.2%	1895	6.0%
22	Developed, Low Intensity:	Urban	6287	20.0%	8781	27.9%
23	Developed, Medium Intensity:	Urban	9523	30.3%	12530	39.9%
24	Developed, High Intensity:	Urban	6855	21.8%	2673	8.5%
31	Barren Land (Rock/Sand/Clay):	Rural	21	0.1%	0	0.0%
41	Deciduous Forest:	Rural	0	0.0%	73	0.2%
42	Evergreen Forest:	Rural	86	0.3%	500	1.6%
43	Mixed Forest:	Rural	35	0.1%	56	0.2%
52	Shrub/Scrub:	Rural	14	0.0%	4	0.0%
71	Grasslands/Herbaceous:	Rural	105	0.3%	95	0.3%
81	Pasture/Hay:	Rural	1825	5.8%	1801	5.7%
82	Cultivated Crops:	Rural	3203	10.2%	2207	7.0%
90	Woody Wetlands:	Rural	339	1.1%	518	1.6%
95	Emergent Herbaceous Wetland:	Rural	222	0.7%	282	0.9%
	Total:		31423		31418	
	Percent Urban			**72%**		**76%**
	Percent Rural			**28%**		**24%**

Meteorological Data Representativeness: The proposed use of the five (5) years of Hillsboro Airport ASOS surface meteorological data would satisfy the need for site-specific data. EPA defines the term "site-specific data" to mean data that would be representative of atmospheric dispersion conditions at the source and at locations where the source may have a significant impact on air quality. Specifically, the meteorological data requirement originates from the Clean Air Act in Section 165(e)(1), which requires an analysis "of the ambient air quality at the facility and in areas which may be affected by emissions from such facility for each pollutant subject to regulation under [the Act] which will be emitted from such facility." This requirement and EPA's guidance on the use of site-specific data are also discussed in Section 8.4.4 of Appendix W to 40 CFR Part 51. The representativeness of meteorological data is dependent upon a determination that the data are free from inappropriate local or microscale influences.: (a) the proximity of the meteorological monitoring site to the area under consideration; (b) the complexity of the topography of the area; (c) the exposure of the meteorological sensors; and (d) the period of time during which the data are collected.

The Hillsboro Airport ASOS surface meteorological monitoring station qualifies as site-specific data for several reasons. First, the Hillsboro Airport meteorological monitoring site is the closest ASOS site and located in very close proximity to the Intel locations, with nearly identical elevations above mean sea level (amsl). Second, both locations are located in the same area of the broad and relatively flat Tualatin Valley. Third, the ASOS monitoring location at the airport was selected to be far enough from wind flow perturbations caused by buildings and other features. Fourth, the period of meteorological data selected at the time of the modeling analyses (2016-2020) would be expected to be the most representative of current conditions, with the same general land uses surrounding the current ASOS location and airport as well as the proposed project site. A review of current Google Earth photo-aerials shows that nearby land uses now at both locations are similar to the land uses reflected in the 2016 and 2020 NLCD sets. Additionally, these data meet the EPA data recovery requirements for air quality modeling as described earlier.

Representativeness is defined in the document *"Workshop on the Representativeness of Meteorological Observations" (Nappo et. al., 1982)* as "the extent to which a set of measurements taken in a space-time domain reflects the actual conditions in the same or different space-time domain taken on a scale appropriate for a specific application." Judgments of representativeness should be made only when sites are climatologically similar, as is the case with the meteorological monitoring site and the proposed project location. In determining the representativeness of the meteorological data set for use in the dispersion models at the project site, the consideration of the correlation of terrain features to prevailing meteorological conditions, as discussed earlier, would be nearly identical to both locations since the orientation and aspect of terrain at the proposed project location correlates well with the prevailing wind fields as measured by and contained in the meteorological dataset. In other words, the same mesoscale and localized geographic and topographic features that influence wind flow patterns at the meteorological monitoring site also influence the wind flow patterns at the proposed project site.

For these reasons, the Hillsboro Airport meteorological data selected for use in modeling emissions from the proposed project are expected to satisfy the definition of representative, and therefore site-specific, meteorological data and are similar to the dispersion conditions at the project site and to the regional area. An annual wind rose for the five-year modeling period is shown in Figure 5.

Existing Baseline Air Quality Data: The nearest air quality monitoring sites to the proposed project are listed in Table 4 which also lists the monitored pollutants and distances to the project.

In addition to the monitoring site data, the ODEQ allows for the use of the *Northwest International Air Quality Environmental Science and Technology Consortium (NW-AIRQUEST)* data for the 2014-2017 period which is considered design data for the 2023 period and can be considered representative of the impact areas. These data sets are summarized in Table 5.

Table 4
Ambient Monitoring Site Information

Monitors	Distance from Ronler Acres (km)	Distance from Aloha (km)	Pollutants Monitored	Monitoring Objective
SE Lafayette (SEL) 5824 SE Lafayette St. (EPA# 41-051-0080)	25	22	CO, NO_2, Ozone, PM_{10}, $PM_{2.5}$, SO_2	Population/NAAQS
Tualatin at I-5 (TBC) (EPA# 41-067-0005)	21	15	CO, NO_2, Ozone, $PM_{2.5}$	Source/NAAQS
Hare Field (HHF) Grant Street (EPA# 41-067-0004)	5	8	$PM_{2.5}$	Population/NAAQS

Table 5
Background Monitoring Data

Pollutant	Units	Avg Time	Stations	2018	2019	2020	2021	2022	NW AIRQUEST Design Value
PM2.5	ug/m³	24 Hr 1st High	Hare Field	28	36	28	24	47	NA
			Tualatin	19	32	28	20	66	
			S. Lafayette	20	30	31	23	75	
		24 Hr 98th percentile	Hare Field	18	24	18	15	29	19.6
			Tualatin	17	21	18	18	28	
			S. Lafayette	17	20	23	16	27	
		Annual Mean	Hare Field	6.1	6.7	6.1	5.8	7.9	6.3
			Tualatin	7.1	6.8	6.8	6.7	8.5	
			S. Lafayette	6.8	6.5	7.1	6.4	7.9	
PM10	ug/m³	24 Hr 1st High	S. Lafayette	54	33	35	31	83	55
		24 Hr 2nd High	S. Lafayette	27	29	35	29	39	
		24 Hr 1st High	Hare Field	ND	35	ND	ND	ND	
		24 Hr 2nd High	Hare Field	ND	32	ND	ND	ND	
CO	ug/m³	8 Hr 1st High	Tualatin	1145	1145	1145	1145	1260	1306
			S. Lafayette	1832	1832	1718	1947	1947	
		1 Hr 1st High	Tualatin	1603	1489	**	1603	2061	1744
			S. Lafayette	2405	2176	**	2978	2405	
NO_2	ug/m³	1 Hr 1st High	Tualatin	83	77	79	71	64	NA
			S. Lafayette	88	81	66	68	68	
		1 Hr 98th percentile	Tualatin	72	62	56	56	58	65.7
			S. Lafayette	66	60	55	58	56	
		Annual Mean	Tualatin	23	21	19	17	19	14.2
			S. Lafayette	17	15	12	12	13	
SO_2	ug/m³	1 Hr 1st High	S. Lafayette	9	8	8	8	8	NA
		24 Hr 1st High	S. Lafayette	3	3	4	5	5	6.0
		1 Hr 99th percentile	S. Lafayette	8	8	5	8	8	12.6
		Annual Mean	S. Lafayette	1.2	0.6	0.6	1.3	1.5	1.20

Notes: Data for 2021-2022 was derived from EPA AIRS Monitored Values Reports. NA = not applicable ND = no data
ODEQ data for 2018-2020 was also supplemented by EPA AIRS data as necessary.
** ODEQ fire data not removed by EPA.

Federal regulations, specifically 40 CFR Part 58 Appendix D, require that a State and Local Air Monitoring (SLAMS) network be designed to meet a minimum of three basic monitoring objectives: Provide air pollution data to the public in a timely manner, support compliance with the National Ambient Air Quality Standards (NAAQS), and support air pollution research. A variety of site types are needed to support these basic objectives, including six (6) general types listed below:

1. Sites are located to determine the highest concentrations expected to occur in the area covered by the network.
2. Sites are located to measure typical concentrations in areas of high population density.
3. Sites are located to determine the impact of significant sources or source categories on air quality.
4. Sites are located to determine general background concentration levels.
5. Sites are located to determine the extent of regional pollutant transport among populated areas.
6. Sites are located to measure air pollution impacts on visibility, vegetation damage, or other welfare-based impacts.

The physical sitting of an air monitoring station must conform to 40 CFR Part 58 and its location must achieve a spatial scale of representativeness that is consistent with the monitoring objective and site type. The spatial scale results from the physical location of the site with respect to the pollutant sources and categories. It estimates the size of the area surrounding the monitoring site that experiences uniform pollutant concentrations. The categories of spatial scale are:

1. Microscale-Defines the concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
2. Middle scale-Defines the concentration typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometer.
3. Neighborhood scale—Defines concentrations within some extended area of the city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers range.
4. Urban scale-Defines concentrations within an area of city-like dimensions, on the order of 4 to 50 kilometers.
5. Regional scale-Defines usually a rural area of reasonably homogeneous geography without large sources and extends from tens to hundreds of kilometers.
6. National and global scales-These measurement scales represent concentrations characterizing the nation and the globe as a whole.

The selection of these monitoring sites is also based on the monitoring stations' objective, which is NAAQS and population exposure for measuring background air quality. These monitoring objectives can be used to support the demonstration of compliance with the NAAQS when coupled with dispersion modeling.

Along with the monitoring objective is the spatial scale of the monitoring site which is used to represent high concentration locations, population and background exposure. The spatial scale of the SE Lafayette monitoring station is summarized below by pollutant:

- NO_2 – Urban which represents highest concentration, population exposure and general background.
- Ozone – Urban which represents highest concentration, population exposure and general background.
- CO – Micro scale which represents highest concentration.
- SO_2 – Urban which represents highest concentration, population exposure and general background.

- PM10 – Neighborhood which represents highest concentration, population exposure and general background.
- PM2.5 – Neighborhood which represents highest concentration, population exposure and general background.

The spatial scale for Hare Field is:

- PM2.5 – Neighborhood scale which is used for highest concentration, population exposure and general background.

The spatial scale for the Tualatin monitoring station is microscale whose primary purpose is to monitor freeway-based concentration data for NO_2, CO, Ozone, and PM2.5. While microscale is useful for determining highest concentration data, the immediate proximity to Interstate Route 5 (I-5) make this monitoring data better suited to identifying temporal (freeway-based impacts) to air quality based on time of day rather than measuring a true background data set that is not influenced by any one source or source type. As such, the further use of this data set was not considered.

As referenced above, there is also gridded background air quality data based on the NW AIRQUEST data set that covers the project area. This data set (2014-2017) can also be used as representative background if demonstrated to be appropriate and applicable to a particular project area. And while the use of the NW AIRQUEST data can be considered conservative for some pollutants and averaging periods, as noted below, this data set does not track the current background air quality trends over the last five (5) years as discussed below.

Based on the goals and objectives of the specific monitors listed in Table 4, the selection of the SE Lafayette and Hare Field monitoring sites were chosen to represent background for use in the dispersion modeling analyses.

In order to select the applicable background monitored data set to use in the modeling analyses, a trend analysis of the background air quality data based on the last five (5) years is summarized below which is based on the data in Table 5. Background trends for CO and SO_2 are not summarized below as the project impacts are expected to be less than the applicable significant impact levels (SILs). Additionally, the SE Lafayette monitoring station represents the highest (design value) concentration for CO and the NW AIRQUEST represents the highest design value for SO_2. These locations will be used to represent background as needed for the project modeling analyses.

The overall trend in background NO_2 for the last five (5) years (2018-2022) at the SE Lafayette monitoring station has been downward for both 1 hour (98^{th} percentile) and annual averages. A similar trend is noted at the Tualatin monitoring site. Note the NW AIRQUEST data is consistent with the 2018 monitoring data and does not reflect the decrease in background over time.

This trend for PM2.5 is not duplicated as the background concentrations at SE Lafayette, Tualatin and Hare Field have shown a small increase in background monitored concentrations since 2018. While the PM2.5 trend decreased during the 2021 time period, overall, the trend has been upward. As noted with the NO_2 trends, the NW AIRQUEST data best represents the year 2018 and does not reflect the increase in background over time.

PM10 trends at the SE Lafayette site show similar increases between the years 2018 and 2022.

Summary of Selected Data: Based on the monitoring objectives (NAAQS), the spatial scales (Urban and Neighborhood) of the Hare Field and SE Lafayette monitoring stations and the last five (5) years of background trends, these sites were selected as being the most representative for determining the background concentrations to be used in the modeling analyses in place of the NW AIRQUEST design values. For NO_2, Ozone and PM10 background data, SE Lafayette is proposed with PM2.5 background based on Hare Field, which is also the closest PM2.5 monitoring station to the project site. For background CO and SO_2, the SE Lafayette is proposed for use in the modeling analyses.

The proposed background concentrations will be the highest values over the last three (3) year period for 1-and 8-hour CO, 24-hour PM10, annual NO_2 and 1, 24-hour and annual SO_2. 24-hour and annual PM2.5 background concentrations will be based on the 3-year average in accordance with *"Guidance for PM2.5 Permit Modeling" (05/25/14)*. Table 6 presents the proposed background concentration data for use in the dispersion modeling assessments.

For 1-hour NO_2, seasonal hourly background NO_2 for the 2019-2021 data period will be used, in accordance with the procedures found in "*Guidance Concerning the Implementation of the 1-hour NO_2 NAAQS for the PSD Program" (6/29/10)* and *"Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 NAAQS" (3/01/11)*. Complete hourly data from the 2022 data period is not yet available for use so the seasonal hourly background NO2 for modeling will be the 2019-2021 data period. In accordance with EPA procedures, the third highest value for each hour and season will be used to calculate the three-year average of each time period.

Seasonal Hour-Of-Day is determined by organizing all of the NO_2 concentrations by hour of day (1AM, 2AM, 3AM, etc.) for each season of the year in descending order and selecting the 3^{rd} highest NO_2 concentrations for each hour of the day and season.

For example, (1AM)

1. First take all the 1AM values (maximum of 90-92 numbers) for each Season
   a. Winter = December of Previous Year, January, February
   b. Spring = March, April, May
   c. Summer = June, July, August
   d. Autumn = September, October, November
2. Organizing the NO_2 concentrations in descending order (highest to lowest)
3. Take the 3^{rd} highest NO_2 concentrations.
4. This value will be used to represent the 1AM 3^{rd} highest or 98^{th}- percentile of available data.
5. The above process is repeated for each hour of the day and season.
6. Repeat steps 1 thru 5 for each of the three years under review.
7. Average the three 1AM NO_2 concentrations.
8. This value will be used in AERMOD as the NO_2 background concentrations (3yr average of the 98^{th} percentile) for the 1AM hour and season.
9. Repeat step 7 and 8 for each of the hours in the day and season.

Table 6 Background Air Quality Data Summary	
Pollutant and Averaging Time	Background Value (µg/m^3)
PM10 – 24-hour 3-year 2nd High NAAQS	39.0
PM2.5$_5$ – 3-Year Average of Annual 24-hour 98th Percentiles NAAQS	20.7
PM2.5$_5$ – 3-Year Average of Annual Values NAAQS	6.6
CO – 1-hour High NAAQS	2,978
CO – 8-hour High NAAQS	1,947
NO_2 –3-Year Average of Annual 98th Percentile 1-hour Daily Maximum NAAQS	56.3*
NO_2 – Annual Maximum NAAQS	18.3
SO_2 – 3-Year Average of Annual 99th Percentile 1-hour Daily Maxima NAAQS	7.0
SO_2 – 24-hour Maximum CAAQS 24-hour High, 2nd High NAAQS	4.7
SO_2 – Annual Maximum NAAQS	1.1

Notes: * Hourly background concurrent with the 2016-2020 meteorology will be used for modeling. This value is just for reference.

Conversion of ppm/ppb measurements to µg/m^3 concentrations based on:
µg/m^3 = ppm x 40.9 x MW, where MW = 48, 28, 46, and 64 for ozone, CO, NO_2, and SO_2, respectively.

AIR QUALITY MODELING PROCEDURES

Several dispersion models are proposed for use to quantify pollutant impacts on the surrounding environment based on the emission sources and operating parameters. AERMOD will be used to determine facility impacts on Class II areas in the immediate project vicinity in simple, intermediate, and complex terrain areas during project operations. AERMOD will be the primary model used for comparison of project impacts to SILs and demonstration of compliance with AAQS. Modeling of operational impacts are described below.

For modeling the project's operational concentrations due to emissions from the proposed sources on nearby simple and complex terrain, the AERMOD model will be used with the entire hourly meteorological data (described above).

AERMOD Model, Options, and Procedures: AERMOD is a steady-state plume dispersion model that simulates transport and dispersion from multiple point, area, or volume sources based on updated characterizations of the atmospheric boundary layer. AERMOD uses Gaussian distributions in the vertical and horizontal for stable conditions, and in the horizontal for convective conditions; the vertical distribution for convective conditions is based on a bi-Gaussian probability density function of the vertical velocity. For elevated terrain AERMOD incorporates the concept of the critical dividing streamline height, in which flow below this height remains horizontal, and flow above this height tends to rise up and over terrain. AERMOD also uses the advanced PRIME algorithm to account for building wake effects. AERMOD input data options are listed below following these EPA modeling guidance documents.

- Final plume rise
- Stack tip downwash
- Regulatory default option (i.e., calm and missing meteorological data processing and elevated terrain heights option)

Flagpole receptors are not proposed to be used (ground level concentrations will be calculated). AERMAP will be used to calculate receptor elevations and hill height scales for all receptors from NED data in accordance with EPA guidance. Selection of the receptor grids is discussed below.

NO_2 Modeling Procedures: NO_2 impacts will first be assessed using a conservative Tier 2 analysis using the Ambient Ratio Method Version 2 (ARM2), adopted in the *Guidance Concerning the Implementation of the 1-hour NO_2 NAAQS for the PSD Program" (6/29/10)*. The Guideline allows a nationwide default conversion rate of 75% for annual NO_2/NO_x ratios and 80% for 1-hour NO_2/NOx ratios for the current Tier 2 Method. A Tier 2 analysis is expected to be sufficient for modeling annual NO_2 impacts for the steady state sources to demonstrate compliance with the NAAQS.

A Tier 3 analysis is proposed to assess the 1-hour NO_2 concentrations from the intermittent sources (emergency generators) for comparison with the 1-hour NAAQS. For the Tier 3 analysis, the plume volume molar ratio method (PVRMR) is proposed. This analysis will use ambient ozone measured at the SE Lafayette monitoring site. As the source of the background air quality data to be used in the modeling analysis, SE Lafayette has been shown above to be representative of the project site. As proposed, the Tier 3 analysis will be used along with the temporal pairing of modeled NO_x concentrations with concurrent hourly background ozone data from the SE Lafayette monitoring site to determine NO_2 concentrations based on PVMRM. The ozone data will be based on the same years as the AERMOD meteorology data. NO_2/NO_x ratios will be based on equipment specific data contained in the EPA ISR database. A NO_2/NO_x ratio of 0.10 is proposed for use on the emergency generators.

The fire pumps and emergency generators operate intermittently, for a limited number of hours in the year for maintenance and readiness testing. Intel's current air permit specifies that no more than ten (10) generators may be run in a day and the generators can only be run during daylight hours, which is defined as hours between 8 am and 6 pm. To evaluate compliance with long-term air quality standards, these sources will be modeled using annualized emissions (hourly emission rate times the number of hours run per year divided by 3,650) for all hours of the day.

The emergency generators typically run up to 25 hours per year, with 50 hours for the emergency fire pumps. As explained in EPA's March 1, 2011, memorandum, *"Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour National Ambient Air Quality Standard"*[2] it is unlikely that emissions from the intermittently operated emergency generators will coincide with the worst-case meteorological conditions and modeled 1-hr NO_2 impacts can be significantly overestimated. As such, EPA also suggests in their March 1, 2011, memo that these types of intermittent sources can be excluded from compliance demonstrations for the 1-hour NO_2 standard. Nonetheless, Intel is proposing to include emergency generator emissions in the 1-hour NO_2 standard compliance demonstration using the methodology described below.

[2] EPA Memorandum, "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 , National Ambient Air Quality Standard", March 1, 2011.

Since the generators only run intermittently, they pose a challenge to accurately reflect potential ambient air quality impacts. One approach suggested by EPA[3] is to model impacts from intermittent sources based on an annualized hourly emission rate, rather than the maximum hourly emissions. This approach would account for potential worst-case meteorological conditions combined with essentially continuous operation of the emergency generators at an average hourly emission rate. This approach will be used for the SIL evaluations but for the 1-hour NO_2 NAAQS, a Monte Carlo method, as discussed below, will be used. This method accounts for the statistical variation in intermittent operation occurrences.

Additional Modeling Procedures: For the other pollutants and averaging times, AERMOD will be used to determine the worst-case group of engines from the source groups used in the Monte Carlos analysis as identified in Table 7. For the 24-hour PM2.5 and PM10 standards, each one (1) hour of testing emissions will be prorated over 10 hours, which represents the 10-hour operating day, in order to calculate the 24-hour impacts. The worst-case daily operation of the groups of the emergency generators will be identified in AERMOD by assuming that each major group of engines in Table 7 are operated for the 10-hour day. From this, the applicable engine group will be added to the non-intermittent sources at the site to determine increment and/or NAAQS. This will also be done for 1 and 8-hour CO and 1 and 24-hour SO_2.

For short-term SO_2, the worst-case groups will be modeled with the sum of the hourly emission rate (10x) for 10 hours per day using the maximum hourly emission rate for the group. This will provide a very conservative estimate as all groups will be run every day with all generators running at the same time, rather than on separate days.

AERMOD will be run on the Intel facility for NO_x, PM10, PM2.5, SO_2, and CO emissions and the results compared to the appropriate SIL. If the project impacts are less than the SIL, then the evaluation of that pollutant is considered complete. If the impacts exceed the SILs, then a full cumulative and applicable increment impact analyses will be conducted as described below. Preliminary results indicate that the project CO emissions will be less than the SILs while the other pollutant impacts will be over the SILs.

Monte Carlo Simulation: For 1-hr NO_2, a Monte Carlo Simulation was used to estimate the NO_2 impacts from running intermittently operated emergency generators. In permitting, typically AERMOD design values (e.g. 98 percentile) are added to background design values. In the case of generators which run infrequently (~1% of the time), the impacts of the generators are statistically likely not to occur on the high background hours. Thus, modeling the generators as continuous sources greatly overestimates the occurrences of exceedances as the high modeled impacts are added to the high background under all conditions. A Monte Carlo simulation is used to model the probability of different outcomes in a process that cannot easily be predicted due to the intervention of random variables. For example, the specific hour/day that a set of generators will run is generally unknown. The operation of the generators may or may not correspond to a poor dispersion period, as the occurrence of these events is essentially random. This Monte Carlo approach accounts for the random nature of both the generator operation and the underlaying meteorological conditions.

A Monte Carlo Simulation involves the following steps. First, hourly NO_2 background as assembled for each day in a five (5) year period and grouped by month. Next, the model is run (without background) with 15 separate source groups of generators, identified in Table 7.

---

[3] ibid

The operating scenario is that no more than seven (7) generators will be run in one (1) hour (8 engines in source group 8, 6 engines in source groups 4 through 6 and source group 9) and that all 17 source groups will be run over 15 days per month, with each engine limited to 25 hours per year for testing and maintenance. The generators groups are shown in Table 7.

Table 7
Monte Carlo Generator Groups

Group ID	Count	Generator IDs
1	7	EGE1_01-07
2	7	EGE1_08-14
3	7	EGE1_15-21
4	6	EGC5_01-06
5	6	EGC5_07-12
6	6	EGC5_13-18
7	3	EGC5_19-21
8	7	EGDD_01-07
9	6	EGDA_01-06
10	2	EGDA_07-08
11	4	EGR1_01-04
12	5	EGDC_01-05
13	3	EGRB1_01, EGRP1_01-02
14	3	EGR4_01, EGRS6_01-02
15	3	EGDB_01-03
16	4	EGIW_01-03, EGR8_01
17	7	EGN2_01, EGF15_01-03, EGF5-01-02
Total Engines	86	

The generators are only modeled for the 10-hour period as noted above. The AERMOD output is hourly NO_2 concentrations for the continuous sources and the 17 generator groups. The data are assembled by day for five (5) years and organized by month (operational up to 152 days per year). Thus, a modeled day includes 15 generator groups run for each day. Once the data is assembled, the Monte Carlo simulation is run using the following iteration process which is also summarized in Figure 6.

For each iteration:

For each month,

- Randomly select model days for each day of the month from the 5-year block for that month
- Assume days one (1) through 15 correspond to generator days (e.g. day 1 = group 1, day 2 = group 2, etc.) and randomly select hour between 8:00 AM and 6:00 PM in which the generators will run.
- On hourly basis, find the total concentration (C(h)) by taking the model values CM(h) for EG(h) for the generators. Specifically:

  C(h) = CM(h)   for h <> hour picked for generators
  C(h) = CM(h) + EG(h)   for h = hour picked for generators

Note that the generators are run on the same day as the continuous sources for consistency.

- Find highest C(h) for that day and save (also record month and day)

Repeat above steps for each month for 3 years:

- For each year, rank maximum daily concentrations from highest to lowest.
- Find and average the high eighth high (H8H) values and save.

Repeat above steps one thousand (1,000) more times then take median of all runs to get design value for comparison against the 1-hour NO_2 standard. The results will also be summed across all years of meteorology and receptors in order to add these results to the steady state source impacts at the same receptor(s). Background will be added to the steady state source impact prior to the summation of the results with emergency generators for comparison with the 98th percentile 1-hour NO_2 NAAQS. While the results will be paired in space, they will not be able to be paired in time as the steady state source analyses do not use the Monte Carlo method for determining the 98th percentile impacts. However, the results, paired in space only, will be larger than if paired in both space and time.

GEP Stack Height and Downwash: Stack locations and heights and building locations and dimensions will be input to BPIP-PRIME. The first part of BPIP-PRIME determines and reports on whether a stack is being subjected to wake effects from a structure or structures. The second part calculates direction-dependent "equivalent building dimensions" if a stack is being influenced by structure wake effects. The BPIP-PRIME output is formatted for use in AERMOD input files.

Receptor Selection: Receptor and source base elevations will be determined from United States Geological Survey (USGS) National Elevation Dataset (NED) data. The NED data will be processed with the EPA-model AERMAP for the receptor locations selected. All coordinates (both sources and receptors) will be referenced to UTM North American Datum 1983 (NAD83, Zone 11). AERMAP is capable of interpolating the elevation data in the NED data for both receptor elevations and hill height scales.

The NED data are available in 1/3-arcsecond (about 10 meter) and 1-arcsecond (about 30 meter) grid node spacing. Areas that contain receptor grids with 100 meter spacing or less between adjacent receptors will use 10 meter NED data. Other areas that contain only receptor grids of greater than 100 meter spacing may utilize 30 meter NED data. For purposes of determining hill height scales, the NED datasets used will extend 5-km past the outside of the coarse receptor grid described below for 30-meter NED data and 2-km past the outside of the intermediate/downwash receptor grids described below for 10-meter NED data.

Cartesian coordinate receptor grids will be used to provide adequate spatial coverage surrounding the project area for assessing ground-level pollution concentrations, to identify the extent of significant impacts, and to identify maximum impact locations. For the full impact analyses, a nested grid will be developed to fully represent the initial location and extent of significance area(s) and maximum impact area(s). The nested grid will be comprised of the following:

- Receptors will be placed along the proposed project fenceline with a spacing of about 25 meters or less between adjacent receptors.
- The downwash receptor grid with a receptor spacing of 25 meters will extend from the project fence line out to 300 meters from the project.
- An intermediate receptor grid with 50-meter receptor spacing will extend from the downwash receptor grid out to 1000 meters from the project fenceline.

- The second intermediate receptor grid with 100-meter receptor spacing will extend from the first intermediate receptor grid outwards to two (2) kilometers (km) from the project fenceline in all directions.
- A coarse grid with 200-meter receptor spacing will extend out five (5) km from the project in all directions.
- A second course grid with 500 meters spacing will extend outwards ten (10) km from the project fenceline in all directions.
- Extended grids with 1,000 meters spacing will be used to close off the applicable modeled SIL's as needed.
- When maximum impacts occur in areas outside the 25-meter spaced receptor grid, additional refined receptor grids with 25-meter resolution will be placed around the maximum impacts and extended as necessary to determine maximum impacts.

Ambient concentrations within the facility fenceline will not be calculated.

Figure 7 presents the receptor grids based on the discussion above.

Ambient Air Quality Impact Analyses: In evaluating the impacts of the proposed project on ambient air quality, the ambient impacts of the project will be added to background concentrations and compared to the state and national ambient standards for SO_2, NO_2, PM_{10}, $PM_{2.5}$, and CO. The project impacts will also be compared to the EPA modeling significance impact levels (SILs). The NAAQS and EPA SILs are shown in Table 9.

Table 9
SILS and NAAQS

Pollutant and Averaging Time	EPA SILs	National AAQS
PM10 – 24-Hour	5 µg/m^3	150 µg/m^3
PM2.5 – 24-Hour	1.2 µg/m^3	35 µg/m^3 Average of Ann.98th%s
PM2.5 – Annual	0.3 µg/m^3	12.0 µg/m^3 Average of Annual Impacts
NO_2 – 1-Hour	7.5 µg/m^3	188 µg/m^3 Average of Ann.98th%s
NO_2 – Annual	1 µg/m^3	100 µg/m^3
CO – 1-Hour	2000 µg/m^3	40,000 µg/m^3
CO – 8-Hour	500 µg/m^3	10,000 µg/m^3
SO_2 – 1-Hour	7.8 µg/m^3	196 µg/m^3 Average of Ann.99th%s
SO_2 – 24-Hour	5 µg/m^3	1300 µg/m^3
SO_2 – Annual	1 µg/m^3	80 µg/m3

Overall maximum impacts will generally be used for pollutants and averaging times where other types of statistical averages are not specified.

Significant Impact Areas: Modeled concentrations that exceed the applicable SILs will be used to determine the extent of the Significant Impact Areas (SIAs), which are circular areas with radii equal to the distance of the furthest significant receptor from the project for the NAAQS and PSD increment. SILs and the associated SIAs will be based on the following:

- 1-hour NO_2 and SO_2 based on the 5-year average of the maximum 1-hour concentrations each year at each receptor due to normal facility operations using ARM2. Intermittent sources such as the emergency generators will be included in the SILs analysis but will use the EPA method for modeling which is based on the annualized emissions.
- 24-hour PM2.5 based on the five (5)-year average of the maximum 24-hour concentrations each year at each receptor
- Annual PM2.5 is based on the five (5)-year average of the annual concentrations for all years at each receptor.
- 24-hour PM10 and SO_2 based on the over maximum 24-hour concentration during any of the five (5) years at each receptor.
- 1 and 8-hour CO will be based on the maximum concentration for each receptor overall five (5) years.
- Annual SO_2 based on the maximum annual concentration for each year and at each receptor.

Proposed PM2.5 SIL: The proposed Class I and Class II PM2.5 SILs for this project are identical to the EPA established SILs, which were vacated by the courts. With respect to reliance on the PM2.5 SILs, EPA cautioned that reliance on the SILs alone to demonstrate that a source will not cause or contribute to a violation of the PM2.5 NAAQS is inadequate. However, EPA stated that permitting authorities have the discretion to select and utilize a PM2.5 SIL value if there is sufficient justification for the selected SIL value and justification in the manner in which it will be used. The SIL values for PM2.5 in EPA regulations can also continue to be used if the permitting authority also takes background concentrations of PM2.5 into account. For this project, the difference between the PM2.5 NAAQS and the monitored PM2.5 background concentrations in the area is greater than the SILs. Based on the data in Table 7, over 41 percent of the available standard is still available. Thus, given the amount of available PM2.5 standard in the project region, the applicant proposes to use the previously vacated PM2.5 SILs for both Class I and Class II modeling assessment, for the NAAQS. If any of the modeling demonstrates an existing violation to the NAAQS, it is proposed that the applicant may continue to show that the proposed source does not contribute to an existing violation of the PM2.5 NAAQS by demonstrating that the proposed source's PM2.5 impact does not significantly contribute to an existing violation of the PM2.5 NAAQS. Comparison to the SILs for PSD Class I and Class II increments will be based on the maximum short-term or annual project impacts. For these analyses, the EPA SILs for PM2.5 of 1.2 and 0.3 $\mu g/m^3$ for PSD Class II areas and 0.07 and 0.06 $\mu g/m^3$ for PSD Class I areas are proposed for evaluating project impacts for 24-hour and annual averaging times, respectively.

NAAQS/Increment Multisource Inventory Request: Based on results of the SILs analyses performed for the project and for those pollutants above the applicable SILs, a request of a multisource inventory of all facilities with either PM10, PM2.5, CO and NO_x emissions will be made to the ODEQ. Intel will also request that the PSD-increment sources be identified for PM10, PM2.5 and NO_x.

NAAQS and Increment Modeling Procedures: Per EPA guidance, Appendix W and the *Draft NSR Workshop Manual* require that the cumulative and increment impacts analysis to include "nearby sources", which includes "[a]ll sources expected to cause a ***significant concentration gradient*** in the vicinity of the source or sources under consideration." This is performed for sources within the SIA plus the 50 km screening area beyond the maximum radial distance of the SIA. Appendix W further instructs that the "impact of nearby sources should be examined at locations where interactions between the plume of the point source under consideration and those of nearby sources (plus natural background) can occur". Emphasizing that "[t]he number of sources is expected to be small except in unusual situations". Thus, only sources with a significant concentration gradient in the vicinity of the source need to be included.

To limit the total number of sources used in the cumulative NAAQS analysis, a Q/D assessment will be made on the ODEQ supplied inventory. The existing facilities in the NAAQS cumulative multisource inventory will be screened with the Q/D analysis[4], where Q is the equivalent ton/year emission rate (appropriately accounting for emergency equipment) and D is the shortest distance in km from the multisource facility to the nearest SIA boundary for PM2.5/PM10 and the 10-km area that is the focus of the NO_2 analyses. Those facilities with a Q/D value greater than 20 tpy/km will be included in the cumulative NAAQS.

For assessing increment, the major and minor source baseline dates have already been triggered. As such, it will be assumed that in the absence of a distinct increment consumption inventory that all cumulative sources used in the NAAQS analysis will also be increment consumers. Based on the results of the SIL analyses, increment for 24-hour and annual PM2.5, 24-hour PM10 and annual NO_2 will be assessed. There are no PSD increments for CO. SO_2 will not be emitted at the major (PSD) source levels.

Ozone and Secondary PM2.5 Formation: The EPA developed a Tier 1 demonstration tool for ozone and PM2.5 precursor emissions called Modeled Emission Rates for Precursors (MERPs). The development of the tool and related guidance is summarized in a memorandum from EPA dated April 2019, with a subject, *"Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone (O_3) and PM2.5 under the PSD Permitting Program."* The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutant impacts from specific or hypothetical sources. The ODEQ AQDM Recommended Procedures will be used the air quality modeling results presented in EPA MERPs memorandum to derive MERPs for hypothetical sources located in the Western U.S.

MERPs can be used to demonstrate that projected impacts from a proposed source are less than the applicable SILs or when included with the modeling results, would not cause or contribute to a violation of a NAAQS or PSD increment for that pollutant.

The MERP is based on a hypothetical source emission rate, the modeled concentration from that emission rate, and the relevant SILs for O_3 and PM2.5 (1 ppb for O_3, 1.2 $\mu g/m^3$ for 24-hr PM2.5, and 0.2 $\mu g/m^3$ for annual PM2.5). The lowest MERP value for each precursor identifies the most conservative condition. ODEQ recommends the use of the Morrow, Oregon site, which is located near Arlington on the Columbia River. For the Tier I analysis, the smallest MERP values will be used for the 8-hour O_3 impact assessment and the 24 and annual PM2.5 assessment.

[4]North Carolina Department of Environment and Natural Resources - Air Permit Unit, 1985: A Screening Method for PSD, July 22, 1985. Memo from Eldewins Haynes to Lewis Nagler, EPA Region IV. This method was originally approved by EPA Region IV in a September 5, 1985 letter from Bruce Miller to Eldewins Haynes.

O_3 8-hr avg. analysis

- For NO_x the lowest MERP is 258 for a hypothetical 500 tpy source and a concentration of 1.9396 ppb
- For VOC the lowest MERP is 1087 for a hypothetical 500 tpy source and a concentration of 0.46018 ppb

PM2.5 24-hr avg. analysis

- For NO_x the lowest MERP is 3003 for a hypothetical 500 tpy source and a concentration of 0.19979 ug/m^3
- For SO_x the lowest MERP is 2314 for a hypothetical 500 tpy source and a concentration of 0.25927 ug/m^3

Annual PM2.5

- For NO_x the lowest MERP is 7942 for a hypothetical 500 tpy source and a concentration of 0.01259 ug/m^3
- For SO_x the lowest MERP is 11877 for a hypothetical 500 tpy source and a concentration of 0.00842 ug/m^3

PSD Class I AQRV Analyses: The Facility will be a federal major source for criteria pollutant emissions subject to PSD permitting requirements. PSD Class I Air Quality Related Value (AQRV) analyses, including visibility and nitrogen deposition may also be required. The nearest Class I area is the Mount Hood National Forrest, operated by the U.S. Forest Service, located approximately 80 km to the east. Seven (7) additional Class I areas are located within 200 km of the facility. The range of distances to each Class I area is listed in Table 10 below and are also presented in Figure 8.

Following the most recent FLAG Workshop procedures (June 2010), the use of the Screening Procedure (Q/D) to determine if the project could screen out of a formal AQRV assessment for visibility and nitrogen deposition was made. Following the screening procedures in FLAG, Q is calculated as the sum (in tons/year) of emissions of NO_x, SO_x, and PM2.5 based on the worst-case hour on the worst-case day and adjusted to reflect 365 days of operation. The screening calculation takes the form of:

Q = sum (NO_x+PM2.5+SOx) in maximum lbs/hr (for 24-hours) for the worst-case day * 365 days/year

The results of the Q/D scenarios are presented in Table 10.

If Q/D is less than 10, then no AQRV analysis is required, as shown above for the nearest Class I area. Based on the ratio of Q/D, none of the Class I areas have a Q/D of greater than 10. Therefore, it is proposed that no further analyses of AQRVs for visibility or nitrogen deposition are required for those areas. The applicant will coordinate with the FLM's on the Q/D results as well as providing a copy of this modeling protocol.

TABLE 10 NEARBY CLASS I AREAS AND Q/D SCREENING RESULTS		
Class I Areas	**Minimum Distance (km)**	**Q/D (Worst Case)**
Mt Hood OR (MOHO)	80	7.0
Mt Jefferson OR (MOJE)	116	4.8
Mt Adams WA (MOAD)	121	4.6
Goat Rocks WA (GORO)	145	3.9
Mt Washington WA (MOWA)	150	3.7
Mt Rainier WA (MORA)	153	3.7
Three Sisters OR (THSI)	167	3.4
*Q/D based on worst case day.		

PSD Class I SILs AERMOD Screening Analyses: The AQRV exemption does not apply to modeling compliance with the PSD Class I increments or NAAQS, which are required if the Class I SILs are exceeded. Therefore, Class I SILs modeling will be assessed for the Class I areas listed in Table 10. Modeling will first be performed for the Intel project emissions only and then compared to the applicable Class I SILs. The Class I receptor grid and elevations given by the National Park Service Air Resources Division on the webpage will be used:

http://www.nature.nps.gov/air/Maps/Receptors/index.cfm

These receptors will be converted to UTM NAD83 coordinates by the US Army Corps of Engineers CORPSCON program for Class I areas within 50 km of the Intel project site(s).

The EPA Modeling Guidelines suggest that the use of AERMOD be limited to distances of less than approximately 50 km, beyond which the CALPUFF dispersion model is typically used to assess the long-range transport of pollutants. Since the requirement to assess AQRVs for each of these areas may not be required, based on the Q/D results, an alternative modeling approach with AERMOD is proposed for assessing Class I SILs for each Class I area that is located at a distance greater than 50 km. The proposed approach would utilize a ring of receptors at 50 km distance from the Intel project, with receptors placed at two (2) degree intervals over the entire 360-degree circle of receptors. For each of these receptors, the receptor heights would be based on the lowest elevation to the maximum elevation for each of the 15 Class I areas, at 100-meter elevation intervals. Using this grid, the Class I SILs listed in Table 11 would be assessed. If any of the Class I areas have impacts that exceed the SILs, then the CALPUFF modeling will be used to reassess these SILs and, if needed, would also be used to assess PSD Class I area increments and NAAQS. Figure 7 also presents the AERMOD receptor grids.

Table 11

Class I SILs

Pollutant	Averaging Time	Class I SIL (µg/m^3)
PM25	24	0.07
PM25	Annual	0.06
PM10	24	0.3
NO_2	Annual	0.1

Analyses of the Columbia River Gorge Scenic Area (CRGSA): A separate nitrogen deposition and regional haze modeling analyses for the CRGSA may be requested by the ODEQ and the Forest Service. This request would be to address concerns on the background impacts in this area regarding visibility and deposition. The CRGSA is located approximately 40 km east of the Intel project site(s). If requested, AERMOD would be used to assess nitrogen deposition. The AERMOD model calculates atmospheric deposition of nitrogen by calculating the wet and dry fluxes of total nitrogen. This deposition is accomplished by using a resistance model for the dry deposition part, and by assigning particle phase washout coefficients for the wet removal process from rainout. The depositional parameters are input into the model in order to calculate the deposition of nitrogen. The depositional parameters will be based on nitric acid (HNO_3), which is consistent with the USFS modeling assumptions that can be used to calculate the amounts of nitrogen deposition from the Intel project. Nitric acid tends to deposit more readily than most other compounds.

In addition to deposition, a nearfield coherent plume visibility assessment may be requested. The most recent version of VISCREEN (13190) would be used to conduct the plume blight analysis with a 98th percentile background visual range as recommended by the FLM Guidance.

Additional Impact Assessments: Additional impact assessments will be made with regards to socioeconomics and biology. The impacts to sensitive species and plants will be included with regards to pollutant concentrations and possible depositional effects. The PSD permit application package will include these additional studies. Table 12 presents the summary of the EPA SILs, NAAQS and increments that will be used throughout the modeling assessments.

Final Modeling Submittal

As part of the final modeling analyses, the ODEQ will be supplied with the following materials which will be submitted in electronic format:

- AERMAP, BPIP-PRIME, and AERMOD input and output files
- Raw and processed meteorological data and background air quality data
- AERMET and AERSURFACE input and output files
- Data from the Monte Carlo Simulations
- Other data as needed to support the dispersion modeling assessments

Table 12

Significant Impact Levels (SILs), National Ambient Air Quality Standards (NAAQS), PSD Class II Increments, and Significant Monitoring Concentrations for Criteria Pollutants

Pollutant	Averaging Period	SIL[1] ug/m^3	NAAQS ug/m^3 (ppb)	Form of NAAQS with Respect to Modeling[2]		PSD Class II Increment[3] (ug/m^3)	Form of Class II Increment		Significant Monitoring Concentration[4] (ug/m^3)
NO_2	1 hour	7.5[5]	188 (100)	Average 8th Highest[6]	EPA/OAQPS memos;[7] 6/29/10 & 3/01/11	---	---	---	---
	Annual	1	100 (53)	Max. annual arithmetic mean	Section 7.2.1.1 App. W	25	NTBE (Max. annual arith. mean)	Section 7.2.1.1 App. W	14
SO_2	1 hour	7.8[5]	196 (75)	Average 4th Highest[6]	S. Page memo; 8/23/10[8]	---	---	---	---
	3 hour	25	1300 (500)	NTBE >once/year (H2H)	Section 7.2.1.1 App. W	512	NTBE >once/year (H2H)	Section 7.2.1.1 App. W	---
	24 hour	5	365 (140)[9]	NTBE >once/year (H2H)	Section 7.2.1.1 App. W	91	NTBE >once/year (H2H)	Section 7.2.1.1 App. W	13
	Annual	1	80 (30)[9]	Max. annual arithmetic mean	Section 7.2.1.1 App. W	20	NTBE (Max. annual arith. mean)	Section 7.2.1.1 App. W	---
PM 2.5[10]	24 hour	1.2	35	Average 1st Highest[11]	S. Page memo; 3/23/10[11]	9	NTBE >once/year (H2H)	Section 7.2.1.1 App. W	4
	Annual	0.3	12	Average 1st Highest[11]		4	NTBE (Max. annual arith. mean)	Section 7.2.1.1 App. W	---
PM 10	24 hour	5	150	NTBE >once/year on average over 5 years (H6H)[12]	Section 7.2.1.1 App. W	30	NTBE >once/year (H2H)	Section 7.2.1.1 App. W	10
	Annual	1	REVOKED[13]			17	NTBE (Max. annual arith. mean)	Section 7.2.1.1 App. W	---
CO	1 hour	2000	40,000 (35,000)	NTBE >once/year (H2H)	Section 7.2.1.1 App. W	---	---	---	---
	8 hour	500	10,000 (9000)	NTBE >once/year (H2H)	Section 7.2.1.1 App. W	---	---	---	575
Pb	Rolling 3-month Avg.	---	0.15	NTBE		---	---	---	0.1

[1] A 01/22/13 court decision remanded and vacated the PM2.5 SIL provision under 40CFR 52.21(k)(2) and 51.166(k)(2). Modelers are advised to consider the potential for a NAAQS exceedance by examining the existing air quality levels at representative monitors for any PSD affected pollutant. [See draft PM2.5 guidance (EPA-454/D-13-001; 180pp.)]

[2] Form of the standard assumes 5 years of meteorological data. If using site specific meteorological data, the form of the standard would be based on at least one year (up to 5 years) of site specific data.

[3] All short-term increments are based on the H-2-H regardless of the form of its respective NAAQS.

[4] A 01/22/13 court decision vacated the SMC for PM2.5. While the implication to other SMCs is not stated, it is prudent to obtain representative data. [See S. Page memo (03/04/13) & draft PM2.5 guidance (EPA-454/D-13-001; 180pp.]. While no SMC is provided for ozone, any emissions increase of 100 tons per year or more of VOC or NOx subject to PSD would be required to obtain one year of ozone air quality data. [See 40 CFR §52.21(i)(5)]

[5] The 1-hour NO and 1-hour SO values are EPA interim SILs until EPA undergoes rulemaking. A State may adopt its own SIL but usually relies on EPA's suggested SIL. The form of the SIL follows the form of its respective NAAQS, i.e., for probabilistic standards (including PM2.5) the SIL analysis is based on the maximum concentrations at each receptor averaged over the number of meteorological years modeled rather than the maximum at any receptor.

[6] For NO2, based on 5 year average of the 98th percentile of the annual distribution of the daily maximum1-hour values at each receptor. (For SO2 it is the 99th percentile). Concentrations at lower ranks must also meet the NAAQS (i.e., the 97th, 96th percentile). If there is 1 year of site specific data (up to 5 years), the averaging is based on the number of years of meteorological data.

[7] Guidance Concerning the Implementation of the 1-hour NO2 NAAQS for the Prevention of Significant Deterioration Program (6/29/10): http://www.epa.gov/region07/air/nsr/nsrmemos/appwno2.pdf

Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO2 NAAQS (3/01/11): http://www.epa.gov/ttn/scram/Additional_Clarifications_AppendixW_Hourly-NO2-NAAQS_FINAL_03-01-2011.pdf

[8] Guidance Concerning the Implementation of the 1-hour SO2 NAAQS for the Prevention of Significant Deterioration Program (08/23/10): http://www.epa.gov/region07/air/nsr/nsrmemos/appwso2.pdf (See also 3/01/11 memo for SO2; Note 7.)

[9] The existing annual & 24-hour SO2 NAAQS will be revoked one year after the effective date in areas with a designated status for the revised SO2 NAAQS, per 40 CFR 50.4(e). Their respective increments will remain in effect.

[10] The PM2.5 Increment, SILs and SMC values may be found in http://edocket.access.gpo.gov/2010/pdf/2010-25132.pdf

[11] On 03/23/10 EPA recommended that the modeled component of the PM2.5 NAAQS be shown using the average H-1-H rather than the design value of 98th percentile (http://www.epa.gov/region07/air/nsr/nsrmemos/pm25memo.pdf). Compliance with the annual PM2.5 NAAQS is also based on the average H-1-H. Theses recommendations are revisited in the 03/04/13 draft PM2.5 guidance provided that secondary formation is addressed. See NFR (10/17/06) in which the 24-h NAAQS was revised from 65 ìg/m³ to 35 ìg/m³: http://www.gpo.gov/fdsys/pkg/FR-2006-10-17/pdf/06-8477.pdf

[12] Form of PM10 NAAQS allows the standard to be exceeded once/year on average using the H-6-H value over 5 years. See Section 7.2.1.1 of App. W & p.4 of S. Page memo (03/23/10).

[13] The annual PM10 NAAQS of 50 ìg/m³ was revoked 17 October 2006 but the annual PM10 PSD increment remains in effect. See NFR (10/17/06): http://www.gpo.gov/fdsys/pkg/FR-2006-10-17/pdf/06-8477.pdf

Figure 1
Facility Location

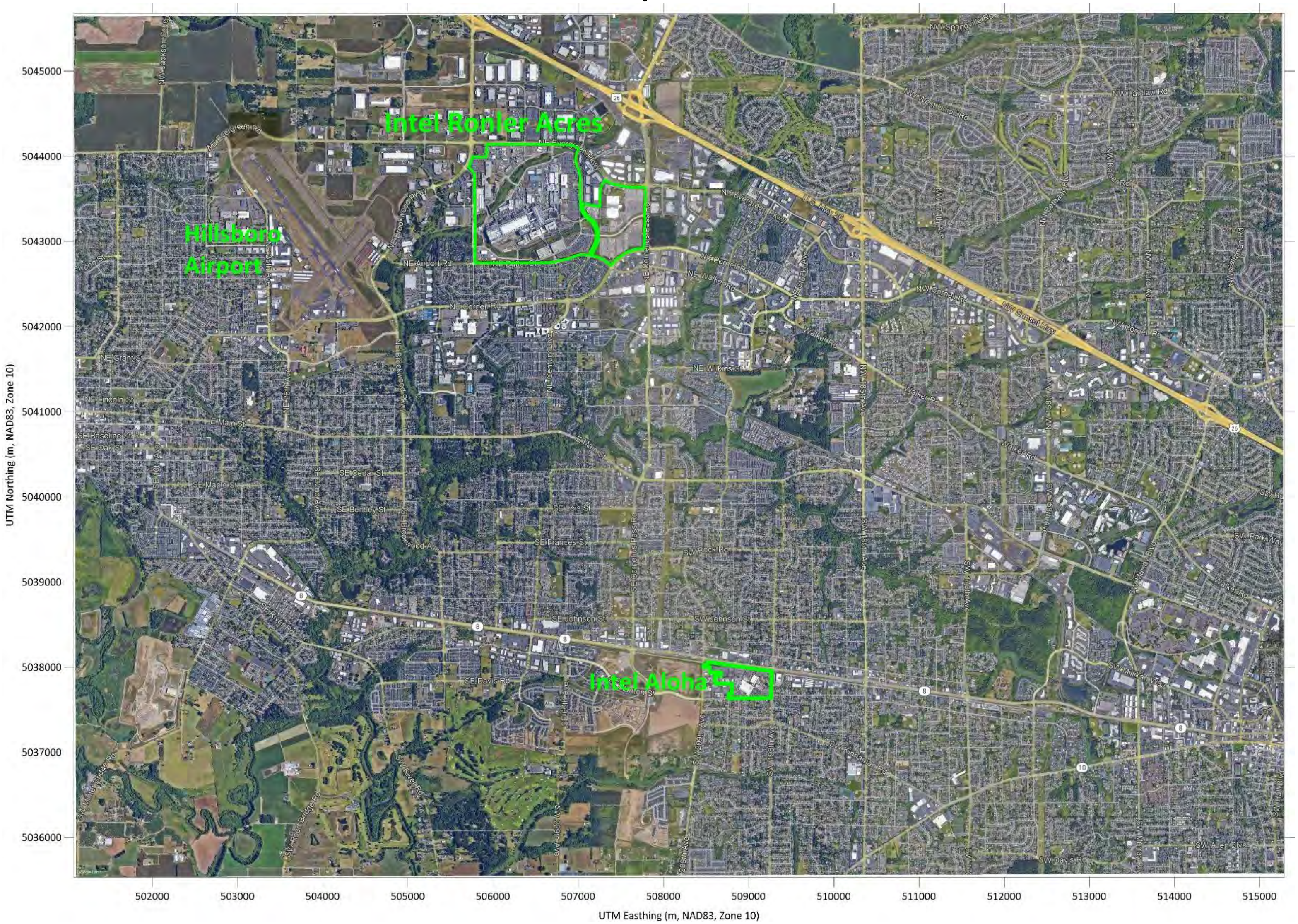


Figure 2
Ronler Acres Site Plan

Figure 3
Aloha Site Plan

Figure 4
Land Use Surrounding the Intel Sites (3 km Radius in Blue)

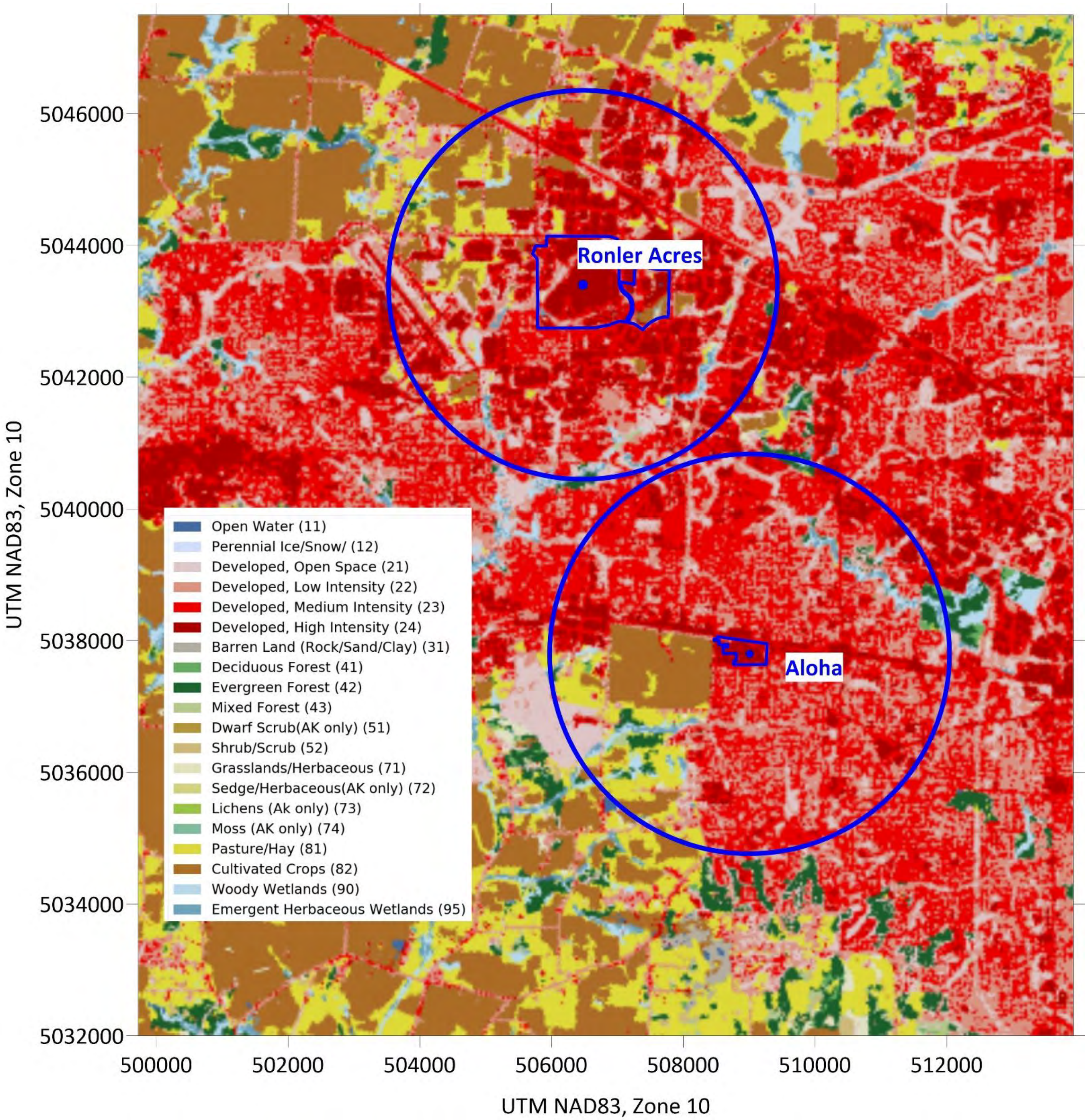


Figure 5
Hillsboro Annual Wind Rose (2016-2020)

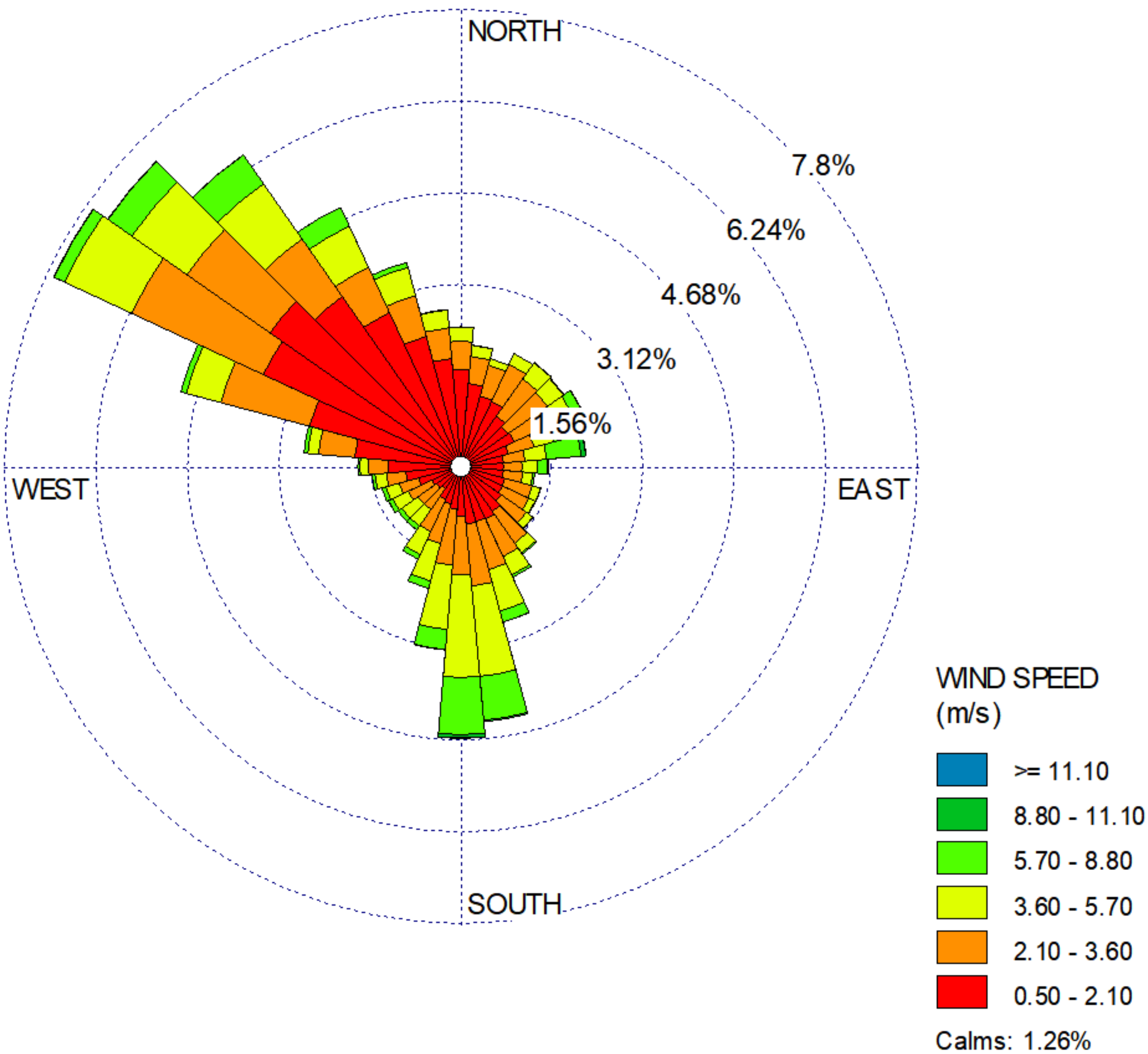


Figure 6
Monte Carlo Simulation Flow

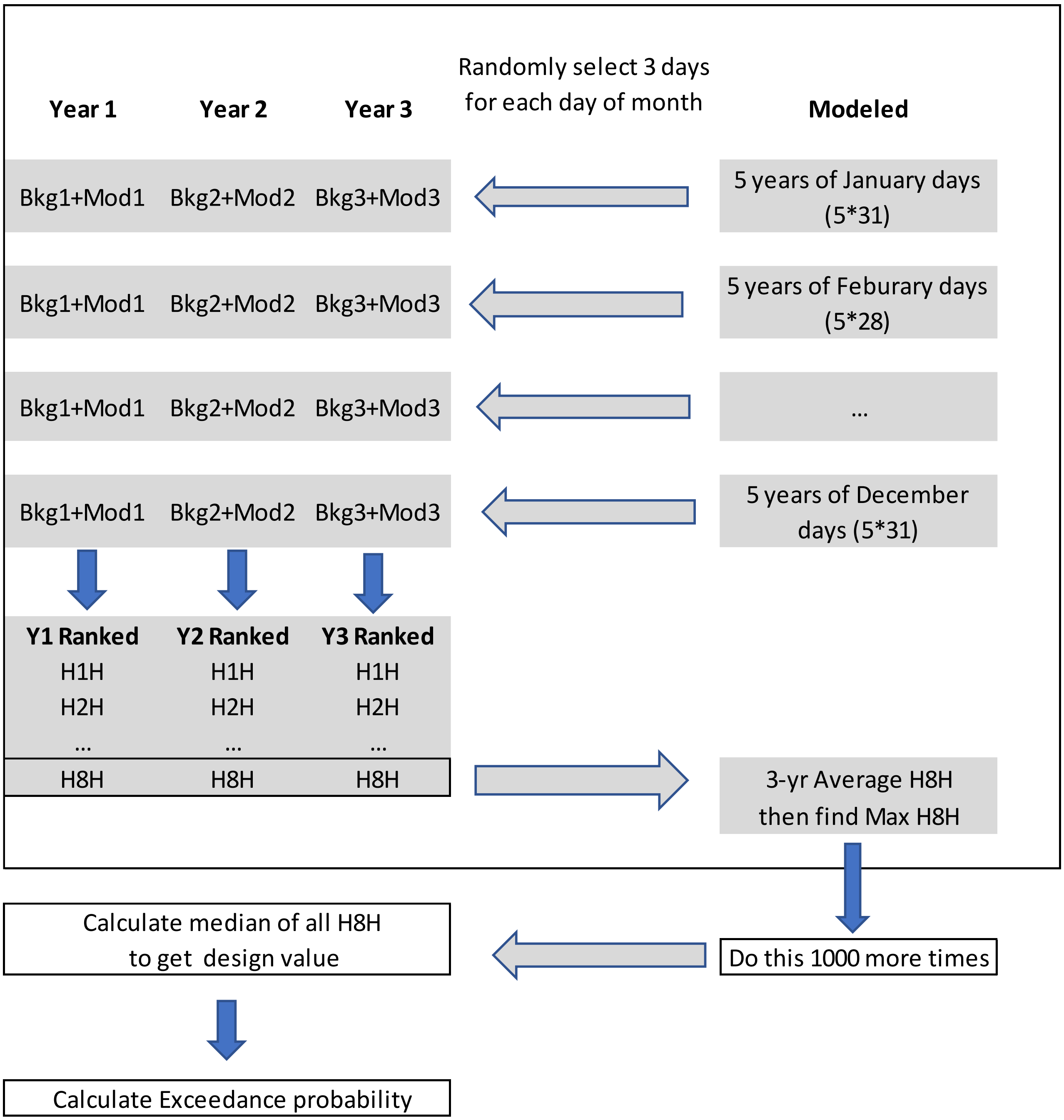


Figure 7
Project Receptor Grids

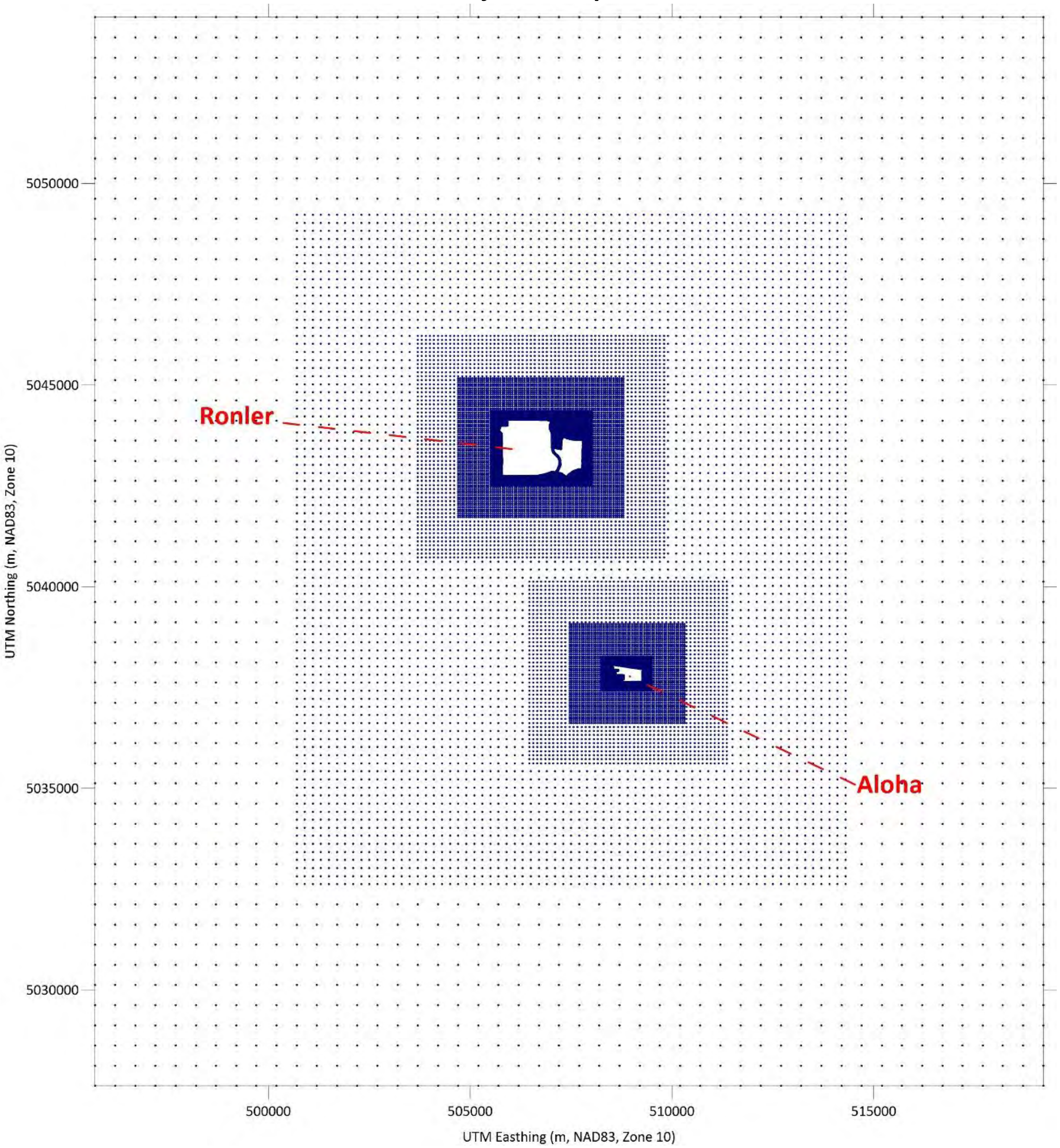


Figure 8
Class I Areas and AERMOD Receptors used for Modeling

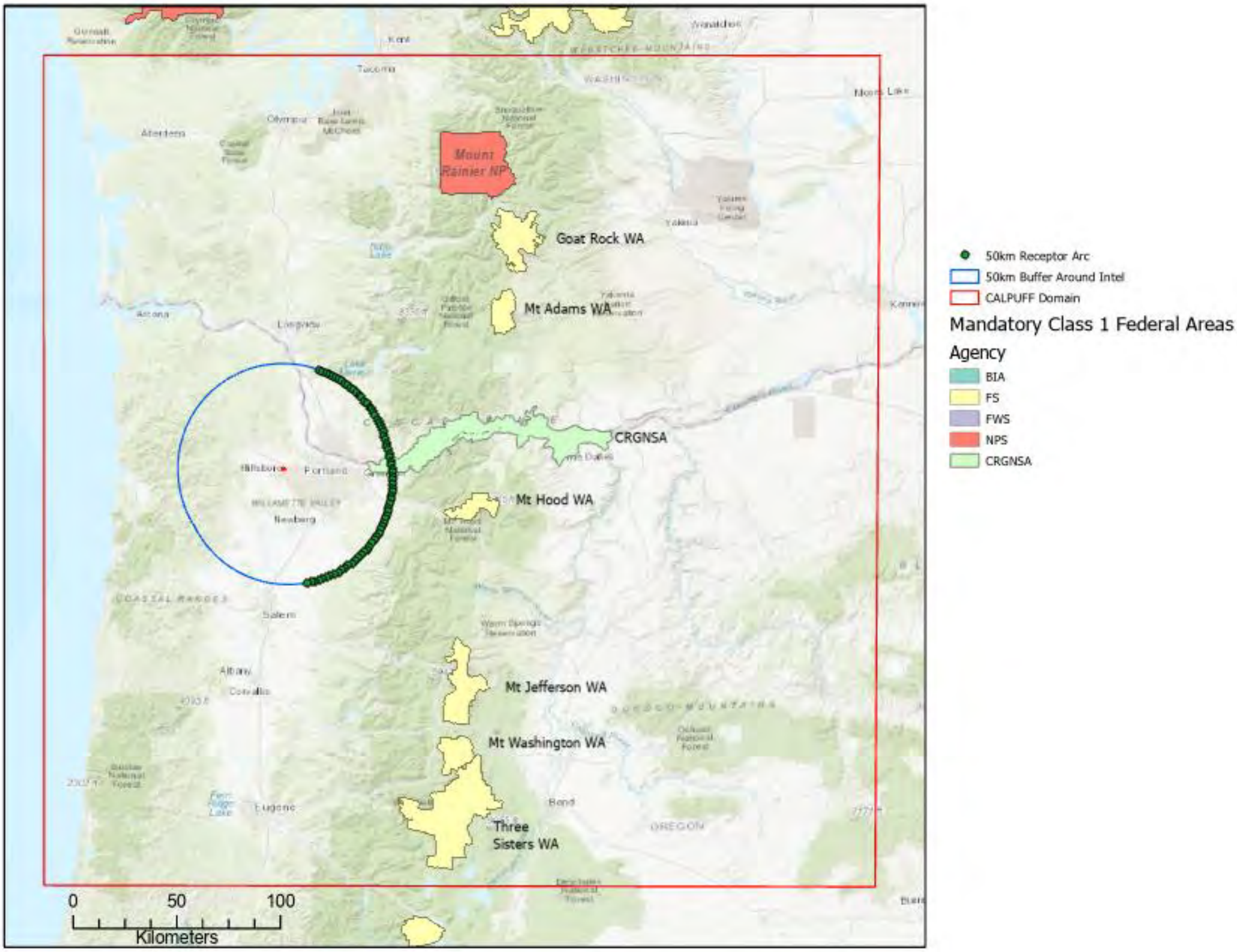
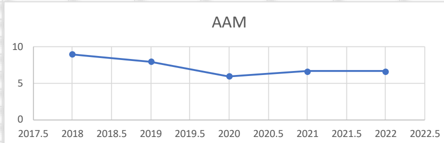


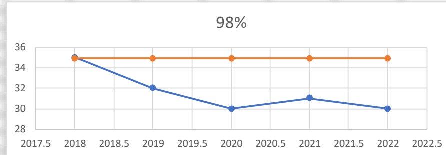
Figure 9
NO_2 Monitoring Data Trends 2018-2022

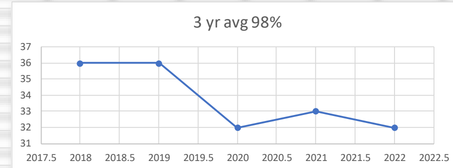
NO2 Trends

SE Lafayette

	AAM	98%tl	3 Yr Avg 98%tl
2018	9	35	36
2019	8	32	36
2020	6	30	32
2021	6.64	31	33
2022	6.69	30	32

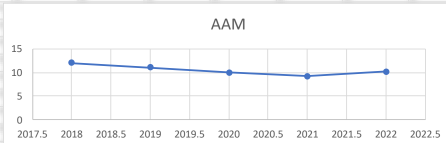


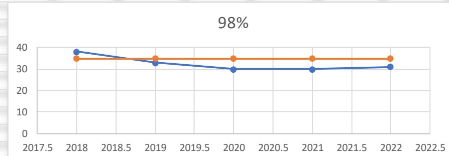


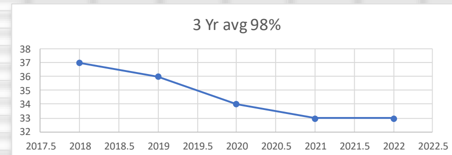


Tualatin

	AAM	98%tl	3 Yr Avg 98%tl
2018	12	38	37
2019	11	33	36
2020	10	30	34
2021	9.23	30	33
2022	10.17	31	33



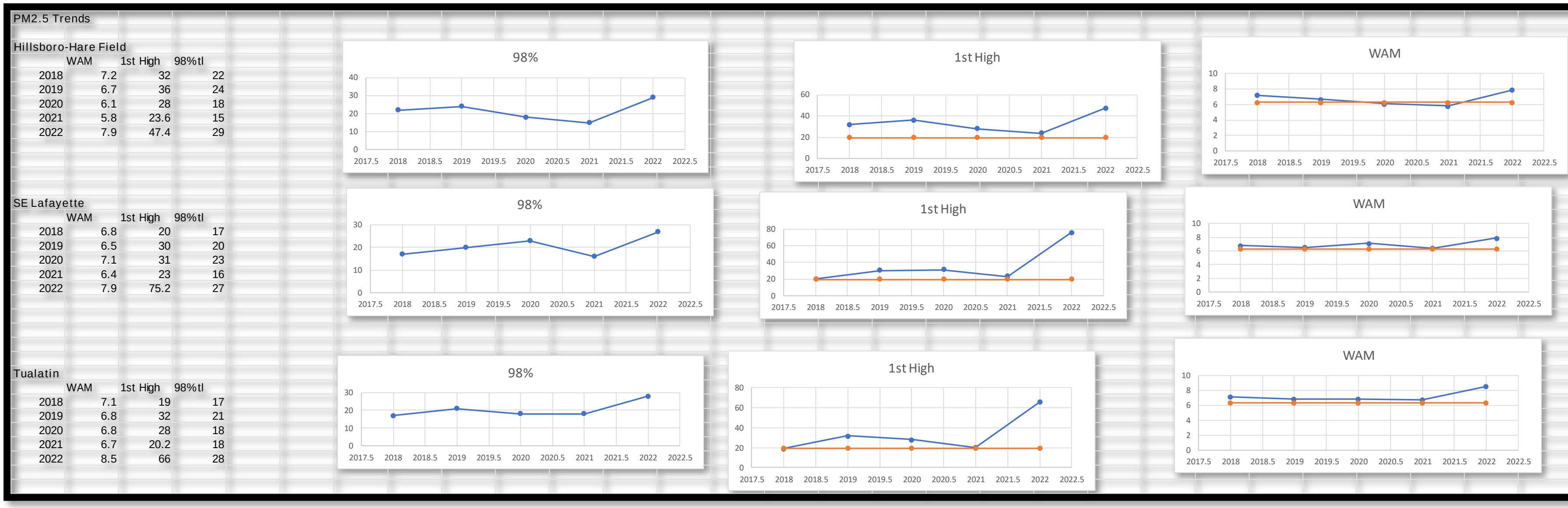




AirQuest 1 Hr

2018	34.9
2019	34.9
2020	34.9
2021	34.9
2022	34.9

Figure 10
PM2.5 Monitoring Data Trends 2018-2022



PM2.5 Trends

Hillsboro-Hare Field

	WAM	1st High	98%tl
2018	7.2	32	22
2019	6.7	36	24
2020	6.1	28	18
2021	5.8	23.6	15
2022	7.9	47.4	29

SE Lafayette

	WAM	1st High	98%tl
2018	6.8	20	17
2019	6.5	30	20
2020	7.1	31	23
2021	6.4	23	16
2022	7.9	75.2	27

Tualatin

	WAM	1st High	98%tl
2018	7.1	19	17
2019	6.8	32	21
2020	6.8	28	18
2021	6.7	20.2	18
2022	8.5	66	28

Figure 11
PM10 Monitoring Data Trends 2018-2022

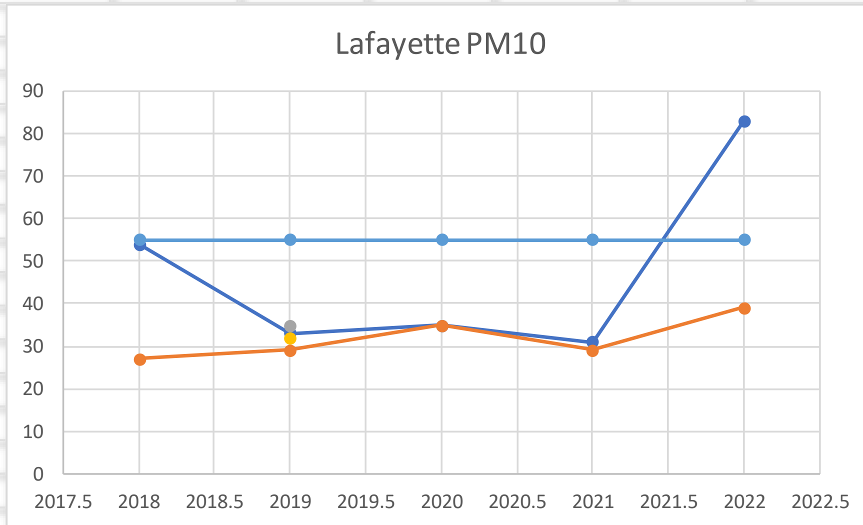
PM10 Trends

SE Lafayette

	1st High	2nd High
2018	54	27
2019	33	29
2020	35	35
2021	31	29
2022	83	39

Hare Field

	1st High	2nd High
2018		
2019	35	32
2020		
2021		
2022		



Blue = 1st High
Red = 2nd High

ATMOSPHERIC DYNAMICS, INC
Meteorological & Air Quality Modeling

Memorandum

To: Phil Allen/ Kristin Martin: ODEQ
From: Greg Darvin: Atmospheric Dynamics
Date: May 24, 2023

Subject: Clarification on the Urban Population Value Used in AERMOD

Reviewing the AERMOD Implementation Guide (June 2022) provides the following recommendations for assigning an urban population number in AERMOD.

> *For urban areas adjacent to or near other urban areas, or part of urban corridors, the user should attempt to identify that part of the urban area that will contribute to the urban heat island plume affecting the source(s). If this approach results in the identification of clearly defined MSAs, then census data may be used as above to determine the appropriate population for input to AERMOD. Use of population based on the Consolidated MSA (CMSA) for applications within urban corridors is not recommended, since this may tend to overstate the urban heat island effect. Similarly, for application sites that are in isolated areas of dense population but are not representative of the larger MSA, care should be taken to determine the extent of the area the urban area that will contribute to the urban heat island plume affecting the source(s).*
>
> *For situations where MSAs cannot be clearly identified, the user may determine the extent of the area, including the source(s) of interest, where the population density exceeds 750 people per square kilometer. The combined population within this identified area may then be used for input to the AERMOD model.*

As you know, dispersion within urban environments has different characteristics than that occurring in a rural environment. The urban boundary layer will behave in a more convective, turbulent manner during the hours just after sunset due to the urban heat island effect.

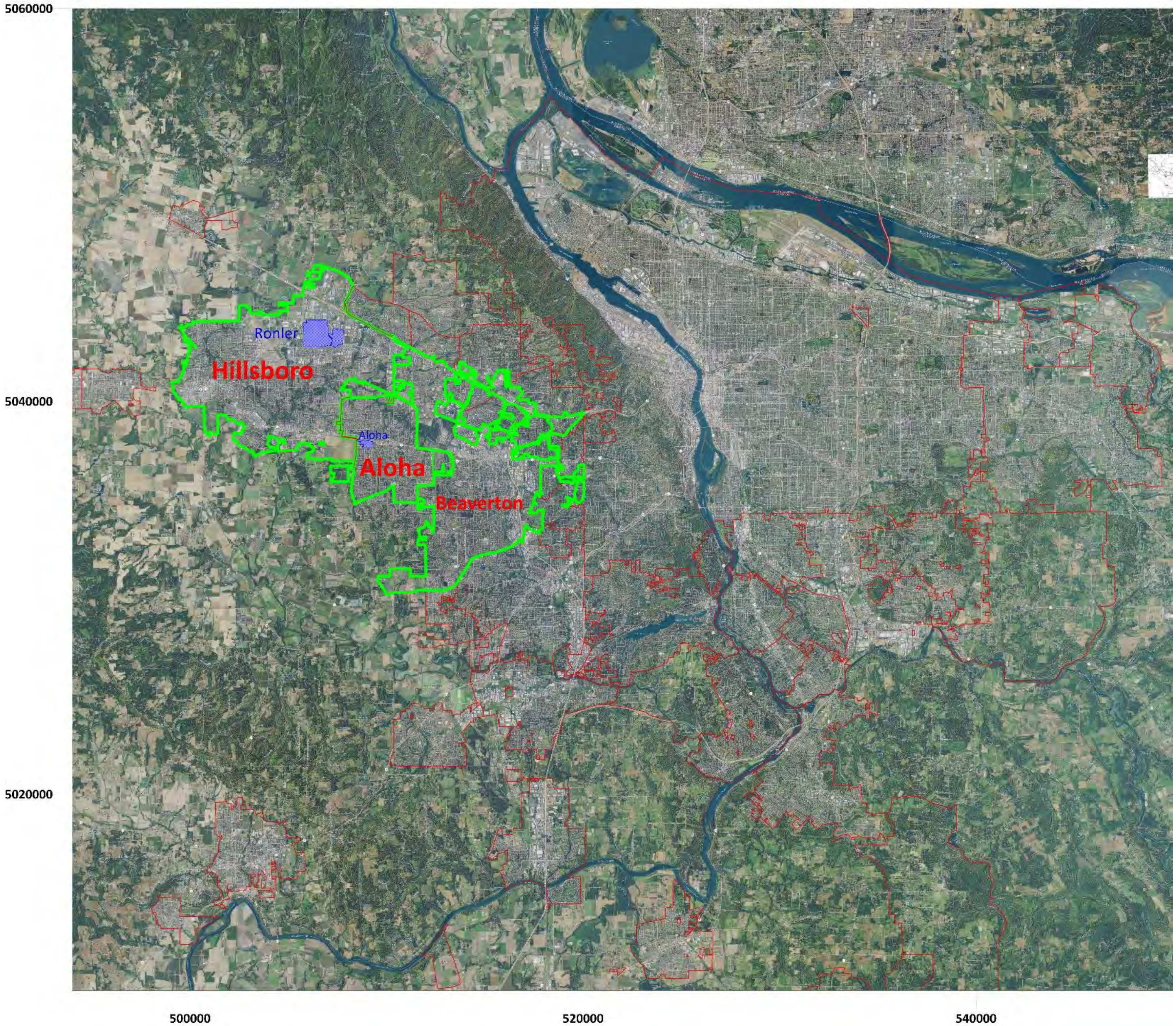
I believe the use of the Hillsboro population of 107,299 (based on the 2020 US Census data) underrepresents the magnitude of the urban-rural temperature difference and urban heat island effect(s) within the impact areas near both project sites. For reference, the main Ronler campus is within the city of Hillsboro and the Aloha campus in the city of Aloha.

Using the Aloha project site as general center point, Figure 1 presents a map showing the project locations relative to the city boundaries in the region. The Aloha site is approximately 10 kilometers from the northwestern edge of the Hillsboro city boundary and nine (9) kilometers from the southeastern edge of the Beaverton city boundary. The three cities proposed for identifying the population are Hillsboro, Aloha and Beaverton. Each of the proposed cities vastly exceeds the 750 people per square kilometer threshold for identifying the area as urban. The three (3) cities also represent a continuous urban/developed corridor which is aligned with the predominant wind direction. The use of the 2022 census derived population data and population density data are summarized in Table 1.

TABLE 1 EXISTING POPULATIONS AND POPULATION DENSITY		
	Population*	Population Density/km^{2*}
Hillsboro	107,299	1,601.3
Aloha	58,828	2,825.3
Beaverton	97,053	1,920.2
Total	263,180	
* 2020 /2022 United States Census Bureau Data		

Based on the combined population of 263,180, this value is proposed to be used for the population input into AERMOD. This combined population would present a conservative and appropriate magnitude of the urban heat island effects within the impact areas surrounding both sites.

Figure 1 City Boundaries



ATMOSPHERIC DYNAMICS, INC
Meteorological & Air Quality Modeling

Memorandum

To: Phil Allen/ Kristin Martin: ODEQ, Rick Graw: USFS
From: Greg Darvin: Atmospheric Dynamics
Date: June 2, 2023

Subject: Clarification on the Q/D calculation procedures for the Class I Areas

PSD Class I AQRV Analyses: The Facility will be a federal major source for criteria pollutant emissions subject to PSD permitting requirements. PSD Class I Air Quality Related Value (AQRV) analyses, including visibility and nitrogen deposition may be required if determined from the screening procedure summarized below. The nearest Class I area is the Mount Hood National Forrest, operated by the U.S. Forest Service and is located approximately 80 kilometers (km) to the east. In total, nine (9) Class I areas are located within 300 km of the project.

Following the FLAG Workshop procedures (June 2010), the use of the Screening Procedure Q/D (Q is the total emissions in tons per year and D is the distance in kilometers to the Class I area) to determine if the project could screen out of a formal AQRV assessment for visibility and nitrogen deposition was made. Following these procedures in FLAG, Q is calculated as the sum (in tons/year) of emissions of NO_x, H_2SO_4 and PM10 based on the maximum 24-hour net emissions increase for each pollutant from the proposed project. The actual baseline emissions were not included in the in the proposed increase, as per FLAG. There will be no increase in SO_2 emissions over the existing PSEL so this pollutant was not included in the calculation of Q. The existing PSEL emissions and the proposed hourly increases converted to tons are summarized in Table 1.

TABLE 1
EXISTING AND PROPOSED EMISSIONS PROFILES

	NO_x tpy	PM10 Tpy	H_2SO_4 tpy	Q tons
Current PSEL	197.0	35.0	0	-
Proposed Increase without Emergency Generators	226.0*	27.5*	0.93*	-
Proposed Increase Emergency Generators Only (worst-case day)	124.1*	10.24*	-	-
Total for Q/D Calculation	350.10	37.74	0.93	388.77
Total PTE	423.0	62.5	0.93	

* Based on worst case day multiplied by 365 days and converted to tons per year

While most of the sources are steady state and operate almost continuously 24-hours per day, the emergency diesel generators are limited to 30 hours per year, with no more than 10 engines being tested during any day. To determine the worst-case daily emissions for the emergency generators, the 10 highest emitting engines' emissions were summed to calculate a pound per day (lb/day) emission rate. This was then multiplied by 365 days and converted to tons per year (tpy) to calculate the engines contribution to the total emissions (Q). The emergency diesel generators do not emit H_2SO_4. As an example, for NO_x:

Each emergency generators at 68 lb/hr each or 10 engines on a daily basis at 680 lb/day
680 lb/day * 365 day/yr * 1 ton/2000 lb = 124.1 tpy

This is repeated for PM10 but with a different set of 10 engines which have a higher PM10 emission rate.

Each emergency generators at 5.61 lb/hr each or 10 engines on a daily basis at 56.1 lb/day
56.1 lb/day * 365 day/yr * 1 ton/2000 lb = 10.24 tpy

Using this procedure on the emergency generators which is then added to the steady state Q, the total facility Q based on the increase in NO_x, PM10 and H_2O_4 is:

Q = sum (NO_x+PM10+H_2SO_4) in maximum lbs/day (for the worst-case day including emergency generators) * 365 days/year * 1 ton/2000 lbs = 388.77 tons

The results of the Q/D scenarios are presented in Table 2. If Q/D is less than 10, then no AQRV analysis is required, as shown above for the nearest Class I area. Based on the ratio of Q/D, there are no Class I areas that have a Q/D of greater than 10. Therefore, the FLM's can exempt the projects impacts on AQRVs for visibility or nitrogen deposition in these areas. There are no exemptions for Class I SILs and NAAQS, which will be assessed as applicable.

TABLE 2
NEARBY CLASS I AREAS AND Q/D SCREENING RESULTS

Class I Areas	Minimum Distance (km)	Q/D*
Mt Hood OR (MOHO)	80	4.9
Mt Jefferson OR (MOJE)	116	3.4
Mt Adams WA (MOAD)	121	3.2
Goat Rocks WA (GORO)	145	2.7
Mt Washington WA (MOWA)	150	2.6
Mt Rainier WA (MORA)	153	2.5
Three Sisters OR (THSI)	167	2.3
Diamond Creek (DC)	223	1.7
Crater Lake (CR)	279	1.4

*Q/D based on worst case day.

ATMOSPHERIC DYNAMICS, INC
Meteorological & Air Quality Modeling

Memorandum

To: Phil Allen/ Kristin Martin: ODEQ
From: Greg Darvin: Atmospheric Dynamics, Inc.
Date: June 14, 2023

Subject: Clarification on the 1-Hour NO_2 Intermittent Source Modeling Approach

As outlined in USEPA guidance documents (March 1, 2011, USEPA memorandum "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 National Ambient Air Quality Standard"), the project will also include intermittent sources comprised of emergency diesel generators and fire pumps in the 1-hour NO_2 modeling assessments. Since the engines would each be tested far less than 100 hours/year (limited to 25 hours per year per engine, except for the fire pump engines which are tested 50 hours per year), the annual average emission rate was modeled for the 1-hour NO_2 NAAQS modeling analyses per EPA guidance due to the statistical nature of these standards. For CO, PM10, and PM2.5, the maximum hourly emission rates will be used.

The current permit limits the testing to no more than 10 engines per day. In order to determine which group of engines would present the worst-case potential 1-hour NO_2 impact, an air quality screening analysis will be performed to determine which group of engines would produce the maximum 98^{th} percentile concentration. This screening assessment will use the NO_2 annualized emission rates. All the engine emissions will be based upon 100% load, with specific source groups identified for each group of engines that are tested during any one (1) hour. The engines can only be tested between 8 AM to 6 PM (controlled using the EMISFACT/HROFDY model option).

The results of the engine screening analysis will be used to input the appropriate groups of diesel engines into the final modeling assessments. The use of the EPA methodology is in addition to the use of the Monte Carlo approach for determining 1-hour NO_2 project-based concentrations.

Oregon
Tina Kotek, Governor
Department of Environmental Quality
Agency Headquarters
700 NE Multnomah Street, Suite 600
Portland, OR 97232
(503) 229-5696
FAX (503) 229-6124
TTY 711

June 16, 2023

Wes Lund
RS5 M/S 115
Intel Corporation
5200 NE Elam Young Parkway
Hillsboro, OR 97124

Mr. Lund,

DEQ has completed the review of the modeling protocols (the Protocol) for the proposed expansion of operations at the Intel Corporation Ronler Acres and Aloha facilities located near Hillsboro, Oregon. These protocols, which were submitted by the modeling consultant Atmospheric Dynamics, Inc. on behalf of the Intel, include 1) the modeling protocol (4/26/2023), 2) the memorandum "Clarification on the Q/d calculation procedures for the Class I Areas" (6/2/2023), and 3) the memorandum "Modeling intermittent sources using annual emission rates" (6/14/2023).

DEQ approves the Protocol with the following comments that can be addressed, as necessary, in the final modeling report.

1. The modeling protocol as submitted did not include specific emissions units, emission estimates, or stack parameters. DEQ understands this information will be provided in the modeling report. When emission estimates, units, and stack parameters are provided in the report, DEQ may have additional comments that could affect the modeling results, and DEQ's approval of the air quality analysis.

2. For the NO_2 model employing ARM2, the default upper and lower limits on the ambient ratio should be 0.9 and 0.5, respectively, as outlined in section 3.3.6.3 of the AERMOD User's Guide. The original protocol (4/26/2023) incorrectly notes the national default conversion rate of 75% for annual and 80% for 1-hour.

3. For the 1-hour NO_2 modeling of nearby competing sources, annualize emissions based on the emission inventory previously provided by DEQ, should be used where specified by DEQ in this letter.

4. As confirmed in a discussion with the modeling consultant, AERSURFACE version 20060, utilizing the 2016 National Land Cover Dataset, including tree canopy and impervious geotiff files, will be used.

5. In order to meet the EPA requirements for modeling 1-hour NO_2 intermittent emission sources, the method as described in the modeling memorandum (6/14/2023) will be followed. Specifically, this method uses annualized emissions from a "worst case" group of engines, previously identified in a screening analysis. Additionally, the ARM2 method should be used for all sources and a competing source inventory should be included, as noted in items 2 and 3, respectively. The description of the modeling and the results using these annualized emissions will be presented in the body of the modeling report.

6. In order to meet DEQ requirements for modeling 1-hour NO_2 intermittent emission sources, the Monte Carlo method, as described in the original modeling protocol (4/26/2023), will be followed. As noted in

the original protocol, this method may utilize the PVMRM method for intermittent sources and does not need to include a competing source inventory. The description of the analysis and results using the Monte Carlo approach will be included in an addendum to the modeling report that will be submitted along with the report.

7. Regarding the 1-hour NO_2 Monte Carlo addendum, DEQ recommends adding a convergence discussion showing the number of iterations needed to achieve convergence of the maximum median 98th percentile of max daily values.

8. In accordance with OAR 340-225-0070, the Federal Land Managers (FLMs) of Class I areas potentially affected by the project have been notified by DEQ of the pending permit application. In their responses, the U.S Forest Service and the National Park Service, as FLMs, have both stated that a detailed analysis of Air Quality Related Values (AQRVs) is not required for their respective Class I areas and the Columbia River Gorge Scenic Area.

9. Although an analysis of AQRV impacts is not required at this time, additional analysis of contributions to regional haze from the Intel project will be required when DEQ conducts a comprehensive revision of the State Regional Haze Plan that is required by EPA no later than 2028 (Round 3 of Regional Haze). The details of this analysis are not yet fully developed, but in anticipation of future emission reduction requirements as part of the Regional Haze Plan, DEQ strongly encourages that NOx emissions be reduced for this proposed permitting action to the greatest extent feasible.

10. A copy of the modeling protocol (4/26/2023) and the Q/d clarification memorandum (6/2/2023) were provided to Jay McAlpine, EPA Region 10 Modeling Coordinator. His comments, and additional input from the EPA Office of Air Quality Planning and Standards (OAQPS), are addressed in this approval letter.

11. If during the modeling and preparation for the final Modeling Report, Intel proposes to make changes in the procedures or data as described in the Protocol, please notify DEQ as soon as practicable. This will facilitate timely review of the Modeling Report.

If you have questions about this approval letter, please contact us.

Sincerely,

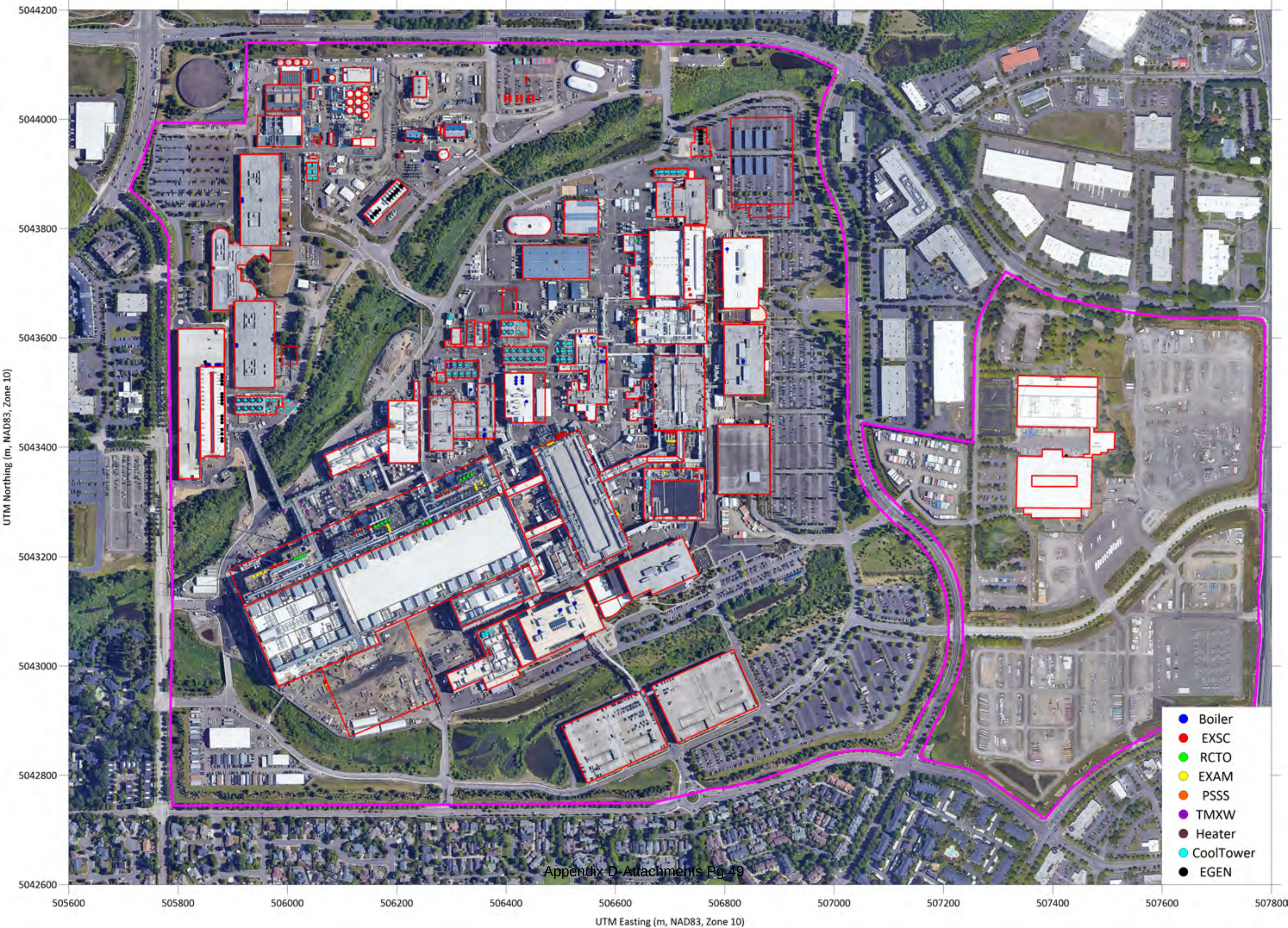
Philip Allen
DEQ Air Quality Modeler

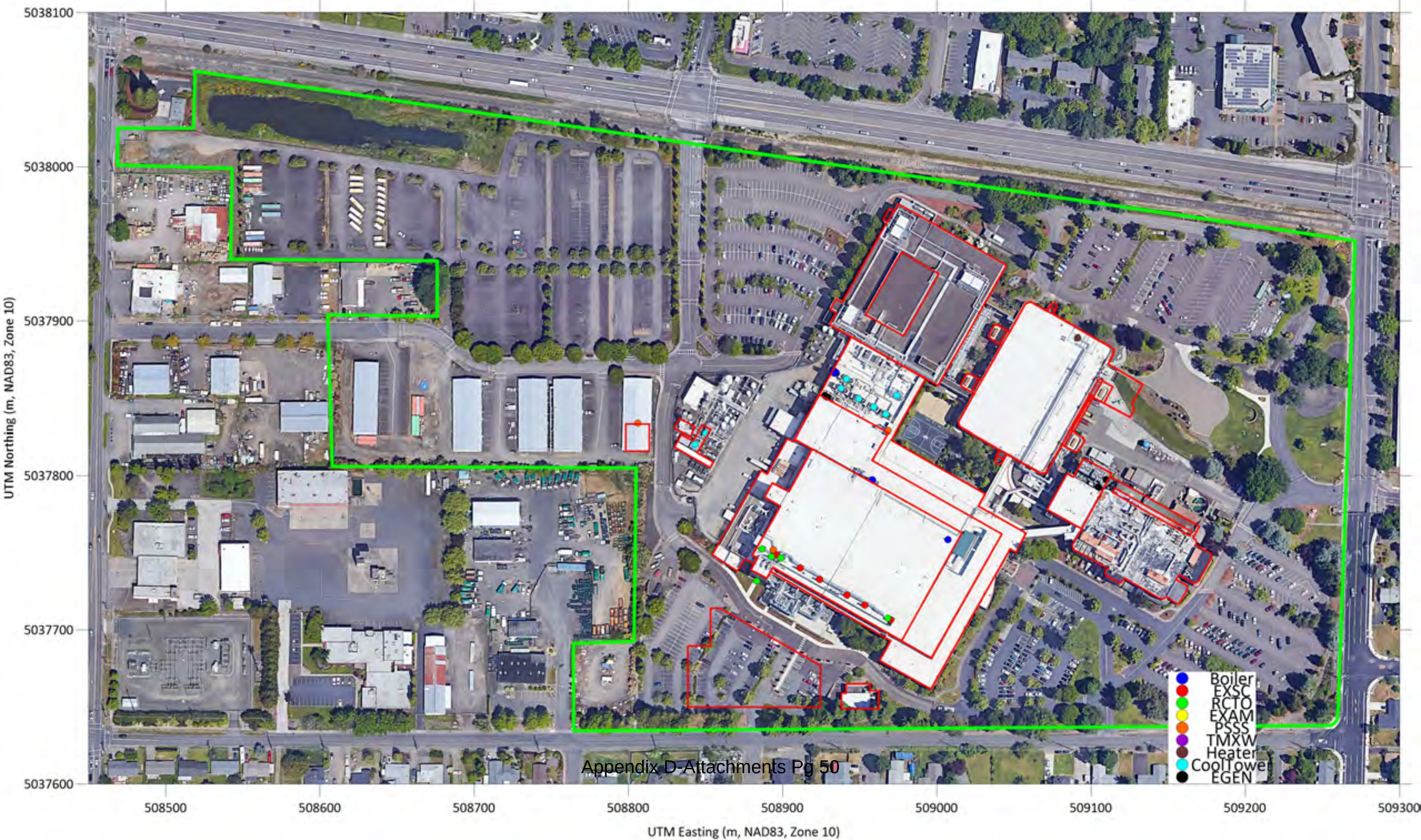
Kristen Martin
DEQ Senior Air Quality Modeler

Cc: Ali Mirzakhalili
Nina DeConcini
George Davis
Josh Alexander
Gregory Darvin, Atmospheric Dynamics, Inc.

Attachment B

Source Data Used in the Modeling Assessment


5044200
5044000
5043800
5043600
5043400
5043200
5043000
5042800
5042600
UTM Northing (m, NAD83, Zone 10)
505600
505800
506000
506200
506400
506600
506800
507000
507200
507400
507600
507800
UTM Easting (m, NAD83, Zone 10)
Boiler
EXSC
RCTO
EXAM
PSSS
TMXW
Heater
CoolTower
EGEN



UTM Northing (m, NAD83, Zone 10)
5038100
5038000
5037900
5037800
5037700
5037600
UTM Easting (m, NAD83, Zone 10)
508500
508600
508700
508800
508900
509000
509100
509200
509300
Boiler
EXSC
RCTO
EXAM
PSSS
TMXW
Heater
CoolTower
EGEN

Intel Corporation - Stack Information

Equipment Type	Equipment ID	Stack ID	UTM Easting	UTM Northing	Elevation (m)	Stack Height		Stack Diameter		Adjusted Stack Flow Rate		Stack Velocity			Stack Temperature		NOx		CO		PM		PM_{10}		$PM_{2.5}$		SO_2	
						(ft)	(m)	(ft)	(m)	(ft^3/min)	(m^3/s)	(ft/min)	(ft/s)	(m/s)	(˚F)	(K)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Boiler	F20-BLR115-1-200	BOC1_01	506743.17	5043806.7	62.70	99.00	30.18	2.67	0.81	6,266.76	2.96	1,122.06	18.70	5.70	210.00	372.04	3.40E-01	4.47E-01	1.15E+00	1.51E+00	7.72E-02	1.01E-01	1.61E-02	2.11E-02	1.33E-02	1.74E-02	8.03E-02	1.06E-01
Boiler	F20-BLR115-2-200	BOC1_02	506745.67	5043806.7	62.70	99.00	30.18	2.67	0.81	6,266.76	2.96	1,122.06	18.70	5.70	210.00	372.04	3.40E-01	4.47E-01	1.15E+00	1.51E+00	7.72E-02	1.01E-01	1.61E-02	2.11E-02	1.33E-02	1.74E-02	8.03E-02	1.06E-01
Boiler	F20-BLR115-3-200	BOC1_03	506748.17	5043806.7	62.70	99.00	30.18	2.67	0.81	6,266.76	2.96	1,122.06	18.70	5.70	210.00	372.04	3.40E-01	4.47E-01	1.15E+00	1.51E+00	7.72E-02	1.01E-01	1.61E-02	2.11E-02	1.33E-02	1.74E-02	8.03E-02	1.06E-01
Boiler	F20-BLR115-4-200	BOC1_04	506750.67	5043806.7	62.70	99.00	30.18	2.00	0.61	6,241.00	2.95	1,986.57	33.11	10.09	210.00	372.04	3.31E-01	4.35E-01	1.12E+00	1.47E+00	7.50E-02	9.86E-02	1.56E-02	2.05E-02	1.29E-02	1.70E-02	7.80E-02	1.03E-01
Boiler	F20-BLR115-5-200	BOC1_05	506753.17	5043806.7	62.70	99.00	30.18	2.00	0.61	6,241.00	2.95	1,986.57	33.11	10.09	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RA1-MECH-B01	BOR1_01	506843.5	5043630.5	62.70	95.00	28.96	0.67	0.20	223.81	0.11	641.18	10.69	3.26	210.00	372.04	7.06E-02	9.28E-02	5.93E-02	7.79E-02	1.76E-03	2.32E-03	3.67E-04	4.82E-04	3.04E-04	3.99E-04	1.84E-03	2.41E-03
Boiler	RA1-MECH-B02	BOR1_02	506804.48	5043762.9	62.70	95.00	28.96	0.50	0.15	223.81	0.11	1,139.87	19.00	5.79	210.00	372.04	9.80E-02	1.29E-01	8.24E-02	1.08E-01	2.45E-03	3.22E-03	5.10E-04	6.70E-04	4.22E-04	5.54E-04	2.55E-03	3.35E-03
Boiler	CUB2-BLR115-1-210	BOC2_01	506579.98	5043557.1	62.70	45.00	13.72	2.67	0.81	2,557.86	1.21	457.98	7.63	2.33	210.00	372.04	3.47E-01	4.56E-01	1.17E+00	1.54E+00	7.87E-02	1.03E-01	1.64E-02	2.15E-02	1.35E-02	1.78E-02	8.19E-02	1.08E-01
Boiler	CUB2-BLR115-2-210	BOC2_02	506579.22	5043582.7	62.70	45.00	13.72	2.67	0.81	2,557.86	1.21	457.98	7.63	2.33	210.00	372.04	3.47E-01	4.56E-01	1.17E+00	1.54E+00	7.87E-02	1.03E-01	1.64E-02	2.15E-02	1.35E-02	1.78E-02	8.19E-02	1.08E-01
Boiler	CUB2-BLR115-3-210	BOC2_03	506574.1	5043556.8	62.70	45.00	13.72	2.67	0.81	2,557.86	1.21	457.98	7.63	2.33	210.00	372.04	3.47E-01	4.56E-01	1.17E+00	1.54E+00	7.87E-02	1.03E-01	1.64E-02	2.15E-02	1.35E-02	1.78E-02	8.19E-02	1.08E-01
Boiler	CUB2-BLR115-4-210	BOC2_04	506575	5043575.9	62.70	45.00	13.72	2.67	0.81	2,557.86	1.21	457.98	7.63	2.33	210.00	372.04	3.53E-01	4.64E-01	1.19E+00	1.57E+00	8.00E-02	1.05E-01	1.66E-02	2.19E-02	1.38E-02	1.81E-02	8.32E-02	1.09E-01
Boiler	CUB2-BLR115-5-210	BOC2_05	506536.08	5043603.2	62.70	45.00	13.72	2.00	0.61	6,241.00	2.95	1,986.57	33.11	10.09	210.00	372.04	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	CUB2-BLR115-6-210	BOC2_06	506556.51	5043600.4	62.70	45.00	13.72	2.00	0.61	6,241.00	2.95	1,986.57	33.11	10.09	210.00	372.04	3.31E-01	4.35E-01	1.12E+00	1.47E+00	7.50E-02	9.86E-02	1.56E-02	2.05E-02	1.29E-02	1.70E-02	7.80E-02	1.03E-01
Boiler	RA4-BLR152-2-30	BOR4_01	506497.72	5043102.2	62.70	121.06	36.90	0.67	0.20	270.58	0.13	775.15	12.92	3.94	350.00	449.82	1.96E-01	2.58E-01	1.65E-01	2.16E-01	4.90E-03	6.44E-03	1.02E-03	1.34E-03	8.43E-04	1.11E-03	5.10E-03	6.70E-03
Boiler	RA4-BLR152-1-30	BOR4_02	506500.12	5043103	62.70	121.06	36.90	0.67	0.20	270.58	0.13	775.15	12.92	3.94	350.00	449.82	1.96E-01	2.58E-01	1.65E-01	2.16E-01	4.90E-03	6.44E-03	1.02E-03	1.34E-03	8.43E-04	1.11E-03	5.10E-03	6.70E-03
Boiler	RA4-BLR117-2-30	BOR4_03	506524.09	5043114.7	62.70	132.00	40.23	1.00	0.30	1,771.91	0.84	2,256.07	37.60	11.46	350.00	449.82	1.96E-01	2.58E-01	1.65E-01	2.16E-01	4.90E-03	6.44E-03	1.02E-03	1.34E-03	8.43E-04	1.11E-03	5.10E-03	6.70E-03
Boiler	RA4-BLR117-1-30	BOR4_04	506526.12	5043116.1	62.70	132.00	40.23	1.00	0.30	1,771.91	0.84	2,256.07	37.60	11.46	350.00	449.82	1.96E-01	2.58E-01	1.65E-01	2.16E-01	4.90E-03	6.44E-03	1.02E-03	1.34E-03	8.43E-04	1.11E-03	5.10E-03	6.70E-03
Boiler	RA4-BLR117-3-30	BOR4_05	506460.1	5043063.7	62.70	132.00	40.23	2.00	0.61	6,594.41	3.11	2,099.07	34.98	10.66	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RA4-BLR117-4-30	BOR4_06	506460.94	5043063.7	62.70	132.00	40.23	2.00	0.61	6,594.41	3.11	2,099.07	34.98	10.66	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	BLR-115-1-210	BOC3_01	506360.1	5043421.3	62.70	51.00	15.54	1.50	0.46	870.44	0.41	492.57	8.21	2.50	300.00	422.04	4.90E-01	6.44E-01	2.98E-01	3.92E-01	2.00E-02	2.63E-02	4.16E-03	5.47E-03	3.44E-03	4.52E-03	2.08E-02	2.73E-02
Boiler	BLR-115-2-210	BOC3_02	506360.1	5043423.2	62.70	51.00	15.54	2.67	0.81	3,481.75	1.64	623.40	10.39	3.17	300.00	422.04	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	BLR-115-3-210	BOC3_03	506360.3	5043432.1	62.70	51.00	15.54	2.67	0.81	3,481.75	1.64	623.40	10.39	3.17	300.00	422.04	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	BLR-115-4-210	BOC3_04	506359.8	5043418.4	62.70	51.00	15.54	2.67	0.81	1,523.26	0.72	272.74	4.55	1.39	300.00	422.04	3.53E-01	4.64E-01	1.19E+00	1.57E+00	8.00E-02	1.05E-01	1.66E-02	2.19E-02	1.38E-02	1.81E-02	8.32E-02	1.09E-01
Boiler	BLR-115-5-210	BOC3_05	506360.1	5043419.9	62.70	51.00	15.54	2.00	0.61	2,200.75	1.04	700.52	11.68	3.56	300.00	422.04	5.15E-01	6.76E-01	5.22E-01	6.86E-01	3.50E-02	4.60E-02	7.28E-03	9.57E-03	6.02E-03	7.91E-03	3.64E-02	4.79E-02
Boiler	BLR-115-6-210	BOC3_06	506334.9	5043505.4	62.70	51.00	15.54	2.00	0.61	2,200.75	1.04	700.52	11.68	3.56	300.00	422.04	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RP1-BLR115-1-210	BORP1_01	506762	5043315.3	62.70	42.00	12.80	1.67	0.51	1,303.38	0.62	597.43	9.96	3.03	294.00	418.71	1.50E-01	1.97E-01	5.08E-01	6.68E-01	3.41E-02	4.48E-02	7.09E-03	9.31E-03	5.86E-03	7.70E-03	3.54E-02	4.66E-02
Boiler	RP1-BLR115-2-210	BORP1_02	506762	5043311.1	62.70	42.00	12.80	1.67	0.51	1,303.38	0.62	597.43	9.96	3.03	294.00	418.71	1.32E-01	1.74E-01	4.48E-01	5.88E-01	3.00E-02	3.94E-02	6.24E-03	8.20E-03	5.16E-03	6.78E-03	3.12E-02	4.10E-02
Boiler	RP1-BLR115-3-210	BORP1_03	506762	5043307	62.70	42.00	12.80	1.67	0.51	1,303.38	0.62	597.43	9.96	3.03	294.00	418.71	1.32E-01	1.74E-01	4.48E-01	5.88E-01	3.00E-02	3.94E-02	6.24E-03	8.20E-03	5.16E-03	6.78E-03	3.12E-02	4.10E-02
Boiler	RP1-BLR115-4-210	BORP1_04	506762	5043302.8	62.70	42.00	12.80	1.67	0.51	454.57	0.21	208.36	3.47	1.06	350.00	449.82	1.27E-01	1.66E-01	4.28E-01	5.63E-01	2.87E-02	3.77E-02	5.97E-03	7.85E-03	4.94E-03	6.49E-03	2.99E-02	3.92E-02
Boiler	CUB4-BLR115-1-10	BOC4_01	506418.13	5043522	62.70	86.50	26.37	1.67	0.51	4,645.00	2.19	2,129.11	35.49	10.82	350.00	449.82	1.54E-01	2.03E-01	5.22E-01	6.86E-01	3.50E-02	4.60E-02	7.28E-03	9.57E-03	6.02E-03	7.91E-03	3.64E-02	4.79E-02
Boiler	CUB4-BLR115-2-10	BOC4_02	506418.4	5043527.6	62.70	86.50	26.37	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.31E-01	4.35E-01	1.12E+00	1.47E+00	7.50E-02	9.86E-02	1.56E-02	2.05E-02	1.29E-02	1.70E-02	7.80E-02	1.03E-01
Boiler	CUB4-BLR115-3-10	BOC4_03	506429.87	5043517.1	62.70	86.50	26.37	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.31E-01	4.35E-01	1.12E+00	1.47E+00	7.50E-02	9.86E-02	1.56E-02	2.05E-02	1.29E-02	1.70E-02	7.80E-02	1.03E-01
Boiler	CUB4-BLR115-4-10	BOC4_04	506429.87	5043522.4	62.70	86.50	26.37	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.31E-01	4.35E-01	1.12E+00	1.47E+00	7.50E-02	9.86E-02	1.56E-02	2.05E-02	1.29E-02	1.70E-02	7.80E-02	1.03E-01
Boiler	CUB4-BLR115-5-10	BOC4_05	506429.87	5043527.8	62.70	86.50	26.37	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	CUB4-BLR115-6-10	BOC4_06	506417.92	5043516.1	62.70	86.50	26.37	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	CUB4-BLR115-7-10	BOC4_07	506437.44	5043483.6	62.70	86.50	26.37	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RAC5-BLR115-1	BOC5_01	505876.9	5043551.4	62.70	70.00	21.34	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RAC5-BLR115-2	BOC5_02	505874.6	5043551.4	62.70	70.00	21.34	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RAC5-BLR115-3	BOC5_03	505872.1	5043551.4	62.70	70.00	21.34	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RAC5-BLR115-4	BOC5_04	505869.5	5043551.4	62.70	70.00	21.34	2.00	0.61	8,530.00	4.03	2,715.18	45.25	13.79	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RA2-BLR115-1-300	BOR2_01	506833.31	5043555.6	62.70	95.00	28.96	1.17	0.36	216.46	0.10	202.49	3.37	1.03	188.00	359.82	4.54E-02	5.96E-02	1.54E-01	2.02E-01	1.03E-02	1.35E-02	2.14E-03	2.81E-03	1.77E-03	2.33E-03	1.07E-02	1.41E-02
Boiler	RA2-BLR115-2-300	BOR2_02	506833.31	5043558.3	62.70	95.00	28.96	1.17	0.36	216.46	0.10	202.49	3.37	1.03	188.00	359.82	4.54E-02	5.96E-02	1.54E-01	2.02E-01	1.03E-02	1.35E-02	2.14E-03	2.81E-03	1.77E-03	2.33E-03	1.07E-02	1.41E-02
Boiler	RS4-BLR115-1	BORS4_01	505917.6	5043854.6	62.70	54.00	16.46	1.00	0.30	1,771.91	0.84	2,256.07	37.60	11.46	350.00	449.82	7.20E-02	9.46E-02	7.31E-02	9.61E-02	4.90E-03	6.44E-03	1.02E-03	1.34E-03	8.43E-04	1.11E-03	5.10E-03	6.70E-03
Boiler	RS4-BLR115-2	BORS4_02	505917.6	5043851.9	62.70	54.00	16.46	1.00	0.30	1,771.91	0.84	2,256.07	37.60	11.46	350.00	449.82	7.20E-02	9.46E-02	7.31E-02	9.61E-02	4.90E-03	6.44E-03	1.02E-03	1.34E-03	8.43E-04	1.11E-03	5.10E-03	6.70E-03
Boiler	RS4-BLR115-3	BORS4_03	505917.6	5043849.4	62.70	54.00	16.46	0.67	0.20	270.58	0.13	775.15	12.92	3.94	350.00	449.82	1.80E-02	2.37E-02	1.83E-02	2.40E-02	1.23E-03	1.61E-03	2.55E-04	3.35E-04	2.11E-04	2.77E-04	1.27E-03	1.67E-03
Boiler	RS6-BLR115-1	BORS6_01	505906.8	5043587.5	62.70	54.00	16.46	1.00	0.30	1,771.91	0.84	2,256.07	37.60	11.46	350.00	449.82	7.20E-02	9.46E-02	7.31E-02	9.61E-02	4.90E-03	6.44E-03	1.02E-03	1.34E-03	8.43E-04	1.11E-03	5.10E-03	6.70E-03
Boiler	RS6-BLR115-2	BORS6_02	505906.8	5043586.1	62.70	54.00	16.46	1.00	0.30	1,771.91	0.84	2,256.07	37.60	11.46	350.00	449.82	7.20E-02	9.46E-02	7.31E-02	9.61E-02	4.90E-03	6.44E-03	1.02E-03	1.34E-03	8.43E-04	1.11E-03	5.10E-03	6.70E-03
Boiler	RS6-BLR115-3	BORS6_03	505906.8	5043584.7	62.70	54.00	16.46	0.67	0.20	270.58	0.13	775.15	12.92	3.94	350.00	449.82	1.80E-02	2.37E-02	1.83E-02	2.40E-02	1.23E-03	1.61E-03	2.55E-04	3.35E-04	2.11E-04	2.77E-04	1.27E-03	1.67E-03
Boiler	F15-BLR28-1-1	BOF15_01	508932.88	5037867.8	69.40	66.00	20.12	2.50	0.76	4,754.49	2.24	968.58	16.14	4.92	124.00	324.26	2.26E-01	2.97E-01	7.65E-01	1.00E+00	5.13E-02	6.74E-02	1.07E-02	1.40E-02	8.82E-03	1.16E-02	5.33E-02	7.01E-02
Boiler	F15-BLR28-1-2	BOF15_02	508934.61	5037866.7	69.40	66.00	20.12	2.50	0.76	4,754.49	2.24	968.58	16.14	4.92	124.00	324.26	2.26E-01	2.97E-01	7.65E-01	1.00E+00	5.13E-02	6.74E-02	1.07E-02	1.40E-02	8.82E-03	1.16E-02	5.33E-02	7.01E-02
Boiler	F15-BLR28-1-3	BOF15_03	508933.22	5037866.3	69.40	47.00	14.33	2.50	0.76	4,754.49	2.24	968.58	16.14	4.92	124.00	324.26	2.26E-01	2.97E-01	7.65E-01	1.00E+00	5.13E-02	6.74E-02	1.07E-02	1.40E-02	8.82E-03	1.16E-02	5.33E-02	7.01E-02
Boiler	F15-HW35-3	BOF15_04	509007.08	5037758.4	69.40	75.53	23.02	0.50	0.15	195.08	0.09	993.56	16.56	5.05	124.00	324.26	5.88E-02	7.73E-02	4.94E-02	6.49E-02	1.47E-03	1.93E-03	3.06E-04	4.02E-04	2.53E-04	3.32E-04	1.53E-03	2.01E-03
Boiler	F15-HW35-4	BOF15_05	508958.08	5037797.2	69.40	75.50	23.01	0.50	0.15	156.45	0.07	796.78	13.28	4.05	150.00	338.71	5.88E-02	7.73E-02	4.94E-02	6.49E-02	1.47E-03	1.93E-03	3.06E-04	4.02E-04	2.53E-04	3.32E-04	1.53E-03	2.01E-03
Boiler	RAC5-BLR115-5	BOC5_05	505857.7	5043551.4	62.70	70.00	21.34	2.00	0.61	6,594.41	3.11	2,099.07	34.98	10.66	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RAC5-BLR115-6	BOC5_06	505855.4	5043551.4	62.70	70.00	21.34	2.00	0.61	6,594.41	3.11	2,099.07	34.98	10.66	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RAC5-BLR115-7	BOC5_07	505853.3	5043551.4	62.70	70.00	21.34	2.00	0.61	6,594.41	3.11	2,099.07	34.98	10.66	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	RAC5-BLR115-8	BOC5_08	505851.5	5043551.4	62.70	70.00	21.34	2.00	0.61	6,594.41	3.11	2,099.07	34.98	10.66	350.00	449.82	3.18E-01	4.17E-01	1.07E+00	1.41E+00	7.20E-02	9.47E-02	1.50E-02	1.97E-02	1.24E-02	1.63E-02	7.49E-02	9.84E-02
Boiler	N2-BLR117-1A-30	BON2_02	506247.36	5043924.4	62.70	23.00	7.01	2.30	0.70	2,582.41	1.22	623.40	10.39	3.17	300.00	422.04	4.93E-01	6.47E-01	1.67E+00	2.19E+00	1.12E-01	1.47E-01	2.32E-02	3.05E-02	1.92E-02	2.53E-02	1.16E-01	1.53E-01
Boiler	N2-BLR117-1B-30	BON2_03	506247.36	5043924.4	62.70	23.00	7.01	2.30	0.70	2,582.41	1.22	623.40	10.39	3.17	300.00	422.04	4.93E-01	6.47E-01	1.67E+00	2.19E+00	1.12E-01	1.47E-01	2.32E-02	3.05E-02	1.92E-02	2.53E-02	1.16E-01	1.53E-01
RCTO	Combined Modeling Stack	TODB_M	506639.16	5043778.1	62.70	80.00	24.38	3.00	0.91	16,125.00	7.61	2,281.22	38.02	11.59	650.00	616.48	2.16E+00	9.45E+00	1.49E+00	6.52E+00	6.44E-01	2.39E+00	6.44E-01	2.39E+00	6.44E-01	2.39E+00	5.61E-02	2.46E-01
RCTO	D1C-VOC138-1-120	TODC_01	506742.79	5043430.5	62.70	120.00	36.58	1.00	0.30	3,400.00	1.60	4,329.01	72.15	21.99	650.00	616.48	1.96E-01	8.59E-01	1.51E+00	6.64E+00	5.40E-02	2.01E-01	5.40E-02	2.01E-01	5.40E-02	2.01E-01	5.10E-03	2.23E-02
RCTO	D1C-VOC138-2-120	TODC_02	506742.68	5043432.2	62.70	120.00	36.58	1.00	0.30	3,400.00	1.60	4,329.01	72.15	21.99	650.00	616.48	1.96E-01	8.59E-01	1.51E+00	6.64E+00	5.40E-02	2.01E-01	5.40E-02	2.01E-01	5.40E-02	2.01E-01	5.10E-03	2.23E-02
RCTO	D1C-VOC138-3-120	TODC_03	506744.57	5043432.3	62.70	120.00	36.58	1.00	0.30	3,400.00	1.60	4,329.01	72.15	21.99	650.00	616.48	1.96E-01	8.59E-01	1.51E+00	6.64E+00	5.40E-02	2.01E-01	5.40E-02	2.01E-01	5.40E-02	2.01E-01	5.10E-03	2.23E-02
RCTO	VOC-138-1-120	TODD_01	506467.03	5043403.9	62.70	89.00	27.13	1.50	0.46	3,400.00	1.60	1,924.01	32.07	9.77	650.00	616.48	1.96E-01	8.59E-01	1.12E+00	4.92E+00	1.46E-01	5.36E-01	1.46E-01	5.36E-01	1.46E-01	5.36E-01	5.10E-03	2.23E-02
RCTO	VOC-138-2-120	TODD_02	506467.03	5043403.9	62.70	89.00	27.13	1.50	0.46	3,400.00	1.60	1,924.01	32.07	9.77	650.00	616.48	1.96E-01	8.59E-01	1.12E+00	4.92E+00	1.46E-01	5.36E-01	1.46E-01	5.36E-01	1.46E-01	5.36E-01	5.10E-03	2.23E-02
RCTO	VOC-138-3-120	TODD_03	506467.03	5043403.9	62.70	89.00	27.13	1.50	0.46	3,400.00	1.60	1,924.01	32.07	9.77	650.00	616.48	1.96E-01	8.59E-01	1.12E+00	4.92E+00	1.46E-01	5.36E-01	1.46E-01	5.36E-01	1.46E-01	5.36E-01	5.10E-03	2.23E-02
RCTO	VOC-138-4-120	TODD_04	506467.03	5043403.9	62.70	89.00	27.13	1.50	0.46	3,400.00	1.60	1,924.01	32.07	9.77	650.00	616.48	1.96E-01	8.59E-01	1.12E+00	4.92E+00	1.46E-01	5.36E-01	1.46E-01	5.36E-01	1.46E-01	5.36E-01	5.10E-03	2.23E-02
RCTO	VOC-138-5-120	TODD_05	506467.03	5043403.9	62.70	89.00	27.13	3.00	0.91	16,125.00	7.61	2,281.22	38.02	11.59	650.00	616.48	7.84E-01	3.44E+00	5.41E-01	2.37E+00	1.61E-01	6.01E-01	1.61E-01	6.01E-01	1.61E-01	6.01E-01	2.04E-02	8.93E-02
RCTO	VOC-138-6-120	TODD_06	506467.03	5043403.9	62.70	89.00	27.13	3.00	0.91	16,125.00	7.61	2,281.22	38.02	11.59	650.00	616.48	7.84E-01	3.44E+00	5.41E-01	2.37E+00	1.61E-01	6.01E-01	1.61E-01	6.01E-01	1.61E-01	6.01E-01	2.04E-02	8.93E-02
RCTO	D1XM1-VOC138-1-20	TOM1_01	506337.39	5043349.8	62.70	120.00	36.58	2.00	0.61	6,400.00	3.02	2,037.18	33.95	10.35	650.00	616.48	3.43E-01	1.50E+00	2.37E-01	1.04E+00	2.75E-02	1.07E-01	2.75E-02	1.07E-01	2.75E-02	1.07E-01	8.92E-03	3.91E-02
RCTO	D1XM1-VOC138-2-20	TOM1_02	506330.48	5043347.1	62.70	120.00	36.58	2.00	0.61	6,400.00	3.02	2,037.18	33.95	10.35	650.00	616.48	3.43E-01	1.50E+00	2.37E-01	1.04E+00	2.75E-02	1.07E-01	2.75E-02	1.07E-01	2.75E-02	1.07E-01	8.92E-03	3.91E-02
RCTO	D1XM1-VOC138-3-20	TOM1_03	506323.67	5043344.1	62.70	120.00	36.58	2.00	0.61	6,400.00	3.02	2,037.18	33.95	10.35	650.00	616.48	3.43E-01	1.50E+00	2.37E-01	1.04E+00	2.75E-02	1.07E-01	2.75E-02	1.07E-01	2.75E-02	1.07E-01	8.92E-03	3.91E-02
RCTO	D1XM1-VOC138-4-20	TOM1_04	506317.28	5043340.9	62.70	120.00	36.58	2.00	0.61	6,400.00	3.02	2,037.18	33.95	10.35	650.00	616.48	3.43E-01	1.50E+00	2.37E-01	1.04E+00	2.75E-02	1.07E-01	2.75E-02	1.07E-01	2.75E-02	1.07E-01	8.92E-03	3.91E-02
RCTO	D1XM1-VOC138-5-20 (Anguil RCTO D1X-1)	TWM1_01	506247.98	5043260.6	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	7.84E-01	3.44E+00	5.41E-01	2.37E+00	1.61E-01	5.92E-01	1.61E-01	5.92E-01	1.61E-01	5.92E-01	2.04E-02	8.93E-02
RCTO	D1XM1-VOC138-6-20 (Anguil RCTO D1X-2)	TWM1_02	506255.54	5043261.9	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	7.84E-01	3.44E+00	5.41E-01	2.37E+00	4.27E-01	1.57E+00	4.27E-01	1.57E+00	4.27E-01	1.57E+00	2.04E-02	8.93E-02
RCTO	D1XM1-VOC138-7-20 (Anguil RCTO D1X-3)	TWM1_03	506262.23	5043264.7	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	7.84E-01	3.44E+00	5.41E-01	2.37E+00	4.27E-01	1.57E+00	4.27E-01	1.57E+00	4.27E-01	1.57E+00	2.04E-02	8.93E-02
RCTO	D1XM1-VOC138-8-20 (Anguil RCTO D1X-4)	TWM1_04	506261.15	5043267.8	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	7.84E-01	3.44E+00	5.41E-01	2.37E+00	1.61E-01	5.92E-01	1.61E-01	5.92E-01	1.61E-01	5.92E-01	2.04E-02	8.93E-02
RCTO	Anguil RCTO D1XM2-1	TIM2_06	506166.5	5043258	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RCTO	Anguil RCTO D1XM2-2	TIM2_07	506173.37	5043260.9	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RCTO	Anguil RCTO D1XM2-3	TIM2_08	506180.17	5043264.1	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-01	1.66E+00	4.51E-01	1.66E+00	4.51E-01	1.66E+00	0.00E+00	0.00E+00
RCTO	Anguil RCTO D1XM2-4	TIM2_09	506186.76	5043267	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RCTO	Anguil RCTO D1XM2-5	TIM2_01	506160.52	5043255.2	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RCTO	D1XM3-VOC138-1-20	TIM3_01	506014.27	5043196.1	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-01	1.66E+00	4.51E-01	1.66E+00	4.51E-01	1.66E+00	0.00E+00	0.00E+00
RCTO	D1XM3-VOC138-2-20	TIM3_02	506018.88	5043198	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RCTO	D1XM3-VOC138-3-20	TIM3_03	506023.5	5043200	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RCTO	D1XM3-VOC138-4-20	TIM3_04	506028.11	5043201.9	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RCTO	D1XM3-VOC138-5-20	TIM3_05	506032.72	5043203.8	62.70	120.00	36.58	3.00	0.91	13,575.00	6.41	1,920.47	32.01	9.76	650.00	616.48	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Intel Corporation - Stack Information

Equipment Type	Equipment ID	Stack ID	UTM Easting	UTM Northing	Elevation (m)	Stack Height (ft)	Stack Height (m)	Stack Diameter (ft)	Stack Diameter (m)	Adjusted Stack Flow Rate (ft^3/min)	Adjusted Stack Flow Rate (m^3/s)	Stack Velocity (ft/min)	Stack Velocity (ft/s)	Stack Velocity (m/s)	Stack Temperature (˚F)	Stack Temperature (K)	NOx (lb/hr)	NOx (tpy)	CO (lb/hr)	CO (tpy)	PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)	SO_2 (lb/hr)	SO_2 (tpy)
RCTO	F15-VOC-138-2-10	TOF15_02	508892.79	5037747.4	69.40	68.00	20.73	1.25	0.38	3,400.00	1.60	2,770.57	46.18	14.07	650.00	616.48	1.96E-01	8.59E-01	1.86E+00	8.16E+00	1.69E-02	6.51E-02	1.69E-02	6.51E-02	1.69E-02	6.51E-02	5.10E-03	2.23E-02
RCTO	F15-VOC-138-3-10	TOF15_03	508886.63	5037752.4	69.40	68.00	20.73	1.37	0.42	3,400.00	1.60	2,290.82	38.18	11.64	650.00	616.48	1.96E-01	8.59E-01	1.35E-01	5.93E-01	1.69E-02	6.51E-02	1.69E-02	6.51E-02	1.69E-02	6.51E-02	5.10E-03	2.23E-02
RCTO	AL3-VOC-138-10	TOA3_01	508883.2	5037731.6	69.40	68.00	20.73	1.50	0.46	3,400.00	1.60	1,924.01	32.07	9.77	650.00	616.48	1.96E-01	8.59E-01	1.35E-01	5.93E-01	1.69E-02	6.51E-02	1.69E-02	6.51E-02	1.69E-02	6.51E-02	5.10E-03	2.23E-02
RCTO	F15-VOC-138-1-10	TOF15_01	508898.87	5037746.7	69.40	68.00	20.73	1.17	0.36	3,400.00	1.60	3,173.36	52.89	16.12	650.00	616.48	1.96E-01	8.59E-01	1.86E+00	8.16E+00	1.69E-02	6.51E-02	1.69E-02	6.51E-02	1.69E-02	6.51E-02	5.10E-03	2.23E-02
RCTO	F15-VOC-138-4-10	TOF15_04	508968.04	5037707.5	69.40	68.00	20.73	1.50	0.46	3,400.00	1.60	1,924.01	32.07	9.77	650.00	616.48	1.96E-01	8.59E-01	1.35E-01	5.93E-01	1.69E-02	6.51E-02	1.69E-02	6.51E-02	1.69E-02	6.51E-02	5.10E-03	2.23E-02
EXSC	F20-SC133-1-111	SCDB_01	506735.04	5043689.3	62.70	96.00	29.26	3.50	1.07	35,750.00	16.87	3,715.78	61.93	18.88	64.99	291.48	1.29E+00	4.71E+00	2.42E+00	8.85E+00	2.55E-01	9.36E-01	2.51E-01	9.21E-01	2.46E-01	8.98E-01	1.09E-01	3.99E-01
EXSC	F20-SC133-2-111	SCDB_02	506737.08	5043678.6	62.70	96.00	29.26	3.50	1.07	35,750.00	16.87	3,715.78	61.93	18.88	64.99	291.48	1.29E+00	4.71E+00	2.42E+00	8.85E+00	2.55E-01	9.36E-01	2.51E-01	9.21E-01	2.46E-01	8.98E-01	1.09E-01	3.99E-01
EXSC	F20-SC133-3-111	SCDB_03	506729.16	5043706.8	62.70	96.00	29.26	3.50	1.07	35,750.00	16.87	3,715.78	61.93	18.88	64.99	291.48	1.29E+00	4.71E+00	2.42E+00	8.85E+00	2.55E-01	9.36E-01	2.51E-01	9.21E-01	2.46E-01	8.98E-01	1.09E-01	3.99E-01
EXSC	Combined Modeling Stack	SCDA_01	506882.28	5043833.3	62.70	96.00	29.26	3.50	1.07	16,500.00	7.79	1,714.98	28.58	8.71	64.99	291.48	8.61E-01	3.14E+00	1.62E+00	5.90E+00	1.70E-01	6.24E-01	1.68E-01	6.14E-01	1.64E-01	5.98E-01	7.29E-02	2.66E-01
EXSC	Combined Modeling Stack	SCDA_02	506882.28	5043821.7	62.70	96.00	29.26	3.50	1.07	16,500.00	7.79	1,714.98	28.58	8.71	64.99	291.48	8.61E-01	3.14E+00	1.62E+00	5.90E+00	1.70E-01	6.24E-01	1.68E-01	6.14E-01	1.64E-01	5.98E-01	7.29E-02	2.66E-01
EXSC	Combined Modeling Stack	SCDA_03	506882.36	5043843.2	62.70	96.00	29.26	3.50	1.07	16,500.00	7.79	1,714.98	28.58	8.71	64.99	291.48	8.61E-01	3.14E+00	1.62E+00	5.90E+00	1.70E-01	6.24E-01	1.68E-01	6.14E-01	1.64E-01	5.98E-01	7.29E-02	2.66E-01
EXSC	D1C-SC133-1-100	SCDC_01	506691.63	5043427.3	62.70	70.00	21.34	4.00	1.22	32,500.00	15.34	2,586.27	43.10	13.14	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	D1C-SC133-2-100	SCDC_02	506697.17	5043427.4	62.70	70.00	21.34	4.00	1.22	32,500.00	15.34	2,586.27	43.10	13.14	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	D1C-SC133-3-100	SCDC_03	506703.15	5043427.6	62.70	70.00	21.34	4.00	1.22	32,500.00	15.34	2,586.27	43.10	13.14	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	D1C-SC133-4-100	SCDC_04	506708.15	5043427.6	62.70	70.00	21.34	4.00	1.22	32,500.00	15.34	2,586.27	43.10	13.14	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	RB1-SC-133-1-100	SCRB1_01	506726.97	5043653.5	62.70	95.00	28.96	4.00	1.22	29,250.00	13.80	2,327.64	38.79	11.82	64.99	291.48	4.09E-01	1.49E+00	7.68E-01	2.80E+00	8.51E-02	3.16E-01	8.24E-02	3.04E-01	7.79E-02	2.84E-01	3.47E-02	1.27E-01
EXSC	RB1-SC-133-2-100	SCRB1_02	506730.03	5043654.8	62.70	95.00	28.96	2.67	0.81	29,250.00	13.80	5,237.19	87.29	26.60	64.99	291.48	4.09E-01	1.49E+00	7.68E-01	2.80E+00	8.51E-02	3.16E-01	8.24E-02	3.04E-01	7.79E-02	2.84E-01	3.47E-02	1.27E-01
EXSC	RB1-SC-133-8-100	SCRB1_03	506734.66	5043654.5	62.70	95.00	28.96	4.00	1.22	35,750.00	16.87	2,844.89	47.41	14.45	64.99	291.48	4.09E-01	1.49E+00	7.68E-01	2.80E+00	1.17E-01	4.55E-01	1.02E-01	3.90E-01	7.80E-02	2.85E-01	3.47E-02	1.27E-01
EXSC	RB1-SC-133-4-100	SCRB1_04	506634.89	5043630.8	62.70	95.00	28.96	4.00	1.22	29,250.00	13.80	2,327.64	38.79	11.82	64.99	291.48	4.09E-01	1.49E+00	7.68E-01	2.80E+00	8.51E-02	3.16E-01	8.24E-02	3.04E-01	7.79E-02	2.84E-01	3.47E-02	1.27E-01
EXSC	RB1-SC-133-6-100	SCRB1_06	506632.54	5043628.8	62.70	95.00	28.96	2.67	0.81	29,250.00	13.80	5,237.19	87.29	26.60	64.99	291.48	4.09E-01	1.49E+00	7.68E-01	2.80E+00	8.51E-02	3.16E-01	8.24E-02	3.04E-01	7.79E-02	2.84E-01	3.47E-02	1.27E-01
EXSC	RB1-SC-133-7-100	SCRB1_05	506635.12	5043628.9	62.70	95.00	28.96	2.67	0.81	29,250.00	13.80	5,237.19	87.29	26.60	64.99	291.48	4.09E-01	1.49E+00	7.68E-01	2.80E+00	8.51E-02	3.16E-01	8.24E-02	3.04E-01	7.79E-02	2.84E-01	3.47E-02	1.27E-01
EXSC	RA4-SC133-1	SWR4_01	506367.2	5043029.3	62.70	85.00	25.91	3.33	1.02	13,000.00	6.14	1,489.69	24.83	7.57	64.99	291.48	1.75E-01	6.40E-01	1.75E-02	6.40E-02	5.98E-03	2.62E-02	4.76E-03	5.32E-02	2.79E-03	4.45E-02	1.12E-01	4.08E-01
EXSC	RA4-SC133-2	SWR4_02	506369.56	5043022.8	62.70	85.00	25.91	3.33	1.02	13,000.00	6.14	1,489.69	24.83	7.57	64.99	291.48	1.75E-01	6.40E-01	1.75E-02	6.40E-02	5.98E-03	2.62E-02	4.76E-03	5.32E-02	2.79E-03	4.45E-02	1.12E-01	4.08E-01
EXSC	RP1-SC133-1-100	SCRP1_01	506748.15	5043358	62.70	85.00	25.91	4.63	1.41	26,000.00	12.27	1,547.60	25.79	7.86	64.99	291.48	1.23E-01	4.50E-01	2.32E-01	8.45E-01	2.99E-02	1.14E-01	2.74E-02	1.03E-01	2.35E-02	8.58E-02	1.05E-02	3.82E-02
EXSC	RP1-SC133-2-100	SCRP1_02	506747.35	5043347.1	62.70	85.00	25.91	4.63	1.41	26,000.00	12.27	1,547.60	25.79	7.86	64.99	291.48	1.23E-01	4.50E-01	2.32E-01	8.45E-01	2.99E-02	1.14E-01	2.74E-02	1.03E-01	2.35E-02	8.58E-02	1.05E-02	3.82E-02
EXSC	RP1-SC133-3-100	SCRP1_03	506748.96	5043347.4	62.70	85.00	25.91	4.63	1.41	27,300.00	12.88	1,624.98	27.08	8.25	64.99	291.48	1.23E-01	4.50E-01	2.32E-01	8.45E-01	3.15E-02	1.21E-01	2.84E-02	1.07E-01	2.35E-02	8.58E-02	1.05E-02	3.82E-02
EXSC	SC-133-1-100	SCDD_01	506493.82	5043419.7	62.70	89.00	27.13	3.33	1.02	32,500.00	15.34	3,724.23	62.07	18.92	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	SC-133-2-100	SCDD_02	506494.8	5043423	62.70	89.00	27.13	3.33	1.02	32,500.00	15.34	3,724.23	62.07	18.92	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	SC-133-3-100	SCDD_03	506498.02	5043421.2	62.70	89.00	27.13	3.33	1.02	32,500.00	15.34	3,724.23	62.07	18.92	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	SC-133-4-100	SCDD_04	506499.41	5043424.2	62.70	89.00	27.13	3.33	1.02	32,500.00	15.34	3,724.23	62.07	18.92	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	SC-133-5-100	SCDD_05	506503.96	5043424	62.70	89.00	27.13	3.33	1.02	32,500.00	15.34	3,724.23	62.07	18.92	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	SC-133-6-100	SCDD_06	506508.76	5043426.4	62.70	89.00	27.13	3.33	1.02	32,500.00	15.34	3,724.23	62.07	18.92	64.99	291.48	9.10E-01	3.32E+00	1.71E+00	6.23E+00	1.81E-01	6.67E-01	1.78E-01	6.54E-01	1.73E-01	6.32E-01	7.70E-02	2.81E-01
EXSC	D1X-SC133-1-00	SWM1_01	506313.59	5043328	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	1.90E+00	7.26E+00	3.06E+00	1.14E+01	1.70E-01	6.35E-01	1.65E-01	6.09E-01	1.55E-01	5.69E-01	1.36E-01	3.30E-01
EXSC	D1X-SC133-2-00	SWM1_02	506307.36	5043325.1	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	1.90E+00	7.26E+00	3.06E+00	1.14E+01	1.70E-01	6.35E-01	1.65E-01	6.09E-01	1.55E-01	5.69E-01	1.36E-01	5.05E-01
EXSC	D1X-SC133-3-00	SCM1_01	506292.25	5043318.6	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	1.90E+00	7.26E+00	3.06E+00	1.14E+01	3.60E-01	1.82E+00	3.54E-01	1.79E+00	3.45E-01	1.75E+00	1.36E-01	5.05E-01
EXSC	D1X-SC133-4-00	SCM1_02	506280.58	5043313.5	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	1.90E+00	7.26E+00	3.06E+00	1.14E+01	3.60E-01	1.82E+00	3.54E-01	1.79E+00	3.45E-01	1.75E+00	1.36E-01	5.05E-01
EXSC	D1X-SC133-5-00	SWM1_03	506273.97	5043310.3	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	1.90E+00	7.26E+00	3.06E+00	1.14E+01	1.70E-01	6.35E-01	1.65E-01	6.09E-01	1.55E-01	5.69E-01	1.36E-01	5.05E-01
EXSC	D1XM2-SC133-2-00	SIM2_01	506153.88	5043255.6	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	3.17E+00	1.21E+01	5.10E+00	1.90E+01	2.74E-01	1.01E+00	2.68E-01	9.88E-01	2.59E-01	9.48E-01	2.27E-01	5.37E-01
EXSC	D1XM2-SC133-3-00	SIM2_02	506147.47	5043252.9	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	3.17E+00	1.21E+01	5.10E+00	1.90E+01	2.74E-01	1.01E+00	2.68E-01	9.88E-01	2.59E-01	9.48E-01	2.27E-01	8.41E-01
EXSC	D1XM2-SC133-4-00	SIM2_03	506133.96	5043247.2	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	3.17E+00	1.21E+01	5.10E+00	1.90E+01	2.74E-01	1.01E+00	2.68E-01	9.88E-01	2.59E-01	9.48E-01	2.27E-01	8.41E-01
EXSC	D1XM2-SC133-5-00	SIM2_04	506122.35	5043242.5	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	3.17E+00	1.21E+01	5.10E+00	1.90E+01	2.74E-01	1.01E+00	2.68E-01	9.88E-01	2.59E-01	9.48E-01	2.27E-01	8.41E-01
EXSC	D1XM3-SC133-1-00	SIM3_01	505998.62	5043191.6	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	2.54E+00	9.68E+00	4.08E+00	1.52E+01	2.22E-01	8.24E-01	2.16E-01	7.99E-01	2.07E-01	7.58E-01	1.81E-01	8.25E-01
EXSC	D1XM3-SC133-2-00	SIM3_02	505991.04	5043188.6	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	2.54E+00	9.68E+00	4.08E+00	1.52E+01	2.22E-01	8.24E-01	2.16E-01	7.99E-01	2.07E-01	7.58E-01	1.81E-01	6.73E-01
EXSC	D1XM3-SC133-3-00	SIM3_03	505984.47	5043185.6	62.70	120.00	36.58	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	2.54E+00	9.68E+00	4.08E+00	1.52E+01	2.22E-01	8.24E-01	2.16E-01	7.99E-01	2.07E-01	7.58E-01	1.81E-01	6.73E-01
EXSC	D1XM3-SC133-4-00	SIM3_04	505977.82	5043183	62.70	129.99	39.62	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	2.54E+00	9.68E+00	4.08E+00	1.52E+01	2.22E-01	8.24E-01	2.16E-01	7.99E-01	2.07E-01	7.58E-01	1.81E-01	6.73E-01
EXSC	D1XM3-SC133-5-00	SIM3_05	505971.18	5043180.4	62.70	129.99	39.62	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	2.54E+00	9.68E+00	4.08E+00	1.52E+01	2.22E-01	8.24E-01	2.16E-01	7.99E-01	2.07E-01	7.58E-01	1.81E-01	6.73E-01
EXSC	D1XM4-SC133-1-00	SCM4_01	506068.7	5042972.3	62.70	129.99	39.62	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	7.30E-01	2.66E+00	1.37E+00	5.00E+00	1.54E-01	5.74E-01	1.48E-01	5.48E-01	1.39E-01	5.07E-01	6.18E-02	2.26E-01
EXSC	D1XM4-SC133-2-00	SCM4_02	506069.8	5042969.6	62.70	129.99	39.62	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	7.30E-01	2.66E+00	1.37E+00	5.00E+00	1.54E-01	5.74E-01	1.48E-01	5.48E-01	1.39E-01	5.07E-01	6.18E-02	2.26E-01
EXSC	D1XM4-SC133-3-00	SCM4_03	506070.9	5042966.8	62.70	129.99	39.62	6.17	1.88	71,250.00	33.63	2,385.58	39.76	12.12	64.99	291.48	7.30E-01	2.66E+00	1.37E+00	5.00E+00	1.54E-01	5.74E-01	1.48E-01	5.48E-01	1.39E-01	5.07E-01	6.18E-02	2.26E-01
EXSC	MSB-SC133-1	SCMB1_01	506416.14	5043153.3	62.70	144.00	43.89	5.83	1.78	71,250.00	33.63	2,666.01	44.43	13.54	64.99	291.48	1.17E-01	4.27E-01	1.17E-02	4.27E-02	4.05E-02	1.59E-01	3.46E-02	1.33E-01	2.50E-02	9.15E-02	7.46E-02	2.72E-01
EXSC	MSB-SC133-2	SCMB1_02	506420.41	5043143	62.70	144.00	43.89	5.83	1.78	71,250.00	33.63	2,666.01	44.43	13.54	64.99	291.48	1.17E-01	4.27E-01	1.17E-02	4.27E-02	4.05E-02	1.59E-01	3.46E-02	1.33E-01	2.50E-02	9.15E-02	7.46E-02	2.72E-01
EXSC	MSB-SC133-3	SCMB1_03	506425.25	5043133.9	62.70	144.00	43.89	5.83	1.78	71,250.00	33.63	2,666.01	44.43	13.54	64.99	291.48	1.17E-01	4.27E-01	1.17E-02	4.27E-02	4.05E-02	1.59E-01	3.46E-02	1.33E-01	2.50E-02	9.15E-02	7.46E-02	2.72E-01
EXSC	F15-SC7-1-1	SCF15_01	508970.09	5037706.6	69.40	73.00	22.25	5.00	1.52	39,000.00	18.41	1,986.25	33.10	10.09	64.99	291.48	7.46E-01	2.72E+00	7.46E-02	2.72E-01	1.69E-01	6.25E-01	1.66E-01	6.09E-01	1.60E-01	5.83E-01	4.76E-01	1.74E+00
EXSC	F15-SC7-1-2	SCF15_02	508953.09	5037716.1	69.40	73.00	22.25	5.00	1.52	39,000.00	18.41	1,986.25	33.10	10.09	64.99	291.48	7.46E-01	2.72E+00	7.46E-02	2.72E-01	1.69E-01	6.25E-01	1.66E-01	6.09E-01	1.60E-01	5.83E-01	4.76E-01	1.74E+00
EXSC	F15-SC7-1-3	SCF15_03	508941.71	5037722.6	69.40	73.00	22.25	5.00	1.52	55,250.00	26.08	2,813.86	46.90	14.29	64.99	291.48	7.46E-01	2.72E+00	7.46E-02	2.72E-01	1.73E-01	6.42E-01	1.68E-01	6.19E-01	1.60E-01	5.83E-01	4.76E-01	1.74E+00
EXSC	F15-SC7-1-4	SCF15_04	508924.01	5037732.8	69.40	73.00	22.25	5.00	1.52	55,250.00	26.08	2,813.86	46.90	14.29	64.99	291.48	7.46E-01	2.72E+00	7.46E-02	2.72E-01	1.73E-01	6.42E-01	1.68E-01	6.19E-01	1.60E-01	5.83E-01	4.76E-01	1.74E+00
EXSC	F15-SC7-1-5	SCF15_05	508911.28	5037740.1	69.40	73.00	22.25	5.00	1.52	39,000.00	18.41	1,986.25	33.10	10.09	64.99	291.48	7.46E-01	2.72E+00	7.46E-02	2.72E-01	1.69E-01	6.25E-01	1.66E-01	6.09E-01	1.60E-01	5.83E-01	4.76E-01	1.74E+00
EXSC	F15-SC7-1-6	SCF15_06	508895.74	5037748.8	69.40	73.00	22.25	5.00	1.52	39,000.00	18.41	1,986.25	33.10	10.09	64.99	291.48	7.46E-01	2.72E+00	7.46E-02	2.72E-01	1.69E-01	6.25E-01	1.66E-01	6.09E-01	1.60E-01	5.83E-01	4.76E-01	1.74E+00
EXAM	Combined Modeling Stack	AMDC_01	506695.47	5043411.2	62.70	65.00	19.81	2.17	0.66	11,700.00	5.52	3,173.30	52.89	16.12	64.99	291.48	1.44E-01	5.25E-01	2.70E-01	9.85E-01	3.76E-02	1.65E-01	2.81E-02	1.03E-01	2.74E-02	1.00E-01	2.57E-03	9.36E-03
EXAM	Combined Modeling Stack	AMDC_02	506698.1	5043411.1	62.70	65.00	19.81	2.17	0.66	11,700.00	5.52	3,173.30	52.89	16.12	64.99	291.48	1.44E-01	5.25E-01	2.70E-01	9.85E-01	3.76E-02	1.65E-01	2.81E-02	1.03E-01	2.74E-02	1.00E-01	2.57E-03	9.36E-03
EXAM	Combined Modeling Stack	AMDC_03	506701.33	5043411.4	62.70	65.00	19.81	2.17	0.66	11,700.00	5.52	3,173.30	52.89	16.12	64.99	291.48	1.44E-01	5.25E-01	2.70E-01	9.85E-01	3.76E-02	1.65E-01	2.81E-02	1.03E-01	2.74E-02	1.00E-01	2.57E-03	9.36E-03
EXAM	Combined Modeling Stack	AMDC_04	506703.89	5043411.1	62.70	65.00	19.81	2.17	0.66	11,700.00	5.52	3,173.30	52.89	16.12	64.99	291.48	1.44E-01	5.25E-01	2.70E-01	9.85E-01	3.76E-02	1.65E-01	2.81E-02	1.03E-01	2.74E-02	1.00E-01	2.57E-03	9.36E-03
EXAM	Combined Modeling Stack	AMDC_05	506707.26	5043411.2	62.70	65.00	19.81	2.17	0.66	11,700.00	5.52	3,173.30	52.89	16.12	64.99	291.48	1.44E-01	5.25E-01	2.70E-01	9.85E-01	3.76E-02	1.65E-01	2.81E-02	1.03E-01	2.74E-02	1.00E-01	2.57E-03	9.36E-03
EXAM	Combined Modeling Stack	AMRB1_AM	506629.85	5043628.4	62.70	95.00	28.96	3.00	0.91	40,950.00	19.33	5,793.24	96.55	29.43	64.99	291.48	8.63E-01	3.15E+00	1.62E+00	5.91E+00	2.20E-01	9.63E-01	1.69E-01	6.18E-01	1.64E-01	6.00E-01	1.54E-02	5.62E-02
EXAM	RP1-SC142-1-100	AMRP1_01	506690.2	5043352.6	62.70	85.01	25.91	4.63	1.41	7,200.00	3.40	428.39	7.14	2.18	64.99	291.48	9.26E-02	3.38E-01	1.74E-01	6.34E-01	2.31E-02	1.01E-01	1.81E-02	6.62E-02	1.76E-02	6.43E-02	1.65E-03	6.02E-03
EXAM	Combined Modeling Stack	AMDD_01	506485.47	5043408.8	62.70	103.00	31.39	2.98	0.91	8,666.66	4.09	1,243.29	20.72	6.32	64.99	291.48	4.08E-01	1.49E+00	7.65E-01	2.79E+00	8.44E-02	3.70E-01	7.86E-02	2.88E-01	7.76E-02	2.83E-01	7.27E-03	2.65E-02
EXAM	Combined Modeling Stack	AMDD_02	506481.52	5043406.8	62.70	103.00	31.39	2.98	0.91	8,666.66	4.09	1,243.29	20.72	6.32	64.99	291.48	1.36E-01	4.96E-01	2.55E-01	9.30E-01	2.81E-02	1.23E-01	2.62E-02	9.59E-02	2.59E-02	9.44E-02	2.42E-03	8.84E-03
EXAM	Combined Modeling Stack	AMDD_03	506477.28	5043404.9	62.70	103.00	31.39	2.98	0.91	8,666.66	4.09	1,243.29	20.72	6.32	64.99	291.48	1.36E-01	4.96E-01	2.55E-01	9.30E-01	2.81E-02	1.23E-01	2.62E-02	9.59E-02	2.59E-02	9.44E-02	2.42E-03	8.84E-03
EXAM	Combined Modeling Stack	AMDD_04	506601.3	5043283.4	62.70	103.00	31.39	2.98	0.91	21,125.00	9.97	3,030.52	50.51	15.40	64.99	291.48	1.70E-01	6.20E-01	3.19E-01	1.16E+00	7.34E-02	3.21E-01	3.47E-02	1.28E-01	3.24E-02	1.18E-01	3.03E-03	1.11E-02
EXAM	Combined Modeling Stack	AMDD_05	506602.26	5043281.5	62.70	103.00	31.39	2.98	0.91	21,125.00	9.97	3,030.52	50.51	15.40	64.99	291.48	1.70E-01	6.20E-01	3.19E-01	1.16E+00	7.34E-02	3.21E-01	3.47E-02	1.28E-01	3.24E-02	1.18E-01	3.03E-03	1.11E-02
EXAM	Combined Modeling Stack	AMDD_06	506603.37	5043279.8	62.70	103.00	31.39	2.98	0.91	21,125.00	9.97	3,030.52	50.51	15.40	64.99	291.48	1.70E-01	6.20E-01	3.19E-01	1.16E+00	7.34E-02	3.21E-01	3.47E-02	1.28E-01	3.24E-02	1.18E-01	3.03E-03	1.11E-02
EXAM	Combined Modeling Stack	AMDD_07	506604.53	5043277.9	62.70	103.00	31.39	2.98	0.91	21,125.00	9.97	3,030.52	50.51	15.40	64.99	291.48	1.70E-01	6.20E-01	3.19E-01	1.16E+00	7.34E-02	3.21E-01	3.47E-02	1.28E-01	3.24E-02	1.18E-01	3.03E-03	1.11E-02
EXAM	D1X-SC142-1-11	AMM1_01	506346.36	5043324.1	62.70	120.00	36.58	4.50	1.37	30,000.00	14.16	1,886.28	31.44	9.58	64.99	291.48	5.41E-01	1.97E+00	1.01E+00	3.70E+00	1.19E-01	5.19E-01	1.05E-01	3.83E-01	1.03E-01	3.76E-01	9.64E-03	3.52E-02
EXAM	D1X-SC142-2-11	AMM1_02	506344.9	5043327.6	62.70	120.00	36.58	4.50	1.37	30,000.00	14.16	1,886.28	31.44	9.58	64.99	291.48	5.41E-01	1.97E+00	1.01E+00	3.70E+00	1.19E-01	5.19E-01	1.05E-01	3.83E-01	1.03E-01	3.76E-01	9.64E-03	3.52E-02
EXAM	D1X-SC142-3-11	AMM1_03	506343.08	5043332.1	62.70	120.00	36.58	4.50	1.37	30,000.00	14.16	1,886.28	31.44	9.58	64.99	291.48	5.41E-01	1.97E+00	1.01E+00	3.70E+00	1.19E-01	5.19E-01	1.05E-01	3.83E-01	1.03E-01	3.76E-01	9.64E-03	3.52E-02
EXAM	D1X-SC142-4-11	AMM1_04	506360.5	5043330.8	62.70	120.00	36.58	4.50	1.37	30,000.00	14.16	1,886.28	31.44	9.58	64.99	291.48	5.41E-01	1.97E+00	1.01E+00	3.70E+00	1.19E-01	5.19E-01	1.05E-01	3.83E-01	1.03E-01	3.76E-01	9.64E-03	3.52E-02
EXAM	D1X-SC142-5-00	AMM1_05	506355.3	5043335.7	62.70	120.00	36.58	4.50	1.37	71,250.00	33.63	4,479.92	74.67	22.76	64.99	291.48	5.41E-01	1.97E+00	1.01E+00	3.70E+00	1.66E-01	7.25E-01	1.07E-01	3.93E-01	1.03E-01	3.76E-01	9.64E-03	3.52E-02
EXAM	D1XM2-SC142-1-00	AMM2_01	506187.92	5043246.9	62.70	120.00	36.58	4.50	1.37	30,000.00	14.16	1,886.28	31.44	9.58	64.99	291.48	4.11E-01	1.50E+00	7.71E-01	2.81E+00	9.80E-02	4.29E-01	7.99E-02	2.93E-01	7.82E-02	2.86E-01	7.32E-03	2.67E-02
EXAM	D1XM2-SC142-2-00	AMM2_02	506186.56	5043250.5	62.70	120.00	36.58	4.50	1.37	30,000.00	14.16	1,886.28	31.44	9.58	64.99	291.48	4.11E-01	1.50E+00	7.71E-01	2.81E+00	9.80E-02	4.29E-01	7.99E-02	2.93E-01	7.82E-02	2.86E-01	7.32E-03	2.67E-02
EXAM	D1XM2-SC142-3-00	AMM2_03	506185.06	5043254.2	62.70	120.00	36.58	4.50	1.37	30,000.00	14.16	1,886.28	31.44	9.58	64.99	291.48	4.11E-01	1.50E+00	7.71E-01	2.81E+00	9.80E-02	4.29E-01	7.99E-02	2.93E-01	7.82E-02	2.86E-01	7.32E-03	2.67E-02
EXAM	D1XM2-SC142-4-00	AMM2_04	506182.82	5043258	62.70	120.00	36.58	4.50	1.37	71,250.00	33.63	4,479.92	74.67	22.76	64.99	291.48	4.11E-01	1.50E+00	7.71E-01	2.81E+00	9.80E-02	4.29E-01	7.99E-02	2.93E-01	7.82E-02	2.86E-01	7.32E-03	2.67E-02
EXAM	D1XM3-SC142-1-00	AMM3_01	505959.16	5043172	62.70	120.00	36.58	6.54	1.99	71,250.00	33.63	2,119.96	35.33	10.77	64.99	291.48	1.01E+00	3.68E+00	1.89E+00	6.90E+00	2.40E-01	1.05E+00	1.96E-01	7.17E-01	1.92E-01	7.00E-01	1.80E-02	6.55E-02
EXAM	D1XM3-SC142-2-00	AMM3_02	505952.13	5043169.5	62.70	120.00	36.58	6.54	1.99	71,250.00	33.63	2,119.96	35.33	10.77	64.99	291.48	1.01E+00	3.68E+00	1.89E+00	6.90E+00	2.40E-01	1.05E+00	1.96E-01	7.17E-01	1.92E-01	7.00E-01	1.80E-02	6.55E-02
EXAM	D1XM3-SC142-3-00	AMM3_03	505945.16	5043167	62.70	129.99	39.62	6.54	1.99	71,250.00	33.63	2,119.96	35.33	10.77	64.99	291.48	1.01E+00	3.68E+00	1.89E+00	6.90E+00	2.40E-01	1.05E+00	1.96E-01	7.17E-01	1.92E-01	7.00E-01	1.80E-02	6.55E-02
EXAM	D1XM3-SC142-4-00	AMM3_04	505938.19	5043164.5	62.70	129.99	39.62	6.54	1.99	71,250.00	33.63	2,119.96	35.33	10.77	64.99	291.48	1.01E+00	3.68E+00	1.89E+00	6.90E+00	2.40E-01	1.05E+00	1.96E-01	7.17E-01	1.92E-01	7.00E-01	1.80E-02	6.55E-02
EXAM	Combined Modeling Stack	AMM4_01	506071.6	5042964.5	62.70	129.99	39.62	6.17	1.88	28,500.00	13.45	954.23	15.90	4.85	64.99	291.48	1.65E-01	6.03E-01	3.10E-01	1.13E+00	7.94E-02	3.48E-01	3.41E-02	1.27E-01	3.15E-02	1.15E-01	2.94E-03	1.07E-02
EXAM	Combined Modeling Stack	AMM4_02	506072.9	5042962.1	62.70	129.99	39.62	6.17	1.88	28,500.00	13.45	954.23	15.90	4.85	64.99	291.48	1.65E-01	6.03E-01	3.10E-01	1.13E+00	7.94E-02	3.48E-01	3.41E-02	1.27E-01	3.15E-02	1.15E-01	2.94E-03	1.07E-02

Intel Corporation - Stack Information

Equipment Type	Equipment ID	Stack ID	UTM Easting	UTM Northing	Elevation (m)	Stack Height (ft)	Stack Height (m)	Stack Diameter (ft)	Stack Diameter (m)	Adjusted Stack Flow Rate (ft^3/min)	Adjusted Stack Flow Rate (m^3/s)	Stack Velocity (ft/min)	Stack Velocity (ft/s)	Stack Velocity (m/s)	Stack Temperature (˚F)	Stack Temperature (K)	NOx (lb/hr)	NOx (tpy)	CO (lb/hr)	CO (tpy)	PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)	SO_2 (lb/hr)	SO_2 (tpy)
EXAM	Combined Modeling Stack	AMM4_03	506074.19	5042959.7	62.70	129.99	39.62	6.17	1.88	28,500.00	13.45	954.23	15.90	4.85	64.99	291.48	1.65E-01	6.03E-01	3.10E-01	1.13E+00	7.94E-02	3.48E-01	3.41E-02	1.27E-01	3.15E-02	1.15E-01	2.94E-03	1.07E-02
HEATER	RA3 Combined Modeling Stack	HER3_M	506679.8	5043176.5	62.70	82.00	24.99	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	1.56E+00	3.42E+00	1.31E+00	5.38E+00	3.90E-02	8.55E-02	3.90E-02	8.55E-02	3.90E-02	8.55E-02	4.06E-02	8.89E-02
HEATER	RS4 Combined Modeling Stack	HERS4_M	505951	5043852.3	62.70	60.00	18.29	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	4.03E-01	8.82E-01	3.38E-01	1.48E+00	1.01E-02	2.21E-02	1.01E-02	2.21E-02	1.01E-02	2.21E-02	1.05E-02	2.29E-02
HEATER	RS5 Combined Modeling Stack	HERS5_M	505915.2	5043725.7	62.70	60.00	18.29	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	7.25E-01	1.59E+00	6.09E-01	2.67E+00	1.81E-02	3.97E-02	1.81E-02	3.97E-02	1.81E-02	3.97E-02	1.89E-02	4.13E-02
HEATER	RS6 Combined Modeling Stack	HERS6_M	505939.9	5043588.1	62.70	60.00	18.29	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	3.09E-01	6.76E-01	2.59E-01	1.14E+00	7.72E-03	1.69E-02	7.72E-03	1.69E-02	7.72E-03	1.69E-02	8.03E-03	1.76E-02
HEATER	Lunch Tent Combined Modeling Stack	HELT4_M	506443.2	5043804.3	62.70	41.00	12.50	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	2.81E-01	6.15E-01	2.36E-01	1.03E+00	7.02E-03	1.54E-02	7.02E-03	1.54E-02	7.02E-03	1.54E-02	7.30E-03	1.60E-02
HEATER	Aloha Combined Modeling Stack	HEAL_M	509091.1	5037889	69.40	46.00	14.02	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	2.88E-01	6.31E-01	2.42E-01	1.06E+00	7.21E-03	1.58E-02	7.21E-03	1.58E-02	7.21E-03	1.58E-02	7.50E-03	1.64E-02
HEATER	RS2 Combined Modeling Stack	HERS2_M	506491.4	5043738.9	62.70	43.00	13.11	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	3.14E-01	6.87E-01	2.64E-01	1.15E+00	7.84E-03	1.72E-02	7.84E-03	1.72E-02	7.84E-03	1.72E-02	8.16E-03	1.79E-02
HEATER	RA1 Combined Modeling Stack	HERA1_M	506835.9	5043715.5	62.70	54.00	16.46	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	1.47E-02	3.22E-02	1.24E-02	5.41E-02	3.68E-04	8.05E-04	3.68E-04	8.05E-04	3.68E-04	8.05E-04	3.82E-04	8.37E-04
HEATER	CUB 4 Heater	HEC4_M	506404.21	5043465.8	62.70	79.00	24.08	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	2.94E-02	6.44E-02	2.47E-02	1.08E-01	7.35E-04	1.61E-03	7.35E-04	1.61E-03	7.35E-04	1.61E-03	7.65E-04	1.67E-03
HEATER	PUB1 Heater	HEPB1_M	506212.9	5043427.9	62.70	104.00	31.70	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	1.47E-01	3.22E-01	1.24E-01	5.41E-01	3.68E-03	8.05E-03	3.68E-03	8.05E-03	3.68E-03	8.05E-03	3.82E-03	8.37E-03
HEATER	CUB 5 Heater	HEC5_M	505862	5043464.8	62.70	73.50	22.40	0.50	0.15	193.25	0.09	984.23	16.40	5.00	300.00	422.04	1.47E-01	3.22E-01	1.24E-01	5.41E-01	3.68E-03	8.05E-03	3.68E-03	8.05E-03	3.68E-03	8.05E-03	3.82E-03	8.37E-03
TMXW	CUB3 - OX293-0-70	TMXW_01	506292.12	5043551.6	62.70	28.00	8.53	1.25	0.38	4,094.17	1.93	3,336.23	55.60	16.95	250.00	394.26	3.40E-01	1.49E+00	3.15E-02	1.38E-01	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02
TMXW	PUB1A-OX293-0-70	TMXW_02	506166.41	5043393	62.70	28.00	8.53	1.25	0.38	4,094.17	1.93	3,336.23	55.60	16.95	250.00	394.26	3.40E-01	1.49E+00	3.15E-02	1.38E-01	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02
TMXW	PUB1B-OX293-0-70	TMXW_03	506100.6	5043326.9	62.70	28.00	8.53	1.25	0.38	4,094.17	1.93	3,336.23	55.60	16.95	250.00	394.26	3.40E-01	1.49E+00	3.15E-02	1.38E-01	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02
TMXW	PUB1C-OX293-0-70	TMXW_04	506116.6	5043305.7	62.70	28.00	8.53	1.25	0.38	4,094.17	1.93	3,336.23	55.60	16.95	250.00	394.26	3.40E-01	1.49E+00	3.15E-02	1.38E-01	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02
TMXW	PUB1D-OX293-0-70	TMXW_05	506025.2	5043301.6	62.70	28.00	8.53	1.25	0.38	4,094.17	1.93	3,336.23	55.60	16.95	250.00	394.26	3.40E-01	1.49E+00	3.15E-02	1.38E-01	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02
TMXW	PUB1E-OX293-0-70	TMXW_06	506035.3	5043283.6	62.70	28.00	8.53	1.25	0.38	4,094.17	1.93	3,336.23	55.60	16.95	250.00	394.26	3.40E-01	1.49E+00	3.15E-02	1.38E-01	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02
TMXW	PUB1F-OX293-0-70	TMXW_07	505992.2	5043284.9	62.70	28.00	8.53	1.25	0.38	4,094.17	1.93	3,336.23	55.60	16.95	250.00	394.26	3.40E-01	1.49E+00	3.15E-02	1.38E-01	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02
TMXW	CUB2-OX293-0-70	TMXW_08	506533.24	5043483.2	62.70	38.29	11.67	1.25	0.38	4,094.17	1.93	3,336.23	55.60	16.95	250.00	394.26	3.40E-01	1.49E+00	3.15E-02	1.38E-01	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02	2.57E-03	1.13E-02
TMXW	CUB3 - OX293B-0-70	TMC3_02	506300.9	5043548.9	62.70	28.00	8.53	1.25	0.38	4,094.17	1.93	3,336.23	55.60	16.95	250.00	394.26	7.20E-02	3.15E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-1	CTC4_01	506401.76	5043561.2	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-2	CTC4_02	506401.71	5043576.1	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-3	CTC4_03	506414.44	5043561.5	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-4	CTC4_04	506414.44	5043576.3	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-5	CTC4_05	506427.26	5043561.4	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-6	CTC4_06	506427.31	5043576.2	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-7	CTC4_07	506440.14	5043561.6	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-8	CTC4_08	506439.99	5043576.2	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-9	CTC4_09	506452.81	5043561.7	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-10	CTC4_10	506452.76	5043576.5	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-11	CTC4_11	506465.78	5043561.8	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-12	CTC4_12	506465.78	5043576.5	62.70	51.00	15.54	28.00	8.53	588,154.79	277.58	955.18	15.92	4.85	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-13	CTC4_13	506396.77	5043625.1	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-14	CTC4_14	506396.92	5043610.5	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-15	CTC4_15	506409.43	5043625.2	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-16	CTC4_16	506409.78	5043610.5	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-17	CTC4_17	506422.09	5043625.2	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-18	CTC4_18	506422.44	5043610.5	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-19	CTC4_19	506434.65	5043625.2	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC4-CT114-20	CTC4_20	506435	5043610.5	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-1	CTC5_01	505911.75	5043470.7	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-2	CTC5_02	505911.42	5043486	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-3	CTC5_03	505924.57	5043470.7	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-4	CTC5_04	505924.24	5043486	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-5	CTC5_05	505937.39	5043470.7	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-6	CTC5_06	505937.06	5043486	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-7	CTC5_07	505950.21	5043470.7	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-8	CTC5_08	505949.88	5043486	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-9	CTC5_09	505963.03	5043470.7	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-10	CTC5_10	505962.7	5043486	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-11	CTC5_11	505975.85	5043470.7	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-12	CTC5_12	505975.52	5043486	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-13	CTC5_13	505988.67	5043470.7	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-14	CTC5_14	505988.34	5043486	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-15	CTC5_15	506001.49	5043470.7	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-16	CTC5_16	506001.16	5043486	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	RAC5-CT115-17	CTC5_17	506014.31	5043470.7	62.70	51.00	15.54	28.00	8.53	1,059,622.00	500.09	1,720.86	28.68	8.74	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.30E-02	5.07E-02	1.53E-04	2.24E-04	0.00E+00	0.00E+00
COOLTOW	CT-114-1-210	CTC3_01	506294.64	5043534.7	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CT-114-2-210	CTC3_02	506306.48	5043534.7	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CT-114-3-210	CTC3_03	506318.32	5043534.8	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CT-114-4-210	CTC3_04	506330.31	5043535	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CT-114-5-210	CTC3_05	506342.15	5043535.2	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CUB3-CT114-21-10	CTC3_06	506305.08	5043550.7	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CUB3-CT114-22-10	CTC3_07	506316.29	5043550.5	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CUB3-CT114-23-10	CTC3_08	506316.29	5043550.5	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CUB3-CT114-24-10	CTC3_09	506316.29	5043550.5	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CUB3-CT114-25-10	CTC3_10	506327.66	5043550.5	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	CUB3-CT114-26-10	CTC3_11	506327.66	5043550.5	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	RP1-CT114-1-200	CTRP1_01	506658.54	5043337.5	62.70	45.00	13.72	10.00	3.05	187,464.51	88.47	2,386.87	39.78	12.13	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	3.08E-02	3.63E-02	1.10E-04	1.60E-04	0.00E+00	0.00E+00
COOLTOW	RP1-CT114-2-200	CTRP1_02	506658.26	5043328.7	62.70	45.00	13.72	10.00	3.05	187,464.51	88.47	2,386.87	39.78	12.13	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	3.08E-02	3.63E-02	1.10E-04	1.60E-04	0.00E+00	0.00E+00
COOLTOW	RP1-CT114-3-00	CTRP1_03	506658.26	5043319.9	62.70	45.00	13.72	10.00	3.05	187,464.51	88.47	2,386.87	39.78	12.13	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	3.08E-02	3.63E-02	1.10E-04	1.60E-04	0.00E+00	0.00E+00
COOLTOW	RA4-CT113-1-10	CTR4_01	506357.82	5043059.1	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.49E-02	5.29E-02	1.60E-04	2.34E-04	0.00E+00	0.00E+00
COOLTOW	RA4-CT113-2-10	CTR4_02	506359.29	5043055.7	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.49E-02	5.29E-02	1.60E-04	2.34E-04	0.00E+00	0.00E+00
COOLTOW	RA4-CT113-3-10	CTR4_03	506363.54	5043061.7	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.49E-02	5.29E-02	1.60E-04	2.34E-04	0.00E+00	0.00E+00
COOLTOW	RA4-CT113-4-10	CTR4_04	506364.93	5043058.1	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.49E-02	5.29E-02	1.60E-04	2.34E-04	0.00E+00	0.00E+00
COOLTOW	RA4-CT113-5-10	CTR4_05	506370.63	5043063	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.49E-02	5.29E-02	1.60E-04	2.34E-04	0.00E+00	0.00E+00
COOLTOW	RA4-CT113-6-10	CTR4_06	506375.5	5043065	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.49E-02	5.29E-02	1.60E-04	2.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-1-210	CTC2_01	506518.07	5043561.1	62.70	29.00	8.84	11.00	3.35	141,807.83	66.93	1,492.19	24.87	7.58	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-2-210	CTC2_02	506518.39	5043575.8	62.70	29.00	8.84	11.00	3.35	141,807.83	66.93	1,492.19	24.87	7.58	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-3-210	CTC2_03	506514.79	5043561.1	62.70	29.00	8.84	11.00	3.35	141,807.83	66.93	1,492.19	24.87	7.58	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-4-210	CTC2_04	506514.89	5043575.7	62.70	29.00	8.84	11.00	3.35	141,807.83	66.93	1,492.19	24.87	7.58	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-5-210	CTC2_05	506506.05	5043561.1	62.70	29.00	8.84	11.00	3.35	141,807.83	66.93	1,492.19	24.87	7.58	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-6-210	CTC2_06	506506.26	5043575.6	62.70	29.00	8.84	11.00	3.35	141,807.83	66.93	1,492.19	24.87	7.58	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-7-210	CTC2_07	506502.65	5043561	62.70	29.00	8.84	11.00	3.35	141,807.83	66.93	1,492.19	24.87	7.58	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-8-210	CTC2_08	506502.87	5043575.6	62.70	29.00	8.84	11.00	3.35	141,807.83	66.93	1,492.19	24.87	7.58	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-9-210	CTC2_09	506494.34	5043560.9	62.70	29.00	8.84	11.00	3.35	141,807.83	66.93	1,492.19	24.87	7.58	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00

Intel Corporation - Stack Information

Equipment Type	Equipment ID	Stack ID	UTM Easting	UTM Northing	Elevation (m)	Stack Height (ft)	Stack Height (m)	Stack Diameter (ft)	Stack Diameter (m)	Adjusted Stack Flow Rate (ft^3/min)	Adjusted Stack Flow Rate (m^3/s)	Stack Velocity (ft/min)	Stack Velocity (ft/s)	Stack Velocity (m/s)	Stack Temperature (˚F)	Stack Temperature (K)	NOx (lb/hr)	NOx (tpy)	CO (lb/hr)	CO (tpy)	PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)	SO_2 (lb/hr)	SO_2 (tpy)
COOLTOW	CUB2-CT114-10-210	CTC2_10	506494.34	5043575.6	62.70	31.00	9.45	11.00	3.35	191,818.53	90.53	2,018.44	33.64	10.25	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-11-10	CTC2_11	506518.1	5043590.2	62.70	31.00	9.45	11.00	3.35	383,697.53	181.08	4,037.51	67.29	20.51	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.04E-01	7.56E-02	3.70E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-12-10	CTC2_12	506514.87	5043590.1	62.70	31.00	9.45	11.00	3.35	191,697.58	90.47	2,017.16	33.62	10.25	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.04E-01	7.56E-02	3.70E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-13-10	CTC2_13	506505.8	5043590	62.70	31.00	9.45	11.00	3.35	191,818.53	90.53	2,018.44	33.64	10.25	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.04E-01	7.56E-02	3.70E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	CUB2-CT114-14-10	CTC2_14	506494.34	5043590.1	62.70	31.00	9.45	11.00	3.35	191,818.53	90.53	2,018.44	33.64	10.25	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.04E-01	7.56E-02	3.70E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-1-210	CTC1_01	506674.28	5043903	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-2-210	CTC1_02	506681.59	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-3-210	CTC1_03	506685.56	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-4-210	CTC1_04	506692.61	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-5-210	CTC1_05	506696.57	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-6-210	CTC1_06	506703.62	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-7-210	CTC1_07	506707.59	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-8-210	CTC1_08	506714.32	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-9-210	CTC1_09	506718.29	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-10-210	CTC1_10	506724.66	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	F20-CT114-11-210	CTC1_11	506728.63	5043904	62.70	29.00	8.84	11.00	3.35	191,848.76	90.54	2,018.76	33.65	10.26	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	1.01E-01	7.56E-02	3.59E-04	3.34E-04	0.00E+00	0.00E+00
COOLTOW	N2-CT114-1	CTN2_01	506333.46	5043970.9	62.70	17.00	5.18	11.67	3.56	135,155.87	63.79	1,264.30	21.07	6.42	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	N2-CT114-2	CTN2_02	506210.58	5043933.9	62.70	17.00	5.18	11.67	3.56	135,155.87	63.79	1,264.30	21.07	6.42	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	N2-CT114-3	CTN2_03	506247.14	5044080.6	62.70	17.00	5.18	11.67	3.56	135,155.87	63.79	1,264.30	21.07	6.42	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RACB3-CT-114-1-35	CTCB_01	506297	5043636	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	RACB3-CT-114-2-35	CTCB_02	506298	5043639	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	RACB3-CT-114-3-35	CTCB_03	506299	5043642	62.70	17.00	5.18	11.67	3.56	362,108.87	170.90	3,387.32	56.46	17.21	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.17E-02	7.28E-02	2.19E-04	3.21E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-1-11	CTWTR_01	506036.99	5043917.3	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-2-11	CTWTR_02	506041.55	5043917.6	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-3-11	CTWTR_03	506049.25	5043917.6	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-4-11	CTWTR_04	506053.37	5043917.4	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-5-11	CTWTR_05	506037.1	5043904	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-6-11	CTWTR_06	506041.66	5043904.3	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-7-11	CTWTR_07	506048.6	5043904.5	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-8-11	CTWTR_08	506053.48	5043904.4	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-9-11	CTWTR_09	506036.74	5043892.3	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-10-11	CTWTR_10	506042.65	5043892.3	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-11-11	CTWTR_11	506049.21	5043892.6	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	RAWTR1-CH918-12-11	CTWTR_12	506053.84	5043892.3	62.70	73.00	22.25	12.00	3.66	332,598.33	156.97	2,940.81	49.01	14.94	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.59E-02	1.01E-01	3.06E-04	4.47E-04	0.00E+00	0.00E+00
COOLTOW	AL4-CHW-CT2	CTA4_01	508843.13	5037820.4	69.40	23.28	7.10	8.00	2.44	81,918.56	38.66	1,629.88	27.16	8.28	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.01E-03	1.42E-02	2.14E-05	6.26E-05	0.00E+00	0.00E+00
COOLTOW	AL4-CHW-CT3	CTA4_02	508850.11	5037827.2	69.40	23.28	7.10	8.00	2.44	81,918.56	38.66	1,629.88	27.16	8.28	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	6.01E-03	1.42E-02	2.14E-05	6.26E-05	0.00E+00	0.00E+00
COOLTOW	F15-CT29-1-1	CTF15_01	508966.76	5037839.6	69.40	37.50	11.43	9.33	2.84	111,511.15	52.63	1,629.88	27.16	8.28	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	2.88E-02	4.42E-02	1.03E-04	1.95E-04	0.00E+00	0.00E+00
COOLTOW	F15-CT29-1-2	CTF15_02	508958.95	5037844.1	69.40	37.50	11.43	9.33	2.84	111,511.15	52.63	1,629.88	27.16	8.28	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	2.88E-02	4.42E-02	1.03E-04	1.95E-04	0.00E+00	0.00E+00
COOLTOW	F15-CT29-1-3	CTF15_03	508949.3	5037849.6	69.40	37.50	11.43	11.00	3.35	178,575.07	84.28	1,879.08	31.32	9.55	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.90E-02	4.42E-02	1.74E-04	1.95E-04	0.00E+00	0.00E+00
COOLTOW	F15-CT29-1-4	CTF15_04	508937.84	5037856.2	69.40	37.50	11.43	11.00	3.35	178,575.07	84.28	1,879.08	31.32	9.55	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.90E-02	4.42E-02	1.74E-04	1.95E-04	0.00E+00	0.00E+00
COOLTOW	F15-CT29-1-5	CTF15_05	508941.56	5037862.4	69.40	37.50	11.43	11.00	3.35	178,575.07	84.28	1,879.08	31.32	9.55	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	4.90E-02	4.42E-02	1.74E-04	1.95E-04	0.00E+00	0.00E+00
COOLTOW	F15-CT29-1-6-1	CTF15_06	508973.89	5037851.8	69.40	37.50	11.43	7.00	2.13	34,408.81	16.24	894.10	14.90	4.54	68.00	293.15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-02	6.21E-02	8.81E-03	7.94E-03	3.13E-05	3.50E-05	0.00E+00	0.00E+00
PSSS	F20-SC-134-1-100	PSDB_01	506665.95	5043736	62.70	95.00	28.96	3.50	1.07	10,362.20	4.89	1,077.03	17.95	5.47	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-03	3.84E-02	5.42E-03	2.38E-02	1.78E-05	7.82E-05	0.00E+00	0.00E+00
PSSS	D1C-SC134-1-100	PSDC_M	506678.31	5043478.3	62.70	77.00	23.47	3.00	0.91	2,960.63	1.40	418.84	6.98	2.13	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.58E-03	4.19E-02	5.92E-03	2.59E-02	1.95E-05	8.53E-05	0.00E+00	0.00E+00
PSSS	D1C-SC134-2-100	PSDD_M	506495	5043302.7	62.70	89.00	27.13	3.00	0.91	9,858.89	4.65	1,394.75	23.25	7.09	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-02	6.29E-02	8.88E-03	3.89E-02	2.92E-05	1.28E-04	0.00E+00	0.00E+00
PSSS	D1C-SC133-1-200	SCC2_01	506538.3	5043483.1	62.70	46.00	14.02	0.83	0.25	2,960.63	1.40	5,428.21	90.47	27.58	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.98E-04	3.49E-03	4.93E-04	2.16E-03	1.62E-06	7.11E-06	0.00E+00	0.00E+00
PSSS	RP1-SC134-1-100	PSRP1_01	506719.16	5043351.4	62.70	85.00	25.91	3.50	1.07	12,434.64	5.87	1,292.43	21.54	6.57	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.70E-03	2.94E-02	4.14E-03	1.81E-02	1.36E-05	5.97E-05	0.00E+00	0.00E+00
PSSS	SC-133-1-200	SCC3_01	506269.27	5043482.1	62.70	45.00	13.72	1.50	0.46	5,921.26	2.79	3,350.75	55.85	17.02	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	6.99E-03	9.86E-04	4.32E-03	3.24E-06	1.42E-05	0.00E+00	0.00E+00
PSSS	D1XM1 Combined Modeling Stack	PSM1_M	506292.09	5043322.5	62.70	120.00	36.58	4.17	1.27	8,881.89	4.19	651.39	10.86	3.31	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-02	1.12E-01	1.58E-02	6.91E-02	5.19E-05	2.27E-04	0.00E+00	0.00E+00
PSSS	D1XM2 Combined Modeling Stack	PSM2_M	506132.4	5043250.6	62.70	120.00	36.58	4.17	1.27	8,881.89	4.19	651.39	10.86	3.31	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-02	1.12E-01	1.58E-02	6.91E-02	5.19E-05	2.27E-04	0.00E+00	0.00E+00
PSSS	D1XM3 Combined Modeling Stack	PSM3_M	505977.34	5043186.3	62.70	120.00	36.58	4.17	1.27	8,881.89	4.19	651.39	10.86	3.31	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E-02	1.12E-01	1.58E-02	6.91E-02	5.19E-05	2.27E-04	0.00E+00	0.00E+00
PSSS	D1XM4-SC134-1-00	PSM4_01	506073.33	5042961.1	62.70	98.50	30.02	6.17	1.88	22,500.78	10.62	753.37	12.56	3.83	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-02	6.64E-02	9.37E-03	4.10E-02	3.08E-05	1.35E-04	0.00E+00	0.00E+00
PSSS	D1XM4-SC134-2-00	PSM4_02	506075.24	5042957.5	62.70	98.50	30.02	6.17	1.88	22,500.78	10.62	753.37	12.56	3.83	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-02	6.64E-02	9.37E-03	4.10E-02	3.08E-05	1.35E-04	0.00E+00	0.00E+00
PSSS	PUB1-SC133-1-00	SCPB1_01	506190.72	5043438.6	62.70	119.00	36.27	3.00	0.91	9,000.00	4.25	1,273.24	21.22	6.47	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-03	1.40E-02	1.97E-03	8.64E-03	6.49E-06	2.84E-05	0.00E+00	0.00E+00
PSSS	PUB1-SC133-2-00	SCPB1_02	506194.51	5043438.7	62.70	119.00	36.27	3.00	0.91	9,000.00	4.25	1,273.24	21.22	6.47	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-03	1.40E-02	1.97E-03	8.64E-03	6.49E-06	2.84E-05	0.00E+00	0.00E+00
PSSS	F15-SC7-2-12	PSF15_01	508968.32	5037829	69.40	73.00	22.25	3.50	1.07	17,171.65	8.10	1,784.79	29.75	9.07	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	6.99E-03	9.86E-04	4.32E-03	3.24E-06	1.42E-05	0.00E+00	0.00E+00
PSSS	F15-SC7-1-7	PSF15_02	508893.72	5037752.1	69.40	73.00	22.25	2.00	0.61	5,921.26	2.79	1,884.80	31.41	9.57	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E-03	2.03E-02	2.86E-03	1.25E-02	9.41E-06	4.12E-05	0.00E+00	0.00E+00
PSSS	F15-SC7-2-7	PSF15_03	508805.99	5037833.7	69.40	50.00	15.24	3.50	1.07	17,171.65	8.10	1,784.79	29.75	9.07	57.00	287.04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E-03	2.03E-02	2.86E-03	1.25E-02	9.41E-06	4.12E-05	0.00E+00	0.00E+00
EGEN	PH #1	FIRS4_01	505986.52	5043796.5	62.70	65.00	19.81	0.42	0.13	1,016.65	0.48	7,455.96	124.27	37.88	918.00	765.37	1.31E+00	3.28E-02	7.45E-01	1.86E-02	3.27E-02	8.16E-04	3.27E-02	8.16E-04	3.27E-02	8.16E-04	1.58E-03	3.94E-05
EGEN	PH #2	FIPH2_01	506319.9	5043633.7	62.70	15.00	4.57	0.42	0.13	2,278.74	1.08	16,711.96	278.53	84.90	987.00	803.71	7.70E-01	1.92E-02	3.42E-01	8.55E-03	3.27E-02	8.16E-04	3.27E-02	8.16E-04	3.27E-02	8.16E-04	1.58E-03	3.94E-05
EGEN	PH #3	FIPH1_01	506814.61	5043923	62.70	15.00	4.57	0.33	0.10	1,159.70	0.55	13,289.17	221.49	67.51	815.00	708.15	2.93E+00	7.33E-02	6.36E-01	1.59E-02	1.49E-01	3.73E-03	1.49E-01	3.73E-03	1.49E-01	3.73E-03	2.61E-03	6.52E-05
EGEN	PH #4	FIC5_01	505849.77	5043556	62.70	83.00	25.30	0.50	0.15	1,539.98	0.73	7,843.07	130.72	39.84	873.00	740.37	2.84E+00	7.10E-02	6.15E-01	1.54E-02	7.89E-03	1.97E-04	7.89E-03	1.97E-04	7.89E-03	1.97E-04	2.52E-03	6.31E-05
EGEN	RA1-ELEC-CPS-GEN01	EGR1_01	506791	5043642.8	62.70	95.00	28.96	0.83	0.25	4,143.92	1.96	7,597.74	126.63	38.60	876.00	742.04	2.82E+01	3.52E-01	1.29E+01	1.62E-01	1.28E+00	1.60E-02	1.28E+00	1.60E-02	1.28E+00	1.60E-02	2.62E-02	3.27E-04
EGEN	RA1-ELEC-CPS-GEN02	EGR1_02	506791	5043639.4	62.70	95.00	28.96	0.83	0.25	4,143.92	1.96	7,597.74	126.63	38.60	876.00	742.04	2.82E+01	3.52E-01	1.29E+01	1.62E-01	1.28E+00	1.60E-02	1.28E+00	1.60E-02	1.28E+00	1.60E-02	2.62E-02	3.27E-04
EGEN	RA1-ELEC-CPS-GEN03	EGR1_03	506791	5043636.3	62.70	95.00	28.96	0.83	0.25	4,143.92	1.96	7,597.74	126.63	38.60	876.00	742.04	2.82E+01	3.52E-01	1.29E+01	1.62E-01	1.28E+00	1.60E-02	1.28E+00	1.60E-02	1.28E+00	1.60E-02	2.62E-02	3.27E-04
EGEN	RA1-ELEC-CPS-GEN04	EGR1_04	506791	5043632.9	62.70	95.00	28.96	0.83	0.25	4,143.92	1.96	7,597.74	126.63	38.60	876.00	742.04	2.82E+01	3.52E-01	1.29E+01	1.62E-01	1.28E+00	1.60E-02	1.28E+00	1.60E-02	1.28E+00	1.60E-02	2.62E-02	3.27E-04
EGEN	D1C-CPS-GEN01	EGDC_01	506673.31	5043439.3	62.70	67.00	20.42	0.83	0.25	3,183.44	1.50	5,836.73	97.28	29.65	1,271.00	961.48	3.94E+01	4.93E-01	1.08E+01	1.36E-01	1.60E+00	2.00E-02	1.60E+00	2.00E-02	1.60E+00	2.00E-02	2.14E-02	2.68E-04
EGEN	D1C-CPS-GEN02	EGDC_02	506673.31	5043438.4	62.70	67.00	20.42	0.83	0.25	3,183.44	1.50	5,836.73	97.28	29.65	1,271.00	961.48	3.94E+01	4.93E-01	1.08E+01	1.36E-01	1.60E+00	2.00E-02	1.60E+00	2.00E-02	1.60E+00	2.00E-02	2.14E-02	2.68E-04
EGEN	D1C-CPS-GEN03	EGDC_03	506673.31	5043437.6	62.70	67.00	20.42	0.83	0.25	3,183.44	1.50	5,836.73	97.28	29.65	1,271.00	961.48	3.94E+01	4.93E-01	1.08E+01	1.36E-01	1.60E+00	2.00E-02	1.60E+00	2.00E-02	1.60E+00	2.00E-02	2.14E-02	2.68E-04
EGEN	D1C-EPS-GEN01	EGDC_04	506673.33	5043513.9	62.70	67.00	20.42	0.83	0.25	6,462.38	3.05	11,848.54	197.48	60.19	869.00	738.15	2.34E+01	2.92E-01	3.29E+00	4.11E-02	8.00E-01	1.00E-02	8.00E-01	1.00E-02	8.00E-01	1.00E-02	3.11E-02	3.88E-04
EGEN	D1C-EPS-GEN02	EGDC_05	506673.33	5043512	62.70	67.00	20.42	0.83	0.25	6,462.38	3.05	11,848.54	197.48	60.19	869.00	738.15	2.34E+01	2.92E-01	3.29E+00	4.11E-02	8.00E-01	1.00E-02	8.00E-01	1.00E-02	8.00E-01	1.00E-02	3.11E-02	3.88E-04
EGEN	RB1-EPS-GEN01	EGRB1_01	506638.99	5043634.1	62.70	95.00	28.96	1.00	0.30	1,933.96	0.91	2,462.40	41.04	12.51	1,234.00	940.93	7.10E+01	8.88E-01	4.88E+00	6.10E-02	6.27E-01	7.84E-03	6.27E-01	7.84E-03	6.27E-01	7.84E-03	3.49E-02	4.36E-04
EGEN	RP1-EPS-GEN01	EGRP1_01	506651.54	5043269.7	62.70	42.00	12.80	1.00	0.30	5,514.40	2.60	7,021.15	117.02	35.67	963.00	790.37	3.88E+01	4.85E-01	6.94E+00	8.68E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	3.46E-02	4.32E-04
EGEN	RP1-GEN-2	EGRP1_02	506651.54	5043267.2	62.70	42.00	12.80	1.00	0.30	5,514.40	2.60	7,021.15	117.02	35.67	963.00	790.37	3.70E+01	4.63E-01	1.57E+01	1.96E-01	4.00E-01	5.00E-03	4.00E-01	5.00E-03	4.00E-01	5.00E-03	3.46E-02	4.32E-04
EGEN	EPS-GEN01	EGDD_01	506569.98	5043352.3	62.70	115.00	35.05	0.67	0.20	4,325.62	2.04	12,391.98	206.53	62.95	814.10	707.65	3.58E+01	4.47E-01	5.31E+00	6.64E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	3.50E-02	4.38E-04
EGEN	EPS-GEN02	EGDD_02	506569.98	5043352.3	62.70	115.00	35.05	0.67	0.20	4,325.62	2.04	12,391.98	206.53	62.95	814.10	707.65	3.58E+01	4.47E-01	5.31E+00	6.64E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	3.50E-02	4.38E-04
EGEN	EPS-GEN03	EGDD_03	506569.98	5043352.3	62.70	115.00	35.05	0.67	0.20	4,325.62	2.04	12,391.98	206.53	62.95	814.10	707.65	3.58E+01	4.47E-01	5.31E+00	6.64E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	3.50E-02	4.38E-04
EGEN	EPS-GEN04	EGDD_04	506569.98	5043352.3	62.70	115.00	35.05	0.67	0.20	4,325.62	2.04	12,391.98	206.53	62.95	814.10	707.65	3.58E+01	4.47E-01	5.31E+00	6.64E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	3.50E-02	4.38E-04
EGEN	EPS-GEN05	EGDD_05	506569.98	5043352.3	62.70	115.00	35.05	0.67	0.20	4,325.62	2.04	12,391.98	206.53	62.95	814.10	707.65	3.58E+01	4.47E-01	5.31E+00	6.64E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	3.50E-02	4.38E-04
EGEN	EPS-GEN06	EGDD_06	506569.98	5043352.3	62.70	115.00	35.05	0.67	0.20	4,325.62	2.04	12,391.98	206.53	62.95	814.10	707.65	3.58E+01	4.47E-01	5.31E+00	6.64E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	3.50E-02	4.38E-04
EGEN	D1D-GEN-7	EGDD_07	506569.98	5043352.3	62.70	115.00	35.05	0.67	0.20	4,325.62	2.04	12,391.98	206.53	62.95	814.10	707.65	3.58E+01	4.47E-01	5.31E+00	6.64E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	3.50E-02	4.38E-04
EGEN	RS4-ELEC-EG-4-1	EGRS4_01	506001.58	5043791.3	62.70	18.00	5.49	0.42	0.13	292.99	0.14	2,148.78	35.81	10.92	1,234.00	940.93	8.88E+00	1.11E-01	2.56E+00	3.20E-02	7.51E-01	9.39E-03	7.51E-01	9.39E-03	7.51E-01	9.39E-03	5.45E-03	6.81E-05
EGEN	RS6-ELEC-EG-6-1	EGRS6_01	505987.76	5043560.5	62.70	18.00	5.49	0.42	0.13	292.99	0.14	2,148.78	35.81	10.92	1,234.00	940.93	8.88E+00	1.11E-01	2.56E+00	3.20E-02	7.51E-01	9.39E-03	7.51E-01	9.39E-03	7.51E-01	9.39E-03	5.45E-03	6.81E-05
EGEN	RS6-GEN-2	EGRS6_02	505987.77	5043558.8	62.70	18.00	5.49	0.67	0.20	4,325.62	2.04	12,391.98	206.53	62.95	814.10	707.65	3.58E+01	4.47E-01	5.31E+00	6.64E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	1.10E+00	1.38E-02	3.50E-02	4.38E-04
EGEN	D1X-GEN-1A	EGE1_01	506155.26	5043820.5	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-1B	EGE1_02	506153.79	5043822.3	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-1C	EGE1_03	506160	5043825.7	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04

Intel Corporation - Stack Information

Equipment Type	Equipment ID	Stack ID	UTM Easting	UTM Northing	Elevation (m)	Stack Height		Stack Diameter		Adjusted Stack Flow Rate		Stack Velocity			Stack Temperature		NOx		CO		PM		PM_{10}		$PM_{2.5}$		SO_2	
						(ft)	(m)	(ft)	(m)	(ft^3/min)	(m^3/s)	(ft/min)	(ft/s)	(m/s)	(˚F)	(K)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
EGEN	D1X-GEN-2A	EGE1_04	506158.66	5043827.6	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-2B	EGE1_05	506164.13	5043829.9	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-2C	EGE1_06	506162.5	5043832	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-3A	EGE1_07	506168.77	5043834.3	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-3B	EGE1_08	506185.64	5043852.6	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-3C	EGE1_09	506183.92	5043854	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-4A	EGE1_10	506189.85	5043857.4	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-4B	EGE1_11	506188.4	5043858.8	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-5C	EGE1_12	506194.66	5043862	62.70	51.00	15.54	2.00	0.61	22,779.74	10.75	7,251.02	120.85	36.84	829.00	715.93	4.78E+01	5.98E-01	1.12E+00	1.40E-02	9.61E-02	1.20E-03	9.61E-02	1.20E-03	9.61E-02	1.20E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-4C	EGE1_13	506192.64	5043863.1	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	5.61E+00	7.01E-02	6.41E-01	8.01E-03	6.41E-01	8.01E-03	6.41E-01	8.01E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-5A	EGE1_14	506199.06	5043866.4	62.70	51.00	15.54	2.00	0.61	22,779.74	10.75	7,251.02	120.85	36.84	829.00	715.93	4.88E+01	6.10E-01	3.76E-01	4.70E-03	1.01E-01	1.26E-03	1.01E-01	1.26E-03	1.01E-01	1.26E-03	5.18E-02	6.47E-04
EGEN	D1X-GEN-5B	EGE1_15	506197.76	5043867.4	62.70	51.00	15.54	2.00	0.61	22,779.74	10.75	7,251.02	120.85	36.84	829.00	715.93	4.88E+01	6.10E-01	3.76E-01	4.70E-03	1.51E-02	1.89E-04	1.51E-02	1.89E-04	1.51E-02	1.89E-04	5.18E-02	6.47E-04
EGEN	D1X-GEN-6A	EGE1_16	506202.67	5043870.6	62.70	51.00	15.54	2.00	0.61	22,779.74	10.75	7,251.02	120.85	36.84	829.00	715.93	4.88E+01	6.10E-01	3.76E-01	4.70E-03	1.51E-02	1.89E-04	1.51E-02	1.89E-04	1.51E-02	1.89E-04	5.18E-02	6.47E-04
EGEN	D1X-GEN-6B	EGE1_17	506201.1	5043871.7	62.70	51.00	15.54	2.00	0.61	22,779.74	10.75	7,251.02	120.85	36.84	829.00	715.93	4.88E+01	6.10E-01	3.76E-01	4.70E-03	1.51E-02	1.89E-04	1.51E-02	1.89E-04	1.51E-02	1.89E-04	5.18E-02	6.47E-04
EGEN	D1X-GEN-6C	EGE1_18	506208.48	5043875.8	62.70	51.00	15.54	2.00	0.61	22,779.74	10.75	7,251.02	120.85	36.84	829.00	715.93	4.88E+01	6.10E-01	3.76E-01	4.70E-03	1.51E-02	1.89E-04	1.51E-02	1.89E-04	1.51E-02	1.89E-04	5.18E-02	6.47E-04
EGEN	D1X-GEN-7A	EGE1_19	506206.28	5043877.6	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	1.12E+00	1.40E-02	9.61E-02	1.20E-03	9.61E-02	1.20E-03	9.61E-02	1.20E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-7B	EGE1_20	506210.87	5043879	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	1.12E+00	1.40E-02	9.61E-02	1.20E-03	9.61E-02	1.20E-03	9.61E-02	1.20E-03	4.41E-02	5.51E-04
EGEN	D1X-GEN-7C	EGE1_21	506208.89	5043880.9	62.70	51.00	15.54	1.67	0.51	7,810.35	3.69	3,580.00	59.67	18.19	829.00	715.93	4.78E+01	5.98E-01	1.12E+00	1.40E-02	9.61E-02	1.20E-03	9.61E-02	1.20E-03	9.61E-02	1.20E-03	4.41E-02	5.51E-04
EGEN	D1X2-GEN-1A	EGC5_01	505880.6	5043410.9	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-1B	EGC5_02	505880.6	5043416.1	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-1C	EGC5_03	505880.6	5043424.3	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-2A	EGC5_04	505880.6	5043432.3	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-2B	EGC5_05	505880.6	5043445.1	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-2C	EGC5_06	505880.6	5043451.2	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-3A	EGC5_07	505880.6	5043456.9	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-3B	EGC5_08	505880.6	5043479.5	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-3C	EGC5_09	505880.6	5043485.6	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-4A	EGC5_10	505880.6	5043491.7	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-4B	EGC5_11	505880.6	5043497.8	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-4C	EGC5_12	505880.6	5043515.2	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-5A	EGC5_13	505880.6	5043521.3	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-5B	EGC5_14	505880.6	5043527.4	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-5C	EGC5_15	505880.6	5043532.8	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-6A	EGC5_16	505880.6	5043527.4	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-6B	EGC5_17	505880.6	5043521.3	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-6C	EGC5_18	505880.6	5043515.2	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-7A	EGC5_19	505880.6	5043497.8	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-7B	EGC5_20	505880.6	5043491.7	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1X2-GEN-7C	EGC5_21	505880.6	5043485.6	62.70	85.04	25.92	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	F20-EPS-1	EGDB_01	506725.14	5043877.9	62.70	35.00	10.67	0.83	0.25	4,143.92	1.96	7,597.74	126.63	38.60	1,257.00	953.71	4.88E+01	6.10E-01	3.76E-01	4.70E-03	1.51E-02	1.89E-04	1.51E-02	1.89E-04	1.51E-02	1.89E-04	5.18E-02	6.47E-04
EGEN	F20-EPS-2	EGDB_02	506725.14	5043875.1	62.70	35.00	10.67	0.83	0.25	4,143.92	1.96	7,597.74	126.63	38.60	1,257.00	953.71	4.88E+01	6.10E-01	3.76E-01	4.70E-03	1.51E-02	1.89E-04	1.51E-02	1.89E-04	1.51E-02	1.89E-04	5.18E-02	6.47E-04
EGEN	F20-CPS-1	EGDB_03	506719.91	5043809.6	62.70	45.00	13.72	0.83	0.25	4,143.92	1.96	7,597.74	126.63	38.60	1,257.00	953.71	4.83E+01	6.03E-01	1.11E+01	1.38E-01	5.05E-01	6.31E-03	5.05E-01	6.31E-03	5.05E-01	6.31E-03	2.44E-02	3.05E-04
EGEN	F15-EG01	EGF15_01	508927.12	5037851.6	69.40	64.50	19.66	1.00	0.30	3,628.43	1.71	4,619.86	77.00	23.47	944.00	779.82	2.62E+01	3.27E-01	1.11E+01	1.38E-01	5.05E-01	6.31E-03	5.05E-01	6.31E-03	5.05E-01	6.31E-03	2.44E-02	3.05E-04
EGEN	F15-EG02	EGF15_02	508928.16	5037851.1	69.40	64.50	19.66	1.00	0.30	4,652.41	2.20	5,923.64	98.73	30.09	923.00	768.15	2.62E+01	3.27E-01	1.11E+01	1.38E-01	5.05E-01	6.31E-03	5.05E-01	6.31E-03	5.05E-01	6.31E-03	2.44E-02	3.05E-04
EGEN	F15-EG03	EGF15_03	508929.2	5037850.5	69.40	64.50	19.66	1.00	0.30	4,652.41	2.20	5,923.64	98.73	30.09	923.00	768.15	2.62E+01	3.27E-01	1.11E+01	1.38E-01	5.05E-01	6.31E-03	5.05E-01	6.31E-03	5.05E-01	6.31E-03	2.44E-02	3.05E-04
EGEN	F15.5-EG01	EGF5_01	509104.57	5037792.7	69.40	67.00	20.42	1.00	0.30	4,652.41	2.20	5,923.64	98.73	30.09	923.00	768.15	5.49E+01	6.87E-01	1.38E+01	1.73E-01	5.80E-01	7.25E-03	5.80E-01	7.25E-03	5.80E-01	7.25E-03	2.61E-02	3.27E-04
EGEN	F15.5-EG02	EGF5_02	509109.61	5037797.5	69.40	67.00	20.42	1.00	0.30	4,652.41	2.20	5,923.64	98.73	30.09	923.00	768.15	7.02E+01	8.78E-01	1.02E+01	1.27E-01	5.40E-01	6.75E-03	5.40E-01	6.75E-03	5.40E-01	6.75E-03	2.62E-02	3.27E-04
EGEN	N2-GEN-1A	EGN2_01	506274.7	5043906.6	62.70	20.00	6.10	1.17	0.36	7,749.99	3.66	7,249.66	120.83	36.83	1,034.00	829.82	7.85E+00	9.81E-02	6.64E-01	8.30E-03	4.73E-02	5.91E-04	4.73E-02	5.91E-04	4.73E-02	5.91E-04	7.32E-03	9.15E-05
EGEN	H2-GEN-1	EGH2_01	506437.39	5044073.8	62.70	26.02	7.93	0.73	0.22	2,260.10	1.07	5,399.97	90.00	27.43	926.60	770.15	2.89E+00	3.62E-02	6.85E-01	8.57E-03	2.51E-02	3.14E-04	2.51E-02	3.14E-04	2.51E-02	3.14E-04	5.62E-03	7.02E-05
EGEN	IWW-GEN-2	EGIW_01	506152.98	5044046.4	62.70	21.98	6.70	0.73	0.22	7,565.45	3.57	18,075.86	301.26	91.83	836.80	720.26	4.88E+01	6.10E-01	3.76E-01	4.70E-03	1.51E-02	1.89E-04	1.51E-02	1.89E-04	1.51E-02	1.89E-04	5.18E-02	6.47E-04
EGEN	IWW-GEN-1	EGIW_02	506161.38	5044046.5	62.70	19.39	5.91	0.73	0.22	7,565.45	3.57	18,075.86	301.26	91.83	836.80	720.26	4.88E+01	6.10E-01	3.76E-01	4.70E-03	1.51E-02	1.89E-04	1.51E-02	1.89E-04	1.51E-02	1.89E-04	5.18E-02	6.47E-04
EGEN	IWW-PS-1	EGIW_03	505881.34	5043340.4	62.70	21.98	6.70	0.73	0.22	7,565.45	3.57	18,075.86	301.26	91.83	836.80	720.26	7.16E+00	8.95E-02	1.33E-01	1.66E-03	2.50E-02	3.12E-04	2.50E-02	3.12E-04	2.50E-02	3.12E-04	9.16E-03	1.15E-04
EGEN	MAX-EGEN	EGRS8_01	507424.81	5043383.9	62.70	8.00	2.44	0.33	0.10	776.79	0.37	9,082.11	151.37	46.14	1,234.00	940.93	7.16E+00	8.95E-02	2.24E+00	2.80E-02	8.42E-02	1.05E-03	8.42E-02	1.05E-03	8.42E-02	1.05E-03	4.07E-03	5.08E-05
EGEN	D1A-GEN-1	EGDA_01	506754.32	5043977	62.70	76.41	23.29	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1A-GEN-2	EGDA_02	506757.32	5043977	62.70	76.41	23.29	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1A-GEN-3	EGDA_03	506754.32	5043970	62.70	76.41	23.29	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1A-GEN-4	EGDA_04	506757.32	5043970	62.70	76.41	23.29	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1A-GEN-5	EGDA_05	506754.32	5043963	62.70	76.41	23.29	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1A-GEN-6	EGDA_06	506757.32	5043963	62.70	76.41	23.29	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1A-GEN-7	EGDA_07	506754.32	5043956	62.70	76.41	23.29	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
EGEN	D1A-GEN-8	EGDA_08	506757.32	5043956	62.70	76.41	23.29	1.67	0.51	22,778.73	10.75	10,441.00	174.02	53.04	830.00	716.48	6.80E+01	8.49E-01	8.87E-01	1.11E-02	8.86E-02	1.11E-03	8.86E-02	1.11E-03	8.86E-02	1.11E-03	6.10E-02	7.63E-04
LIME		LIME	506321.13	5043487	62.70												0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-01	4.44E-01	1.01E-01	4.44E-01	1.01E-01	4.44E-01	0.00E+00	0.00E+00

Equipment Type	Building	Equipment ID	Stack ID	UTM Easting	UTM Northing	Elevation (m)	Stack Height (m)	Stack Diameter (m)	Stack Velocity (m/s)	Stack Temperature (K)	NOx Hourly Emissions (g/s)	NOx Annual Emissions (g/s)	CO Hourly Emissions (g/s)	CO Hourly 8-HR Emissions (g/s)	PM10 Hourly Emissions (g/s)	PM10 Annual Emissions (g/s)	PM25 Hourly Emissions (g/s)	PM25 Annual Emissions (g/s)	SO2 Hourly Emissions (g/s)	SO2 Annual Emissions (g/s)
Boiler	CUB1	F20-BLR115-1-200	BOC1_01	506743.17	5043806.7	62.70	30.18	0.81	5.70	372.04	4.28824E-02	1.28647E-02	1.45066E-01	1.45066E-01	2.02341E-03	6.07024E-04	1.67321E-03	5.01962E-04	1.01171E-02	3.03512E-03
Boiler	CUB1	F20-BLR115-2-200	BOC1_02	506745.67	5043806.7	62.70	30.18	0.81	5.70	372.04	4.28824E-02	1.28647E-02	1.45066E-01	1.45066E-01	2.02341E-03	6.07024E-04	1.67321E-03	5.01962E-04	1.01171E-02	3.03512E-03
Boiler	CUB1	F20-BLR115-3-200	BOC1_03	506748.17	5043806.7	62.70	30.18	0.81	5.70	372.04	4.28824E-02	1.28647E-02	1.45066E-01	1.45066E-01	2.02341E-03	6.07024E-04	1.67321E-03	5.01962E-04	1.01171E-02	3.03512E-03
Boiler	CUB1	F20-BLR115-4-200	BOC1_04	506750.67	5043806.7	62.70	30.18	0.61	10.09	372.04	4.16776E-02	1.25033E-02	1.40990E-01	1.40990E-01	1.96656E-03	5.89969E-04	1.62620E-03	4.87859E-04	9.83282E-03	2.94985E-03
Boiler	CUB1	F20-BLR115-5-200	BOC1_05	506753.17	5043806.7	62.70	30.18	0.61	10.09	449.82	4.00140E-02	1.20042E-02	1.35363E-01	1.35363E-01	1.88807E-03	5.66420E-04	1.56129E-03	4.68386E-04	9.44034E-03	2.83210E-03
Boiler	RA1	RA1-MECH-B01	BOR1_01	506843.5	5043630.5	62.70	28.96	0.20	3.26	372.04	8.89412E-03	2.66824E-03	7.47106E-03	7.47106E-03	4.62494E-05	1.38748E-05	3.82447E-05	1.14734E-05	2.31247E-04	6.93741E-05
Boiler	RA1	RA1-MECH-B02	BOR1_02	506804.48	5043762.9	62.70	28.96	0.15	5.79	372.04	1.23529E-02	3.70588E-03	1.03765E-02	1.03765E-02	6.42353E-05	1.92706E-05	5.31176E-05	1.59353E-05	3.21176E-04	9.63529E-05
Boiler	CUB2	CUB2-BLR115-1-210	BOC2_01	506579.98	5043557.1	62.70	13.72	0.81	2.33	372.04	4.37155E-02	1.31146E-02	1.47884E-01	1.47884E-01	2.06272E-03	6.18817E-04	1.70571E-03	5.11714E-04	1.03136E-02	3.09409E-03
Boiler	CUB2	CUB2-BLR115-2-210	BOC2_02	506579.22	5043582.7	62.70	13.72	0.81	2.33	372.04	4.37155E-02	1.31146E-02	1.47884E-01	1.47884E-01	2.06272E-03	6.18817E-04	1.70571E-03	5.11714E-04	1.03136E-02	3.09409E-03
Boiler	CUB2	CUB2-BLR115-3-210	BOC2_03	506574.1	5043556.8	62.70	13.72	0.81	2.33	372.04	4.37155E-02	1.31146E-02	1.47884E-01	1.47884E-01	2.06272E-03	6.18817E-04	1.70571E-03	5.11714E-04	1.03136E-02	3.09409E-03
Boiler	CUB2	CUB2-BLR115-4-210	BOC2_04	506575	5043575.9	62.70	13.72	0.81	2.33	372.04	4.44595E-02	1.33378E-02	1.50401E-01	1.50401E-01	2.09783E-03	6.29349E-04	1.73474E-03	5.20423E-04	1.04891E-02	3.14674E-03
Boiler	CUB2	CUB2-BLR115-5-210	BOC2_05	506536.08	5043603.2	62.70	13.72	0.61	10.09	372.04	4.00126E-02	1.20038E-02	1.35358E-01	1.35358E-01	1.88800E-03	5.66401E-04	1.56123E-03	4.68370E-04	9.44002E-03	2.83201E-03
Boiler	CUB2	CUB2-BLR115-6-210	BOC2_06	506556.51	5043600.4	62.70	13.72	0.61	10.09	372.04	4.16816E-02	1.25045E-02	1.41004E-01	1.41004E-01	1.96676E-03	5.90027E-04	1.62636E-03	4.87907E-04	9.83378E-03	2.95013E-03
Boiler	RA4	RA4-BLR152-2-30	BOR4_01	506497.72	5043102.2	62.70	36.90	0.20	3.94	449.82	2.46935E-02	7.40806E-03	2.07426E-02	2.07426E-02	1.28406E-04	3.85219E-05	1.06182E-04	3.18547E-05	6.42032E-04	1.92610E-04
Boiler	RA4	RA4-BLR152-1-30	BOR4_02	506500.12	5043103	62.70	36.90	0.20	3.94	449.82	2.46935E-02	7.40806E-03	2.07426E-02	2.07426E-02	1.28406E-04	3.85219E-05	1.06182E-04	3.18547E-05	6.42032E-04	1.92610E-04
Boiler	RA4	RA4-BLR117-2-30	BOR4_03	506524.09	5043114.7	62.70	40.23	0.30	11.46	449.82	2.46935E-02	7.40806E-03	2.07426E-02	2.07426E-02	1.28406E-04	3.85219E-05	1.06182E-04	3.18547E-05	6.42032E-04	1.92610E-04
Boiler	RA4	RA4-BLR117-1-30	BOR4_04	506526.12	5043116.1	62.70	40.23	0.30	11.46	449.82	2.46935E-02	7.40806E-03	2.07426E-02	2.07426E-02	1.28406E-04	3.85219E-05	1.06182E-04	3.18547E-05	6.42032E-04	1.92610E-04
Boiler	RA4	RA4-BLR117-3-30	BOR4_05	506460.1	5043063.7	62.70	40.23	0.61	10.66	449.82	4.00140E-02	1.20042E-02	1.35363E-01	1.35363E-01	1.88807E-03	5.66420E-04	1.56129E-03	4.68386E-04	9.44034E-03	2.83210E-03
Boiler	RA4	RA4-BLR117-4-30	BOR4_06	506460.94	5043063.7	62.70	40.23	0.61	10.66	449.82	4.00140E-02	1.20042E-02	1.35363E-01	1.35363E-01	1.88807E-03	5.66420E-04	1.56129E-03	4.68386E-04	9.44034E-03	2.83210E-03
Boiler	CUB3	BLR-115-1-210	BOC3_01	506360.1	5043421.3	62.70	15.54	0.46	2.50	422.04	6.17521E-02	1.85256E-02	3.76020E-02	3.76020E-02	5.24481E-04	1.57344E-04	4.33706E-04	1.30112E-04	2.62241E-03	7.86722E-04
Boiler	CUB3	BLR-115-2-210	BOC3_02	506360.1	5043423.2	62.70	15.54	0.81	3.17	422.04	4.00140E-02	1.20042E-02	1.35363E-01	1.35363E-01	1.88807E-03	5.66420E-04	1.56129E-03	4.68386E-04	9.44034E-03	2.83210E-03
Boiler	CUB3	BLR-115-3-210	BOC3_03	506360.3	5043432.1	62.70	15.54	0.81	3.17	422.04	4.00140E-02	1.20042E-02	1.35363E-01	1.35363E-01	1.88807E-03	5.66420E-04	1.56129E-03	4.68386E-04	9.44034E-03	2.83210E-03
Boiler	CUB3	BLR-115-4-210	BOC3_04	506359.8	5043418.4	62.70	15.54	0.81	1.39	422.04	4.44602E-02	1.33380E-02	1.50403E-01	1.50403E-01	2.09786E-03	6.29358E-04	1.73477E-03	5.20431E-04	1.04893E-02	3.14679E-03
Boiler	CUB3	BLR-115-5-210	BOC3_05	506360.1	5043419.9	62.70	15.54	0.61	3.56	422.04	6.48363E-02	1.94509E-02	6.58000E-02	6.58000E-02	9.17794E-04	2.75338E-04	7.58945E-04	2.27683E-04	4.58897E-03	1.37669E-03
Boiler	CUB3	BLR-115-6-210	BOC3_06	506334.9	5043505.4	62.70	15.54	0.61	3.56	422.04	4.00126E-02	1.20038E-02	1.35358E-01	1.35358E-01	1.88800E-03	5.66401E-04	1.56123E-03	4.68370E-04	9.44002E-03	2.83201E-03
Boiler	RP1	RP1-BLR115-1-210	BORP1_01	506762	5043315.3	62.70	12.80	0.51	3.03	418.71	1.89213E-02	5.67640E-03	6.40086E-02	6.40086E-02	8.92806E-04	2.67842E-04	7.38282E-04	2.21485E-04	4.46403E-03	1.33921E-03
Boiler	RP1	RP1-BLR115-2-210	BORP1_02	506762	5043311.1	62.70	12.80	0.51	3.03	418.71	1.66724E-02	5.00172E-03	5.64007E-02	5.64007E-02	7.86690E-04	2.36007E-04	6.50532E-04	1.95160E-04	3.93345E-03	1.18003E-03
Boiler	RP1	RP1-BLR115-3-210	BORP1_03	506762	5043307	62.70	12.80	0.51	3.03	418.71	1.66724E-02	5.00172E-03	5.64007E-02	5.64007E-02	7.86690E-04	2.36007E-04	6.50532E-04	1.95160E-04	3.93345E-03	1.18003E-03
Boiler	RP1	RP1-BLR115-4-210	BORP1_04	506762	5043302.8	62.70	12.80	0.51	1.06	449.82	1.59482E-02	4.78445E-03	5.39507E-02	5.39507E-02	7.52516E-04	2.25755E-04	6.22273E-04	1.86682E-04	3.76258E-03	1.12877E-03
Boiler	CUB4	CUB4-BLR115-1-10	BOC4_01	506418.13	5043522	62.70	26.37	0.51	10.82	449.82	1.94495E-02	5.83486E-03	6.57954E-02	6.57954E-02	9.17730E-04	2.75319E-04	7.58892E-04	2.27668E-04	4.58865E-03	1.37659E-03
Boiler	CUB4	CUB4-BLR115-2-10	BOC4_02	506418.4	5043527.6	62.70	26.37	0.61	13.79	449.82	4.16776E-02	1.25033E-02	1.40990E-01	1.40990E-01	1.96656E-03	5.89969E-04	1.62620E-03	4.87859E-04	9.83282E-03	2.94985E-03
Boiler	CUB4	CUB4-BLR115-3-10	BOC4_03	506429.87	5043517.1	62.70	26.37	0.61	13.79	449.82	4.16776E-02	1.25033E-02	1.40990E-01	1.40990E-01	1.96656E-03	5.89969E-04	1.62620E-03	4.87859E-04	9.83282E-03	2.94985E-03
Boiler	CUB4	CUB4-BLR115-4-10	BOC4_04	506429.87	5043522.4	62.70	26.37	0.61	13.79	449.82	4.16776E-02	1.25033E-02	1.40990E-01	1.40990E-01	1.96656E-03	5.89969E-04	1.62620E-03	4.87859E-04	9.83282E-03	2.94985E-03
Boiler	CUB4	CUB4-BLR115-5-10	BOC4_05	506429.87	5043527.8	62.70	26.37	0.61	13.79	449.82	4.00140E-02	1.20042E-02	1.35363E-01	1.35363E-01	1.88807E-03	5.66420E-04	1.56129E-03	4.68386E-04	9.44034E-03	2.83210E-03
Boiler	CUB4	CUB4-BLR115-6-10	BOC4_06	506417.92	5043516.1	62.70	26.37	0.61	13.79	449.82	4.00140E-02	1.20042E-02	1.35363E-01	1.35363E-01	1.88807E-03	5.66420E-04	1.56129E-03	4.68386E-04	9.44034E-03	2.83210E-03
Boiler	CUB4x	CUB4-BLR115-7-10	BOC4_07	506437.44	5043483.6	62.70	26.37	0.61	13.79	449.82	4.00140E-02	1.20042E-02	1.35363E-01	1.35363E-01	1.88807E-03	5.66420E-04	1.56129E-03	4.68386E-04	9.44034E-03	2.83210E-03
Boiler	CUB5	RAC5-BLR115-1	BOC5_01	505876.9	5043551.4	62.70	21.34	0.61	13.79	449.82	4.00099E-02	1.20030E-02	1.35349E-01	1.35349E-01	1.88788E-03	5.66363E-04	1.56113E-03	4.68338E-04	9.43938E-03	2.83181E-03
Boiler	CUB5	RAC5-BLR115-2	BOC5_02	505874.6	5043551.4	62.70	21.34	0.61	13.79	449.82	4.00099E-02	1.20030E-02	1.35349E-01	1.35349E-01	1.88788E-03	5.66363E-04	1.56113E-03	4.68338E-04	9.43938E-03	2.83181E-03
Boiler	CUB5	RAC5-BLR115-3	BOC5_03	505872.1	5043551.4	62.70	21.34	0.61	13.79	449.82	4.00099E-02	1.20030E-02	1.35349E-01	1.35349E-01	1.88788E-03	5.66363E-04	1.56113E-03	4.68338E-04	9.43938E-03	2.83181E-03
Boiler	CUB5	RAC5-BLR115-4	BOC5_04	505869.5	5043551.4	62.70	21.34	0.61	13.79	449.82	4.00099E-02	1.20030E-02	1.35349E-01	1.35349E-01	1.88788E-03	5.66363E-04	1.56113E-03	4.68338E-04	9.43938E-03	2.83181E-03
Boiler	RA2	RA2-BLR115-1-300	BOR2_01	506833.31	5043555.2	62.70	28.96	0.36	1.03	359.82	5.71765E-03	1.71529E-03	1.93421E-02	1.93421E-02	2.69788E-04	8.09365E-05	2.23094E-04	6.69282E-05	1.34894E-03	4.04682E-04
Boiler	RA2	RA2-BLR115-2-300	BOR2_02	506833.31	5043558.3	62.70	28.96	0.36	1.03	359.82	5.71765E-03	1.71529E-03	1.93421E-02	1.93421E-02	2.69788E-04	8.09365E-05	2.23094E-04	6.69282E-05	1.34894E-03	4.04682E-04
Boiler	RS4	RS4-BLR115-1	BORS4_01	505917.6	5043854.6	62.70	16.46	0.30	11.46	449.82	9.07563E-03	2.72269E-03	9.21053E-03	9.21053E-03	1.28471E-04	3.85412E-05	1.06235E-04	3.18706E-05	6.42353E-04	1.92706E-04
Boiler	RS4	RS4-BLR115-2	BORS4_02	505917.6	5043851.9	62.70	16.46	0.30	11.46	449.82	9.07563E-03	2.72269E-03	9.21053E-03	9.21053E-03	1.28471E-04	3.85412E-05	1.06235E-04	3.18706E-05	6.42353E-04	1.92706E-04
Boiler	RS4	RS4-BLR115-3	BORS4_03	505917.6	5043849.4	62.70	16.46	0.20	3.94	449.82	2.26891E-03	6.80672E-04	2.30263E-03	2.30263E-03	3.21176E-05	9.63529E-06	2.65588E-05	7.96765E-06	1.60588E-04	4.81765E-05
Boiler	RS6	RS6-BLR115-1	BORS6_01	505906.8	5043587.5	62.70	16.46	0.30	11.46	449.82	9.07563E-03	2.72269E-03	9.21053E-03	9.21053E-03	1.28471E-04	3.85412E-05	1.06235E-04	3.18706E-05	6.42353E-04	1.92706E-04
Boiler	RS6	RS6-BLR115-2	BORS6_02	505906.8	5043586.1	62.70	16.46	0.30	11.46	449.82	9.07563E-03	2.72269E-03	9.21053E-03	9.21053E-03	1.28471E-04	3.85412E-05	1.06235E-04	3.18706E-05	6.42353E-04	1.92706E-04
Boiler	RS6	RS6-BLR115-3	BORS6_03	505906.8	5043584.7	62.70	16.46	0.20	3.94	449.82	2.26891E-03	6.80672E-04	2.30263E-03	2.30263E-03	3.21176E-05	9.63529E-06	2.65588E-05	7.96765E-06	1.60588E-04	4.81765E-05
Boiler	F15	F15-BLR28-1-1	BOF15_01	508932.88	5037867.8	69.40	20.12	0.76	4.92	324.26	2.84821E-02	8.54462E-03	9.63513E-02	9.63513E-02	1.34393E-03	4.03179E-04	1.11133E-03	3.33398E-04	6.71965E-03	2.01590E-03
Boiler	F15	F15-BLR28-1-2	BOF15_02	508934.61	5037866.7	69.40	20.12	0.76	4.92	324.26	2.84821E-02	8.54462E-03	9.63513E-02	9.63513E-02	1.34393E-03	4.03179E-04	1.11133E-03	3.33398E-04	6.71965E-03	2.01590E-03
Boiler	F15	F15-BLR28-1-3	BOF15_03	508933.22	5037866.3	69.40	14.33	0.76	4.92	324.26	2.84821E-02	8.54462E-03	9.63513E-02	9.63513E-02	1.34393E-03	4.03179E-04	1.11133E-03	3.33398E-04	6.71965E-03	2.01590E-03
Boiler	F15	F15-HW35-3	BOF15_04	509007.08	5037758.4	69.40	23.02	0.15	5.05	324.26	7.41176E-03	2.22353E-03	6.22588E-03	6.22588E-03	3.85412E-05	1.15624E-05	3.18706E-05	9.56118E-06	1.92706E-04	5.78118E-05
Boiler	F15	F15-HW35-4	BOF15_05	508958.08	5037797.2	69.40	23.01	0.15	4.05	338.71	7.41176E-03	2.22353E-03	6.22588E-03	6.22588E-03	3.85412E-05	1.15624E-05	3.18706E-05	9.56118E-06	1.92706E-04	5.78118E-05
Boiler	CUB5	RAC5-BLR115-5	BOC5_05	505857.7	5043551.4	62.70	21.34	0.61	10.66	449.82	4.00099E-02	1.20030E-02	1.35349E-01	1.35349E-01	1.88788E-03	5.66363E-04	1.56113E-03	4.68338E-04	9.43938E-03	2.83181E-03
Boiler	CUB5	RAC5-BLR115-6	BOC5_06	505855.4	5043551.4	62.70	21.34	0.61	10.66	449.82	4.00099E-02	1.20030E-02	1.35349E-01	1.35349E-01	1.88788E-03	5.66363E-04	1.56113E-03	4.68338E-04	9.43938E-03	2.83181E-03
Boiler	CUB5	RAC5-BLR115-7	BOC5_07	505853.3	5043551.4	62.70	21.34	0.61	10.66	449.82	4.00099E-02	1.20030E-02	1.35349E-01	1.35349E-01	1.88788E-03	5.66363E-04	1.56113E-03	4.68338E-04	9.43938E-03	2.83181E-03
Boiler	CUB5	RAC5-BLR115-8	BOC5_08	505851.5	5043551.4	62.70	21.34	0.61	10.66	449.82	4.00099E-02	1.20030E-02	1.35349E-01	1.35349E-01	1.88788E-03	5.66363E-04	1.56113E-03	4.68338E-04	9.43938E-03	2.83181E-03
Boiler	N2 Plant	N2-BLR117-1A-30	BON2_02	506247.36	5043924.4	62.70	7.01	0.70	3.17	422.04	6.20773E-02	1.86232E-02	2.10000E-01	2.10000E-01	2.92913E-03	8.78739E-04	2.42216E-03	7.26649E-04	1.46456E-02	4.39369E-03
Boiler	N2 Plant	N2-BLR117-1B-30	BON2_03	506247.36	5043924.4	62.70	7.01	0.70	3.17	422.04	6.20773E-02	1.86232E-02	2.10000E-01	2.10000E-01	2.92913E-03	8.78739E-04	2.42216E-03	7.26649E-04	1.46456E-02	4.39369E-03
RCTO	D1B	D1B Combined Modeling Stack	TODB_M	506639.16	5043778.1	62.70	24.38	0.91	11.59	616.48	2.71765E-01	2.71765E-01	1.87518E-01	1.87518E-01	8.10812E-02	6.87000E-02	8.10812E-02	6.87000E-02	7.06588E-03	7.06588E-03
RCTO	D1C	D1C-VOC138-1-120	TODC_01	506742.79	5043430.5	62.70	36.58	0.30	21.99	616.48	2.47059E-02	2.47059E-02	1.90878E-01	1.90878E-01	6.80824E-03	5.77647E-03	6.80824E-03	5.77647E-03	6.42353E-04	6.42353E-04
RCTO	D1C	D1C-VOC138-2-120	TODC_02	506742.68	5043432.2	62.70	36.58	0.30	21.99	616.48	2.47059E-02	2.47059E-02	1.90878E-01	1.90878E-01	6.80824E-03	5.77647E-03	6.80824E-03	5.77647E-03	6.42353E-04	6.42353E-04
RCTO	D1C	D1C-VOC138-3-120	TODC_03	506744.57	5043432.3	62.70	36.58	0.30	21.99	616.48	2.47059E-02	2.47059E-02	1.90878E-01	1.90878E-01	6.80824E-03	5.77647E-03	6.80824E-03	5.77647E-03	6.42353E-04	6.42353E-04
RCTO	D1D	VOC-138-1-120	TODD_01	506467.03	5043403.9	62.70	27.13	0.46	9.77	616.48	2.47059E-02	2.47059E-02	1.41491E-01	1.41491E-01	1.83888E-02	1.54269E-02	1.83888E-02	1.54269E-02	6.42353E-04	6.42353E-04
RCTO	D1D	VOC-138-2-120	TODD_02	506467.03	5043403.9	62.70	27.13	0.46	9.77	616.48	2.47059E-02	2.47059E-02	1.41491E-01	1.41491E-01	1.83888E-02	1.54269E-02	1.83888E-02	1.54269E-02	6.42353E-04	6.42353E-04
RCTO	D1D	VOC-138-3-120	TODD_03	506467.03	5043403.9	62.70	27.13	0.46	9.77	616.48	2.47059E-02	2.47059E-02	1.41491E-01	1.41491E-01	1.83888E-02	1.54269E-02	1.83888E-02	1.54269E-02	6.42353E-04	6.42353E-04
RCTO	D1D	VOC-138-4-120	TODD_04	506467.03	5043403.9	62.70	27.13	0.46	9.77	616.48	2.47059E-02	2.47059E-02	1.41491E-01	1.41491E-01	1.83888E-02	1.54269E-02	1.83888E-02	1.54269E-02	6.42353E-04	6.42353E-04
RCTO	D1D	VOC-138-5-120	TODD_05	506467.03	5043403.9	62.70	27.13	0.91	11.59	616.48	9.88235E-02	9.88235E-02	6.81882E-02	6.81882E-02	2.02417E-02	1.72799E-02	2.02417E-02	1.72799E-02	2.56941E-03	2.56941E-03
RCTO	D1D	VOC-138-6-120	TODD_06	506467.03	5043403.9	62.70	27.13	0.91	11.59	616.48	9.88235E-02	9.88235E-02	6.81882E-02	6.81882E-02	2.02417E-02	1.72799E-02	2.02417E-02	1.72799E-02	2.56941E-03	2.56941E-03
RCTO	D1XM1	D1XM1-VOC138-1-20	TOM1_01	506337.39	5043349.8	62.70	36.58	0.61	10.35	616.48	4.32353E-02	4.32353E-02	2.98324E-02	2.98324E-02	3.46105E-03	3.06435E-03	3.46105E-03	3.06435E-03	1.12412E-03	1.12412E-03
RCTO	D1XM1	D1XM1-VOC138-2-20	TOM1_02	506330.48	5043347.1	62.70	36.58	0.61	10.35	616.48	4.32353E-02	4.32353E-02	2.98324E-02	2.98324E-02	3.46105E-03	3.06435E-03	3.46105E-03	3.06435E-03	1.12412E-03	1.12412E-03
RCTO	D1XM1	D1XM1-VOC138-3-20	TOM1_03	506323.67	5043344.1	62.70	36.58	0.61	10.35	616.48	4.32353E-02	4.32353E-02	2.98324E-02	2.98324E-02	3.46105E-03	3.06435E-03	3.46105E-03	3.06435E-03	1.12412E-03	1.12412E-03
RCTO	D1XM1	D1XM1-VOC138-4-20	TOM1_04	506317.28	5043340.9	62.70	36.58	0.61	10.35	616.48	4.32353E-02	4.32353E-02	2.98324E-02	2.98324E-02	3.46105E-03	3.06435E-03	3.46105E-03	3.06435E-03	1.12412E-03	1.12412E-03
RCTO	D1XM1	D1XM1-VOC138-5-20 (Anguil RCTO D1X-1)	TWM1_01	506247.98	5043260.6	62.70	36.58	0.91	9.76	616.48	9.88235E-02	9.88235E-02	6.81882E-02	6.81882E-02	2.02384E-02	1.70204E-02	2.02384E-02	1.70204E-02	2.56941E-03	2.56941E-03
RCTO	D1XM1	D1XM1-VOC138-6-20 (Anguil RCTO D1X-2)	TWM1_02	506255.54	5043261.9	62.70	36.58	0.91	9.76	616.48	9.88235E-02	9.88235E-02	6.81882E-02	6.81882E-02	5.37720E-02	4.52218E-02	5.37720E-02	4.52218E-02	2.56941E-03	2.56941E-03
RCTO	D1XM1	D1XM1-VOC138-7-20 (Anguil RCTO D1X-3)	TWM1_03	506262.23	5043264.7	62.70	36.58	0.91	9.76	616.48	9.88235E-02	9.88235E-02	6.81882E-02	6.81882E-02	5.37720E-02	4.52218E-02	5.37720E-02	4.52218E-02	2.56941E-03	2.56941E-03
RCTO	D1XM1	D1XM1-VOC138-8-20 (Anguil RCTO D1X-4)	TWM1_04	506261.15	5043267.8	62.70	36.58	0.91	9.76	616.48	9.88235E-02	9.88235E-02	6.81882E-02	6.81882E-02	2.02384E-02	1.70204E-02	2.02384E-02	1.70204E-02	2.56941E-03	2.56941E-03
RCTO	D1XM2	Anguil RCTO D1XM2-1	TIM2_06	506166.5	5043258	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
RCTO	D1XM2	Anguil RCTO D1XM2-2	TIM2_07	506173.37	5043260.9	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
RCTO	D1XM2	Anguil RCTO D1XM2-3	TIM2_08	506180.17	5043264.1	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.68039E-02	4.77483E-02	5.68039E-02	4.77483E-02	0.00000E+00	0.00000E+00
RCTO	D1XM2	Anguil RCTO D1XM2-4	TIM2_09	506186.76	5043267	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
RCTO	D1XM2	Anguil RCTO D1XM2-5	TIM2_01	506160.52	5043255.2	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
RCTO	D1XM3	D1XM3-VOC138-1-20	TIM3_01	506014.27	5043196.1	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.68039E-02	4.77483E-02	5.68039E-02	4.77483E-02	0.00000E+00	0.00000E+00
RCTO	D1XM3	D1XM3-VOC138-2-20	TIM3_02	506018.88	5043198	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
RCTO	D1XM3	D1XM3-VOC138-3-20	TIM3_03	506023.5	5043200	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

RCTO	D1XM3	D1XM3-VOC138-4-20	TIM3_04	506028.11	5043201.9	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
RCTO	D1XM3	D1XM3-VOC138-5-20	TIM3_05	506032.72	5043203.8	62.70	36.58	0.91	9.76	616.48	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
RCTO	F15	F15-VOC-138-2-10	TOF15_02	508892.79	5037747.4	69.40	20.73	0.38	14.07	616.48	2.47059E-02	2.47059E-02	2.34829E-01	2.34829E-01	2.12381E-03	1.87278E-03	2.12381E-03	1.87278E-03	6.42353E-04	6.42353E-04
RCTO	F15	F15-VOC-138-3-10	TOF15_03	508886.63	5037752.4	69.40	20.73	0.42	11.64	616.48	2.47059E-02	2.47059E-02	1.70471E-02	1.70471E-02	2.12381E-03	1.87278E-03	2.12381E-03	1.87278E-03	6.42353E-04	6.42353E-04
RCTO	AL3	AL3-VOC-138-10	TOA3_01	508883.2	5037731.6	69.40	20.73	0.46	9.77	616.48	2.47059E-02	2.47059E-02	1.70471E-02	1.70471E-02	2.12381E-03	1.87278E-03	2.12381E-03	1.87278E-03	6.42353E-04	6.42353E-04
RCTO	F15	F15-VOC-138-1-10	TOF15_01	508898.87	5037746.7	69.40	20.73	0.36	16.12	616.48	2.47059E-02	2.47059E-02	2.34829E-01	2.34829E-01	2.12381E-03	1.87278E-03	2.12381E-03	1.87278E-03	6.42353E-04	6.42353E-04
RCTO	F15	F15-VOC-138-4-10	TOF15_04	508968.04	5037707.5	69.40	20.73	0.46	9.77	616.48	2.47059E-02	2.47059E-02	1.70471E-02	1.70471E-02	2.12381E-03	1.87278E-03	2.12381E-03	1.87278E-03	6.42353E-04	6.42353E-04
EXSC	D1B	F20-SC133-1-111	SCDB_01	506735.04	5043689.3	62.70	29.26	1.07	18.88	291.48	1.62760E-01	1.35633E-01	3.05340E-01	3.05340E-01	3.16656E-02	2.65019E-02	3.09844E-02	2.58207E-02	1.37856E-02	1.14880E-02
EXSC	D1B	F20-SC133-2-111	SCDB_02	506737.08	5043678.6	62.70	29.26	1.07	18.88	291.48	1.62760E-01	1.35633E-01	3.05340E-01	3.05340E-01	3.16656E-02	2.65019E-02	3.09844E-02	2.58207E-02	1.37856E-02	1.14880E-02
EXSC	D1B	F20-SC133-3-111	SCDB_03	506729.16	5043706.8	62.70	29.26	1.07	18.88	291.48	1.62760E-01	1.35633E-01	3.05340E-01	3.05340E-01	3.16656E-02	2.65019E-02	3.09844E-02	2.58207E-02	1.37856E-02	1.14880E-02
EXSC	D1A	D1A Combined Modeling Stack	SCDA_01	506882.28	5043833.3	62.70	29.26	1.07	8.71	291.48	1.08506E-01	9.04220E-02	2.03560E-01	2.03560E-01	2.11104E-02	1.76680E-02	2.06563E-02	1.72138E-02	9.19038E-03	7.65865E-03
EXSC	D1A	D1A Combined Modeling Stack	SCDA_02	506882.28	5043821.7	62.70	29.26	1.07	8.71	291.48	1.08506E-01	9.04220E-02	2.03560E-01	2.03560E-01	2.11104E-02	1.76680E-02	2.06563E-02	1.72138E-02	9.19038E-03	7.65865E-03
EXSC	D1A	D1A Combined Modeling Stack	SCDA_03	506882.36	5043843.2	62.70	29.26	1.07	8.71	291.48	1.08506E-01	9.04220E-02	2.03560E-01	2.03560E-01	2.11104E-02	1.76680E-02	2.06563E-02	1.72138E-02	9.19038E-03	7.65865E-03
EXSC	D1C	D1C-SC133-1-100	SCDC_01	506691.63	5043427.3	62.70	21.34	1.22	13.14	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	D1C	D1C-SC133-2-100	SCDC_02	506697.17	5043427.4	62.70	21.34	1.22	13.14	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	D1C	D1C-SC133-3-100	SCDC_03	506703.15	5043427.6	62.70	21.34	1.22	13.14	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	D1C	D1C-SC133-4-100	SCDC_04	506708.15	5043427.6	62.70	21.34	1.22	13.14	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	RB1	RB1-SC-133-1-100	SCRB1_01	506726.97	5043653.5	62.70	28.96	1.22	11.82	291.48	5.15788E-02	4.29823E-02	9.67628E-02	9.67628E-02	1.03775E-02	8.74111E-03	9.82013E-03	8.18375E-03	4.36867E-03	3.64055E-03
EXSC	RB1	RB1-SC-133-2-100	SCRB1_02	506730.03	5043654.8	62.70	28.96	0.81	26.60	291.48	5.15788E-02	4.29823E-02	9.67628E-02	9.67628E-02	1.03775E-02	8.74111E-03	9.82013E-03	8.18375E-03	4.36867E-03	3.64055E-03
EXSC	RB1	RB1-SC-133-8-100	SCRB1_03	506734.66	5043654.5	62.70	28.96	1.22	14.45	291.48	5.15788E-02	4.29823E-02	9.67628E-02	9.67628E-02	1.28456E-02	1.12093E-02	9.82825E-03	8.19186E-03	4.36867E-03	3.64055E-03
EXSC	RB1	RB1-SC-133-4-100	SCRB1_04	506634.89	5043630.8	62.70	28.96	1.22	11.82	291.48	5.15788E-02	4.29823E-02	9.67628E-02	9.67628E-02	1.03775E-02	8.74111E-03	9.82013E-03	8.18375E-03	4.36867E-03	3.64055E-03
EXSC	RB1	RB1-SC-133-6-100	SCRB1_06	506632.54	5043628.8	62.70	28.96	0.81	26.60	291.48	5.15788E-02	4.29823E-02	9.67628E-02	9.67628E-02	1.03775E-02	8.74111E-03	9.82013E-03	8.18375E-03	4.36867E-03	3.64055E-03
EXSC	RB1	RB1-SC-133-7-100	SCRB1_05	506635.12	5043628.9	62.70	28.96	0.81	26.60	291.48	5.15788E-02	4.29823E-02	9.67628E-02	9.67628E-02	1.03775E-02	8.74111E-03	9.82013E-03	8.18375E-03	4.36867E-03	3.64055E-03
EXSC	RA4	RA4-SC133-1	SWR4_01	506367.2	5043029.3	62.70	25.91	1.02	7.57	291.48	2.20891E-02	1.84076E-02	2.20891E-03	2.20891E-03	5.99382E-04	1.52913E-03	3.51664E-04	1.28141E-03	1.40942E-02	1.17452E-02
EXSC	RA4	RA4-SC133-2	SWR4_02	506369.56	5043022.8	62.70	25.91	1.02	7.57	291.48	2.20891E-02	1.84076E-02	2.20891E-03	2.20891E-03	5.99382E-04	1.52913E-03	3.51664E-04	1.28141E-03	1.40942E-02	1.17452E-02
EXSC	RP1	RP1-SC133-1-100	SCRP1_01	506748.15	5043358	62.70	25.91	1.41	7.86	291.48	1.55500E-02	1.29584E-02	2.91722E-02	2.91722E-02	3.45710E-03	2.96376E-03	2.96167E-03	2.46833E-03	1.31707E-03	1.09756E-03
EXSC	RP1	RP1-SC133-2-100	SCRP1_02	506747.35	5043347.1	62.70	25.91	1.41	7.86	291.48	1.55500E-02	1.29584E-02	2.91722E-02	2.91722E-02	3.45710E-03	2.96376E-03	2.96167E-03	2.46833E-03	1.31707E-03	1.09756E-03
EXSC	RP1	RP1-SC133-3-100	SCRP1_03	506748.96	5043347.4	62.70	25.91	1.41	8.25	291.48	1.55500E-02	1.29584E-02	2.91722E-02	2.91722E-02	3.58137E-03	3.08803E-03	2.96208E-03	2.46874E-03	1.31707E-03	1.09756E-03
EXSC	D1D	SC-133-1-100	SCDD_01	506493.82	5043419.7	62.70	27.13	1.02	18.92	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	D1D	SC-133-2-100	SCDD_02	506494.8	5043423	62.70	27.13	1.02	18.92	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	D1D	SC-133-3-100	SCDD_03	506498.02	5043421.2	62.70	27.13	1.02	18.92	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	D1D	SC-133-4-100	SCDD_04	506499.41	5043424.2	62.70	27.13	1.02	18.92	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	D1D	SC-133-5-100	SCDD_05	506503.96	5043424	62.70	27.13	1.02	18.92	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	D1D	SC-133-6-100	SCDD_06	506508.76	5043426.4	62.70	27.13	1.02	18.92	291.48	1.14619E-01	9.55162E-02	2.15028E-01	2.15028E-01	2.24398E-02	1.88034E-02	2.18205E-02	1.81841E-02	9.70814E-03	8.09012E-03
EXSC	D1XM1	D1X-SC133-1-00	SWM1_01	506313.59	5043328	62.70	36.58	1.88	12.12	291.48	2.39750E-01	2.08776E-01	3.85846E-01	3.85846E-01	2.07338E-02	1.75334E-02	1.95572E-02	1.63567E-02	1.71425E-02	9.49162E-03
EXSC	D1XM1	D1X-SC133-2-00	SWM1_02	506307.36	5043325.1	62.70	36.58	1.88	12.12	291.48	2.39750E-01	2.08776E-01	3.85846E-01	3.85846E-01	2.07338E-02	1.75334E-02	1.95572E-02	1.63567E-02	1.71425E-02	1.45190E-02
EXSC	D1XM1	D1X-SC133-3-00	SCM1_01	506292.25	5043318.6	62.70	36.58	1.88	12.12	291.48	2.39750E-01	2.08776E-01	3.85846E-01	3.85846E-01	4.46132E-02	5.14969E-02	4.34366E-02	5.03202E-02	1.71425E-02	1.45190E-02
EXSC	D1XM1	D1X-SC133-4-00	SCM1_02	506280.58	5043313.5	62.70	36.58	1.88	12.12	291.48	2.39750E-01	2.08776E-01	3.85846E-01	3.85846E-01	4.46132E-02	5.14969E-02	4.34366E-02	5.03202E-02	1.71425E-02	1.45190E-02
EXSC	D1XM1	D1X-SC133-5-00	SWM1_03	506273.97	5043310.3	62.70	36.58	1.88	12.12	291.48	2.39750E-01	2.08776E-01	3.85846E-01	3.85846E-01	2.07338E-02	1.75334E-02	1.95572E-02	1.63567E-02	1.71425E-02	1.45190E-02
EXSC	D1XM2	D1XM2-SC133-2-00	SIM2_01	506153.88	5043255.6	62.70	36.58	1.88	12.12	291.48	3.99584E-01	3.47960E-01	6.43076E-01	6.43076E-01	3.37694E-02	2.84352E-02	3.25927E-02	2.72586E-02	2.85708E-02	1.54533E-02
EXSC	D1XM2	D1XM2-SC133-3-00	SIM2_02	506147.47	5043252.9	62.70	36.58	1.88	12.12	291.48	3.99584E-01	3.47960E-01	6.43076E-01	6.43076E-01	3.37694E-02	2.84352E-02	3.25927E-02	2.72586E-02	2.85708E-02	2.41983E-02
EXSC	D1XM2	D1XM2-SC133-4-00	SIM2_03	506133.96	5043247.2	62.70	36.58	1.88	12.12	291.48	3.99584E-01	3.47960E-01	6.43076E-01	6.43076E-01	3.37694E-02	2.84352E-02	3.25927E-02	2.72586E-02	2.85708E-02	2.41983E-02
EXSC	D1XM2	D1XM2-SC133-5-00	SIM2_04	506122.35	5043242.5	62.70	36.58	1.88	12.12	291.48	3.99584E-01	3.47960E-01	6.43076E-01	6.43076E-01	3.37694E-02	2.84352E-02	3.25927E-02	2.72586E-02	2.85708E-02	2.41983E-02
EXSC	D1XM3	D1XM3-SC133-1-00	SIM3_01	505998.62	5043191.6	62.70	36.58	1.88	12.12	291.48	3.19667E-01	2.78368E-01	5.14461E-01	5.14461E-01	2.72516E-02	2.29843E-02	2.60750E-02	2.18076E-02	2.28567E-02	2.37312E-02
EXSC	D1XM3	D1XM3-SC133-2-00	SIM3_02	505991.04	5043188.6	62.70	36.58	1.88	12.12	291.48	3.19667E-01	2.78368E-01	5.14461E-01	5.14461E-01	2.72516E-02	2.29843E-02	2.60750E-02	2.18076E-02	2.28567E-02	1.93587E-02
EXSC	D1XM3	D1XM3-SC133-3-00	SIM3_03	505984.47	5043185.6	62.70	36.58	1.88	12.12	291.48	3.19667E-01	2.78368E-01	5.14461E-01	5.14461E-01	2.72516E-02	2.29843E-02	2.60750E-02	2.18076E-02	2.28567E-02	1.93587E-02
EXSC	D1XM3	D1XM3-SC133-4-00	SIM3_04	505977.82	5043183	62.70	39.62	1.88	12.12	291.48	3.19667E-01	2.78368E-01	5.14461E-01	5.14461E-01	2.72516E-02	2.29843E-02	2.60750E-02	2.18076E-02	2.28567E-02	1.93587E-02
EXSC	D1XM3	D1XM3-SC133-5-00	SIM3_05	505971.18	5043180.4	62.70	39.62	1.88	12.12	291.48	3.19667E-01	2.78368E-01	5.14461E-01	5.14461E-01	2.72516E-02	2.29843E-02	2.60750E-02	2.18076E-02	2.28567E-02	1.93587E-02
EXSC	D1XM4	D1XM4-SC133-1-00	SCM4_01	506068.7	5042972.3	62.70	39.62	1.88	12.12	291.48	9.19674E-02	7.66395E-02	1.72533E-01	1.72533E-01	1.86870E-02	1.57693E-02	1.75104E-02	1.45926E-02	7.78954E-03	6.49128E-03
EXSC	D1XM4	D1XM4-SC133-2-00	SCM4_02	506069.8	5042969.6	62.70	39.62	1.88	12.12	291.48	9.19674E-02	7.66395E-02	1.72533E-01	1.72533E-01	1.86870E-02	1.57693E-02	1.75104E-02	1.45926E-02	7.78954E-03	6.49128E-03
EXSC	D1XM4	D1XM4-SC133-3-00	SCM4_03	506070.9	5042966.8	62.70	39.62	1.88	12.12	291.48	9.19674E-02	7.66395E-02	1.72533E-01	1.72533E-01	1.86870E-02	1.57693E-02	1.75104E-02	1.45926E-02	7.78954E-03	6.49128E-03
EXSC	MSB-1	MSB-SC133-1	SCMB1_01	506416.14	5043153.3	62.70	43.89	1.78	13.54	291.48	1.47261E-02	1.22717E-02	1.47261E-03	1.47261E-03	4.36109E-03	3.83572E-03	3.15620E-03	2.63083E-03	9.39614E-03	7.83011E-03
EXSC	MSB-1	MSB-SC133-2	SCMB1_02	506420.41	5043143	62.70	43.89	1.78	13.54	291.48	1.47261E-02	1.22717E-02	1.47261E-03	1.47261E-03	4.36109E-03	3.83572E-03	3.15620E-03	2.63083E-03	9.39614E-03	7.83011E-03
EXSC	MSB-1	MSB-SC133-3	SCMB1_03	506425.25	5043133.9	62.70	43.89	1.78	13.54	291.48	1.47261E-02	1.22717E-02	1.47261E-03	1.47261E-03	4.36109E-03	3.83572E-03	3.15620E-03	2.63083E-03	9.39614E-03	7.83011E-03
EXSC	F15	F15-SC7-1-1	SCF15_01	508970.09	5037706.6	69.40	22.25	1.52	10.09	291.48	9.39726E-02	7.83105E-02	9.39726E-03	9.39726E-03	2.08611E-02	1.75085E-02	2.01180E-02	1.67654E-02	5.99603E-02	4.99669E-02
EXSC	F15	F15-SC7-1-2	SCF15_02	508953.09	5037716.1	69.40	22.25	1.52	10.09	291.48	9.39726E-02	7.83105E-02	9.39726E-03	9.39726E-03	2.08611E-02	1.75085E-02	2.01180E-02	1.67654E-02	5.99603E-02	4.99669E-02
EXSC	F15	F15-SC7-1-3	SCF15_03	508941.71	5037722.6	69.40	22.25	1.52	14.29	291.48	9.39726E-02	7.83105E-02	9.39726E-03	9.39726E-03	2.11718E-02	1.78192E-02	2.01190E-02	1.67664E-02	5.99603E-02	4.99669E-02
EXSC	F15	F15-SC7-1-4	SCF15_04	508924.01	5037732.8	69.40	22.25	1.52	14.29	291.48	9.39726E-02	7.83105E-02	9.39726E-03	9.39726E-03	2.11718E-02	1.78192E-02	2.01190E-02	1.67664E-02	5.99603E-02	4.99669E-02
EXSC	F15	F15-SC7-1-5	SCF15_05	508911.28	5037740.1	69.40	22.25	1.52	10.09	291.48	9.39726E-02	7.83105E-02	9.39726E-03	9.39726E-03	2.08611E-02	1.75085E-02	2.01180E-02	1.67654E-02	5.99603E-02	4.99669E-02
EXSC	F15	F15-SC7-1-6	SCF15_06	508895.74	5037748.8	69.40	22.25	1.52	10.09	291.48	9.39726E-02	7.83105E-02	9.39726E-03	9.39726E-03	2.08611E-02	1.75085E-02	2.01180E-02	1.67654E-02	5.99603E-02	4.99669E-02
EXAM	D1C	D1C Combined Modeling Stack	AMDC_01	506695.47	5043411.2	62.70	19.81	0.66	16.12	291.48	1.81283E-02	1.51069E-02	3.40090E-02	3.40090E-02	3.54575E-03	2.97061E-03	3.45234E-03	2.87720E-03	3.23252E-04	2.69377E-04
EXAM	D1C	D1C Combined Modeling Stack	AMDC_02	506698.1	5043411.1	62.70	19.81	0.66	16.12	291.48	1.81283E-02	1.51069E-02	3.40090E-02	3.40090E-02	3.54575E-03	2.97061E-03	3.45234E-03	2.87720E-03	3.23252E-04	2.69377E-04
EXAM	D1C	D1C Combined Modeling Stack	AMDC_03	506701.33	5043411.4	62.70	19.81	0.66	16.12	291.48	1.81283E-02	1.51069E-02	3.40090E-02	3.40090E-02	3.54575E-03	2.97061E-03	3.45234E-03	2.87720E-03	3.23252E-04	2.69377E-04
EXAM	D1C	D1C Combined Modeling Stack	AMDC_04	506703.89	5043411.1	62.70	19.81	0.66	16.12	291.48	1.81283E-02	1.51069E-02	3.40090E-02	3.40090E-02	3.54575E-03	2.97061E-03	3.45234E-03	2.87720E-03	3.23252E-04	2.69377E-04
EXAM	D1C	D1C Combined Modeling Stack	AMDC_05	506707.26	5043411.2	62.70	19.81	0.66	16.12	291.48	1.81283E-02	1.51069E-02	3.40090E-02	3.40090E-02	3.54575E-03	2.97061E-03	3.45234E-03	2.87720E-03	3.23252E-04	2.69377E-04
EXAM	RB1	D1C Combined Modeling Stack	AMRB1_AM	506629.85	5043628.4	62.70	28.96	0.91	29.43	291.48	1.08770E-01	9.06414E-02	2.04054E-01	2.04054E-01	2.12376E-02	1.77868E-02	2.07134E-02	1.72626E-02	1.93951E-03	1.61626E-03
EXAM	RP1	RP1-SC142-1-100	AMRP1_01	506690.2	5043352.6	62.70	25.91	1.41	2.18	291.48	1.16625E-02	9.71878E-03	2.18791E-02	2.18791E-02	2.27432E-03	1.90431E-03	2.22090E-03	1.85089E-03	2.07959E-04	1.73299E-04
EXAM	D1D	D1D Combined Modeling Stack	AMDD_01	506485.47	5043408.8	62.70	31.39	0.91	6.32	291.48	5.13635E-02	4.28029E-02	9.63589E-02	9.63589E-02	9.90388E-03	8.27433E-03	9.77934E-03	8.14979E-03	9.15880E-04	7.63234E-04
EXAM	D1D	D1D Combined Modeling Stack	AMDD_02	506481.52	5043406.8	62.70	31.39	0.91	6.32	291.48	1.71212E-02	1.42676E-02	3.21196E-02	3.21196E-02	3.30129E-03	2.75811E-03	3.25978E-03	2.71660E-03	3.05293E-04	2.54411E-04
EXAM	D1D	D1D Combined Modeling Stack	AMDD_03	506477.28	5043404.9	62.70	31.39	0.91	6.32	291.48	1.71212E-02	1.42676E-02	3.21196E-02	3.21196E-02	3.30129E-03	2.75811E-03	3.25978E-03	2.71660E-03	3.05293E-04	2.54411E-04
EXAM	D1D	D1D Combined Modeling Stack	AMDD_04	506601.3	5043283.4	62.70	31.39	0.91	15.40	291.48	2.14015E-02	1.78345E-02	4.01496E-02	4.01496E-02	4.37217E-03	3.69319E-03	4.07867E-03	3.39969E-03	3.81617E-04	3.18014E-04
EXAM	D1D	D1D Combined Modeling Stack	AMDD_05	506602.26	5043281.5	62.70	31.39	0.91	15.40	291.48	2.14015E-02	1.78345E-02	4.01496E-02	4.01496E-02	4.37217E-03	3.69319E-03	4.07867E-03	3.39969E-03	3.81617E-04	3.18014E-04
EXAM	D1D	D1D Combined Modeling Stack	AMDD_06	506603.37	5043279.8	62.70	31.39	0.91	15.40	291.48	2.14015E-02	1.78345E-02	4.01496E-02	4.01496E-02	4.37217E-03	3.69319E-03	4.07867E-03	3.39969E-03	3.81617E-04	3.18014E-04
EXAM	D1D	D1D Combined Modeling Stack	AMDD_07	506604.53	5043277.9	62.70	31.39	0.91	15.40	291.48	2.14015E-02	1.78345E-02	4.01496E-02	4.01496E-02	4.37217E-03	3.69319E-03	4.07867E-03	3.39969E-03	3.81617E-04	3.18014E-04
EXAM	D1XM1	D1X-SC142-1-11	AMM1_01	506346.36	5043324.1	62.70	36.58	1.37	9.58	291.48	6.81147E-02	5.67622E-02	1.27785E-01	1.27785E-01	1.31769E-02	1.10160E-02	1.29694E-02	1.08084E-02	1.21458E-03	1.01215E-03
EXAM	D1XM1	D1X-SC142-2-11	AMM1_02	506344.9	5043327.6	62.70	36.58	1.37	9.58	291.48	6.81147E-02	5.67622E-02	1.27785E-01	1.27785E-01	1.31769E-02	1.10160E-02	1.29694E-02	1.08084E-02	1.21458E-03	1.01215E-03
EXAM	D1XM1	D1X-SC142-3-11	AMM1_03	506343.08	5043332.1	62.70	36.58	1.37	9.58	291.48	6.81147E-02	5.67622E-02	1.27785E-01	1.27785E-01	1.31769E-02	1.10160E-02	1.29694E-02	1.08084E-02	1.21458E-03	1.01215E-03
EXAM	D1XM1	D1X-SC142-4-11	AMM1_04	506360.5	5043330.8	62.70	36.58	1.37	9.58	291.48	6.81147E-02	5.67622E-02	1.27785E-01	1.27785E-01	1.31769E-02	1.10160E-02	1.29694E-02	1.08084E-02	1.21458E-03	1.01215E-03
EXAM	D1XM1	D1X-SC142-5-00	AMM1_05	506355.3	5043335.7	62.70	36.58	1.37	22.76	291.48	6.81147E-02	5.67622E-02	1.27785E-01	1.27785E-01	1.34790E-02	1.13180E-02	1.29742E-02	1.08132E-02	1.21458E-03	1.01215E-03
EXAM	D1XM2	D1XM2-SC142-1-00	AMM2_01	506187.92	5043246.9	62.70	36.58	1.37	9.58	291.48	5.17538E-02	4.31282E-02	9.70912E-02	9.70912E-02	1.00626E-02	8.42063E-03	9.85500E-03	8.21306E-03	9.22840E-04	7.69034E-04
EXAM	D1XM2	D1XM2-SC142-2-00	AMM2_02	506186.56	5043250.5	62.70	36.58	1.37	9.58	291.48	5.17538E-02	4.31282E-02	9.70912E-02	9.70912E-02	1.00626E-02	8.42063E-03	9.85500E-03	8.21306E-03	9.22840E-04	7.69034E-04
EXAM	D1XM2	D1XM2-SC142-3-00	AMM2_03	506185.06	5043254.2	62.70	36.58	1.37	9.58	291.48	5.17538E-02	4.31282E-02	9.70912E-02	9.70912E-02	1.00626E-02	8.42063E-03	9.85500E-03	8.21306E-03	9.22840E-04	7.69034E-04
EXAM	D1XM2	D1XM2-SC142-4-00	AMM2_04	506182.82	5043258	62.70	36.58	1.37	22.76	291.48	5.17538E-02	4.31282E-02	9.70912E-02	9.70912E-02	1.00626E-02	8.42063E-03	9.85500E-03	8.21306E-03	9.22840E-04	7.69034E-04
EXAM	D1XM3	D1XM3-SC142-1-00	AMM3_01	505959.16	5043172	62.70	36.58	1.99	10.77	291.48	1.26880E-01	1.05734E-01	2.38030E-01	2.38030E-01	2.46654E-02	2.06400E-02	2.41606E-02	2.01352E-02	2.26245E-03	1.88537E-03
EXAM	D1XM3	D1XM3-SC142-2-00	AMM3_02	505952.13	5043169.5	62.70	36.58	1.99	10.77	291.48	1.26880E-01	1.05734E-01	2.38030E-01	2.38030E-01	2.46654E-02	2.06400E-02	2.41606E-02	2.01352E-02	2.26245E-03	1.88537E-03
EXAM	D1XM3	D1XM3-SC142-3-00	AMM3_03	505945.16	5043167	62.70	39.62	1.99	10.77	291.48	1.26880E-01	1.05734E-01	2.38030E-01	2.38030E-01	2.46654E-02	2.06400E-02	2.41606E-02	2.01352E-02	2.26245E-03	1.88537E-03
EXAM	D1XM3	D1XM3-SC142-4-00	AMM3_04	505938.19	5043164.5	62.70	39.62	1.99	10.77	291.48	1.26880E-01	1.05734E-01	2.38030E-01	2.38030E-01	2.46654E-02	2.06400E-02	2.41606E-02	2.01352E-02	2.26245E-03	1.88537E-03
EXAM	D1XM4	D1XM4 Combined Modeling Stack	AMM4_01	506071.6	5042964.5	62.70	39.62	1.88	4.85	291.48	2.08021E-02	1.73351E-02	3.90253E-02	3.90253E-02	4.30184E-03	3.64187E-03	3.96529E-03	3.30532E-03	3.70930E-04	3.09109E-04
EXAM	D1XM4	D1XM4 Combined Modeling Stack	AMM4_02	506072.9	5042962.1	62.70	39.62	1.88	4.85	291.48	2.08021E-02	1.73351E-02	3.90253E-02	3.90253E-02	4.30184E-03	3.64187E-03	3.96529E-03	3.30532E-03	3.70930E-04	3.09109E-04
EXAM	D1XM4	D1XM4 Combined Modeling Stack	AMM4_03	506074.19	5042959.7	62.70	39.62	1.88	4.85	291.48	2.08021E-02	1.73351E-02	3.90253E-02	3.90253E-02	4.30184E-03	3.64187E-03	3.96529E-03	3.30532E-03	3.70930E-04	3.09109E-04

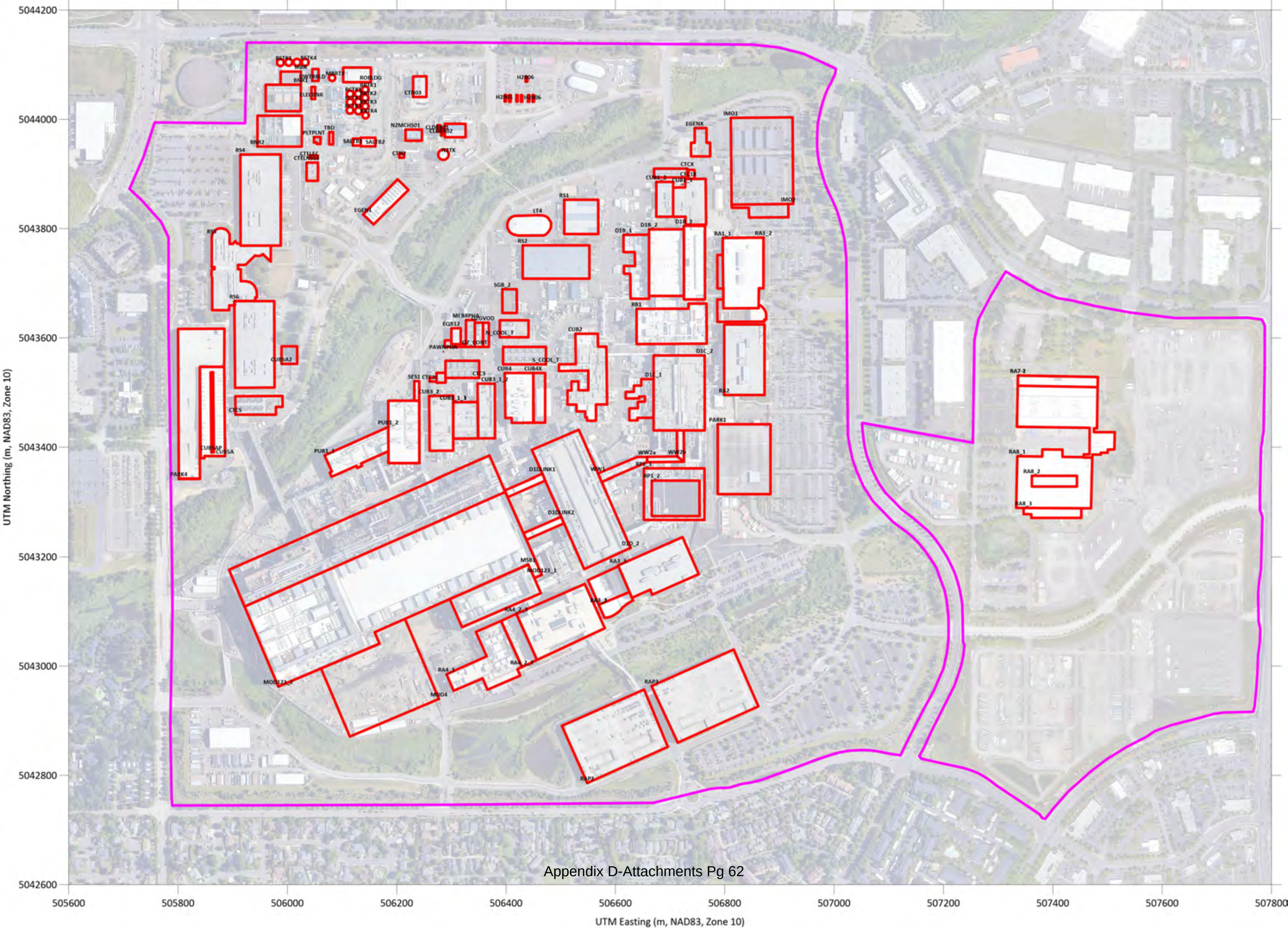
HEATER	RA3	RA3 Combined Modeling Stack	HER3_M	506679.8	5043176.5	62.70	24.99	0.15	5.00	422.04	1.96659E-01	9.83294E-02	1.65193E-01	1.65193E-01	4.91647E-03	2.45824E-03	4.91647E-03	2.45824E-03	5.11313E-03	2.55656E-03
HEATER	RS4	RS4 Combined Modeling Stack	HERS4_M	505951	5043852.3	62.70	18.29	0.15	5.00	422.04	5.07706E-02	2.53853E-02	4.26473E-02	4.26473E-02	1.26926E-03	6.34632E-04	1.26926E-03	6.34632E-04	1.32004E-03	6.60018E-04
HEATER	RS5	RS5 Combined Modeling Stack	HERS5_M	505915.2	5043725.7	62.70	18.29	0.15	5.00	422.04	9.13994E-02	4.56997E-02	7.67755E-02	7.67755E-02	2.28499E-03	1.14249E-03	2.28499E-03	1.14249E-03	2.37638E-03	1.18819E-03
HEATER	RS6	RS6 Combined Modeling Stack	HERS6_M	505939.9	5043588.1	62.70	18.29	0.15	5.00	422.04	3.89118E-02	1.94559E-02	3.26859E-02	3.26859E-02	9.72794E-04	4.86397E-04	9.72794E-04	4.86397E-04	1.01171E-03	5.05853E-04
HEATER	LT4	Lunch Tent Combined Modeling Stack	HELT4_M	506443.2	5043804.3	62.70	12.50	0.15	5.00	422.04	3.53912E-02	1.76956E-02	2.97286E-02	2.97286E-02	8.84779E-04	4.42390E-04	8.84779E-04	4.42390E-04	9.20171E-04	4.60085E-04
HEATER	Aloha	Aloha Combined Modeling Stack	HEAL_M	509091.1	5037889	69.40	14.02	0.15	5.00	422.04	3.63300E-02	1.81650E-02	3.05172E-02	3.05172E-02	9.08250E-04	4.54125E-04	9.08250E-04	4.54125E-04	9.44580E-04	4.72290E-04
HEATER	RS2	RS2 Combined Modeling Stack	HERS2_M	506491.4	5043738.9	62.70	13.11	0.15	5.00	422.04	3.95294E-02	1.97647E-02	3.32047E-02	3.32047E-02	9.88235E-04	4.94118E-04	9.88235E-04	4.94118E-04	1.02776E-03	5.13882E-04
HEATER	RA1	RA1 Combined Modeling Stack	HERA1_M	506835.9	5043715.5	62.70	16.46	0.15	5.00	422.04	1.85294E-03	9.26471E-04	1.55647E-03	1.55647E-03	4.63235E-05	2.31618E-05	4.63235E-05	2.31618E-05	4.81765E-05	2.40882E-05
HEATER	CUB4	CUB 4 Heater	HEC4_M	506404.21	5043465.8	62.70	24.08	0.15	5.00	422.04	3.70588E-03	1.85294E-03	3.11294E-03	3.11294E-03	9.26471E-05	4.63235E-05	9.26471E-05	4.63235E-05	9.63529E-05	4.81765E-05
HEATER	PUB1	PUB1 Heater	HEPB1_M	506212.9	5043427.9	62.70	31.70	0.15	5.00	422.04	1.85294E-02	9.26471E-03	1.55647E-02	1.55647E-02	4.63235E-04	2.31618E-04	4.63235E-04	2.31618E-04	4.81765E-04	2.40882E-04
HEATER	CUB5	CUB 5 Heater	HEC5_M	505862	5043464.8	62.70	22.40	0.15	5.00	422.04	1.85294E-02	9.26471E-03	1.55647E-02	1.55647E-02	4.63235E-04	2.31618E-04	4.63235E-04	2.31618E-04	4.81765E-04	2.40882E-04
TMXW	CUB3	CUB3 - OX293-0-70	TMXW_01	506292.12	5043551.6	62.70	8.53	0.38	16.95	394.26	4.28400E-02	4.28400E-02	3.96900E-03	3.96900E-03	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04
TMXW	PUB1	PUB1A-OX293-0-70	TMXW_02	506166.41	5043393	62.70	8.53	0.38	16.95	394.26	4.28400E-02	4.28400E-02	3.96900E-03	3.96900E-03	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04
TMXW	PUB1	PUB1B-OX293-0-70	TMXW_03	506100.6	5043326.9	62.70	8.53	0.38	16.95	394.26	4.28400E-02	4.28400E-02	3.96900E-03	3.96900E-03	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04
TMXW	PUB1	PUB1C-OX293-0-70	TMXW_04	506116.6	5043305.7	62.70	8.53	0.38	16.95	394.26	4.28400E-02	4.28400E-02	3.96900E-03	3.96900E-03	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04
TMXW	PUB1	PUB1D-OX293-0-70	TMXW_05	506025.2	5043301.6	62.70	8.53	0.38	16.95	394.26	4.28400E-02	4.28400E-02	3.96900E-03	3.96900E-03	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04
TMXW	PUB1	PUB1E-OX293-0-70	TMXW_06	506035.3	5043283.6	62.70	8.53	0.38	16.95	394.26	4.28400E-02	4.28400E-02	3.96900E-03	3.96900E-03	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04
TMXW	PUB1	PUB1F-OX293-0-70	TMXW_07	505992.2	5043284.9	62.70	8.53	0.38	16.95	394.26	4.28400E-02	4.28400E-02	3.96900E-03	3.96900E-03	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04
TMXW	CUB2	CUB2-OX293-0-70	TMXW_08	506533.24	5043483.2	62.70	11.67	0.38	16.95	394.26	4.28400E-02	4.28400E-02	3.96900E-03	3.96900E-03	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04	3.24265E-04
TMXW	CUB3	CUB3 - OX293B-0-70	TMC3_02	506300.9	5043548.9	62.70	8.53	0.38	16.95	394.26	9.07200E-03	9.07200E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-1	CTC4_01	506401.76	5043561.2	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-2	CTC4_02	506401.71	5043576.1	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-3	CTC4_03	506414.44	5043561.5	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-4	CTC4_04	506414.44	5043576.3	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-5	CTC4_05	506427.26	5043561.4	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-6	CTC4_06	506427.31	5043576.2	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-7	CTC4_07	506440.14	5043561.6	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-8	CTC4_08	506439.99	5043576.2	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-9	CTC4_09	506452.81	5043561.7	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-10	CTC4_10	506452.76	5043576.5	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-11	CTC4_11	506465.78	5043561.8	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-12	CTC4_12	506465.78	5043576.5	62.70	15.54	8.53	4.85	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-13	CTC4_13	506396.77	5043625.1	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-14	CTC4_14	506396.92	5043610.5	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-15	CTC4_15	506409.43	5043625.2	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4	RAC4-CT114-16	CTC4_16	506409.78	5043610.5	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4X	RAC4-CT114-17	CTC4_17	506422.09	5043625.2	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4X	RAC4-CT114-18	CTC4_18	506422.44	5043610.5	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4X	RAC4-CT114-19	CTC4_19	506434.65	5043625.2	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB4X	RAC4-CT114-20	CTC4_20	506435	5043610.5	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-1	CTC5_01	505911.75	5043470.7	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-2	CTC5_02	505911.42	5043486	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-3	CTC5_03	505924.57	5043470.7	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-4	CTC5_04	505924.24	5043486	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-5	CTC5_05	505937.39	5043470.7	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-6	CTC5_06	505937.06	5043486	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-7	CTC5_07	505950.21	5043470.7	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-8	CTC5_08	505949.88	5043486	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-9	CTC5_09	505963.03	5043470.7	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-10	CTC5_10	505962.7	5043486	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-11	CTC5_11	505975.85	5043470.7	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-12	CTC5_12	505975.52	5043486	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-13	CTC5_13	505988.67	5043470.7	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-14	CTC5_14	505988.34	5043486	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-15	CTC5_15	506001.49	5043470.7	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-16	CTC5_16	506001.16	5043486	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB5	RAC5-CT115-17	CTC5_17	506014.31	5043470.7	62.70	15.54	8.53	8.74	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.41311E-03	1.45806E-03	1.92516E-05	6.43262E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3	CT-114-1-210	CTC3_01	506294.64	5043534.7	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3	CT-114-2-210	CTC3_02	506306.48	5043534.7	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3	CT-114-3-210	CTC3_03	506318.32	5043534.8	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3	CT-114-4-210	CTC3_04	506330.31	5043535	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3	CT-114-5-210	CTC3_05	506342.15	5043535.2	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3X	CUB3-CT114-21-10	CTC3_06	506305.08	5043550.7	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3X	CUB3-CT114-22-10	CTC3_07	506316.29	5043550.5	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3X	CUB3-CT114-23-10	CTC3_08	506316.29	5043550.5	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3X	CUB3-CT114-24-10	CTC3_09	506316.29	5043550.5	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3X	CUB3-CT114-25-10	CTC3_10	506327.66	5043550.5	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB3X	CUB3-CT114-26-10	CTC3_11	506327.66	5043550.5	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	RP1	RP1-CT114-1-200	CTRP1_01	506658.54	5043337.5	62.70	13.72	3.05	12.13	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.88201E-03	1.04547E-03	1.38063E-05	4.61238E-06	0.00000E+00	0.00000E+00
COOLTOW	RP1	RP1-CT114-2-200	CTRP1_02	506658.26	5043328.7	62.70	13.72	3.05	12.13	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.88201E-03	1.04547E-03	1.38063E-05	4.61238E-06	0.00000E+00	0.00000E+00
COOLTOW	RP1	RP1-CT114-3-00	CTRP1_03	506658.26	5043319.9	62.70	13.72	3.05	12.13	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.88201E-03	1.04547E-03	1.38063E-05	4.61238E-06	0.00000E+00	0.00000E+00
COOLTOW	RA4	RA4-CT113-1-10	CTR4_01	506357.82	5043059.1	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.65391E-03	1.52306E-03	2.01080E-05	6.71940E-06	0.00000E+00	0.00000E+00
COOLTOW	RA4	RA4-CT113-2-10	CTR4_02	506359.29	5043055.7	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.65391E-03	1.52306E-03	2.01080E-05	6.71940E-06	0.00000E+00	0.00000E+00
COOLTOW	RA4	RA4-CT113-3-10	CTR4_03	506363.54	5043061.7	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.65391E-03	1.52306E-03	2.01080E-05	6.71940E-06	0.00000E+00	0.00000E+00
COOLTOW	RA4	RA4-CT113-4-10	CTR4_04	506364.93	5043058.1	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.65391E-03	1.52306E-03	2.01080E-05	6.71940E-06	0.00000E+00	0.00000E+00
COOLTOW	RA4	RA4-CT113-5-10	CTR4_05	506370.63	5043063	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.65391E-03	1.52306E-03	2.01080E-05	6.71940E-06	0.00000E+00	0.00000E+00
COOLTOW	RA4	RA4-CT113-6-10	CTR4_06	506375.5	5043065	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.65391E-03	1.52306E-03	2.01080E-05	6.71940E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-1-210	CTC2_01	506518.07	5043561.1	62.70	8.84	3.35	7.58	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-2-210	CTC2_02	506518.39	5043575.8	62.70	8.84	3.35	7.58	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-3-210	CTC2_03	506514.79	5043561.1	62.70	8.84	3.35	7.58	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-4-210	CTC2_04	506514.89	5043575.7	62.70	8.84	3.35	7.58	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-5-210	CTC2_05	506506.05	5043561.1	62.70	8.84	3.35	7.58	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-6-210	CTC2_06	506506.26	5043575.6	62.70	8.84	3.35	7.58	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-7-210	CTC2_07	506502.65	5043561	62.70	8.84	3.35	7.58	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-8-210	CTC2_08	506502.87	5043575.6	62.70	8.84	3.35	7.58	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-9-210	CTC2_09	506494.34	5043560.9	62.70	8.84	3.35	7.58	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2	CUB2-CT114-10-210	CTC2_10	506494.34	5043575.6	62.70	9.45	3.35	10.25	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2X	CUB2-CT114-11-10	CTC2_11	506518.1	5043590.2	62.70	9.45	3.35	20.51	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.31251E-02	2.17580E-03	4.66794E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2X	CUB2-CT114-12-10	CTC2_12	506514.87	5043590.1	62.70	9.45	3.35	10.25	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.31251E-02	2.17580E-03	4.66794E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB2X	CUB2-CT114-13-10	CTC2_13	506505.8	5043590	62.70	9.45	3.35	10.25	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.31251E-02	2.17580E-03	4.66794E-05	9.59914E-06	0.00000E+00	0.00000E+00

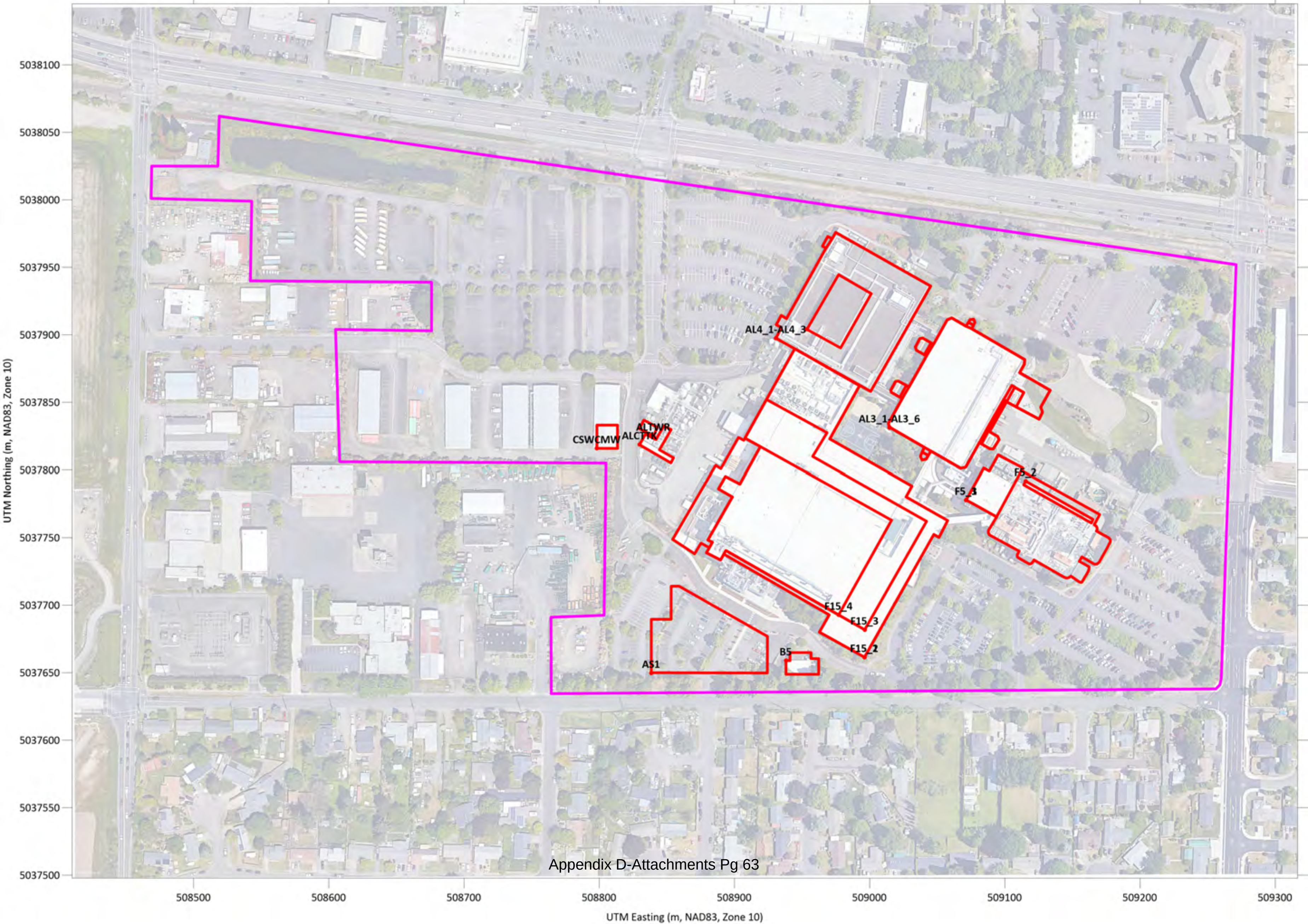
COOLTOW	CUB2X	CUB2-CT114-14-10	CTC2_14	506494.34	5043590.4	62.70	9.45	3.35	10.25	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.31251E-02	2.17580E-03	4.66794E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-1-210	CTC1_01	506674.28	5043903	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-2-210	CTC1_02	506681.59	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-3-210	CTC1_03	506685.56	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-4-210	CTC1_04	506692.61	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-5-210	CTC1_05	506696.57	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-6-210	CTC1_06	506703.62	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-7-210	CTC1_07	506707.59	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-8-210	CTC1_08	506714.32	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-9-210	CTC1_09	506718.29	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-10-210	CTC1_10	506724.66	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	CUB1	F20-CT114-11-210	CTC1_11	506728.63	5043904	62.70	8.84	3.35	10.26	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27213E-02	2.17580E-03	4.52431E-05	9.59914E-06	0.00000E+00	0.00000E+00
COOLTOW	N2 Plant	N2-CT114-1	CTN2_01	506333.46	5043970.9	62.70	5.18	3.56	6.42	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91667E-03	3.85033E-05	1.28676E-05	0.00000E+00	0.00000E+00
COOLTOW	N2 Plant	N2-CT114-2	CTN2_02	506210.58	5043933.9	62.70	5.18	3.56	6.42	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91667E-03	3.85033E-05	1.28676E-05	0.00000E+00	0.00000E+00
COOLTOW	N2 Plant	N2-CT114-3	CTN2_03	506247.14	5044080.6	62.70	5.18	3.56	6.42	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91667E-03	3.85033E-05	1.28676E-05	0.00000E+00	0.00000E+00
COOLTOW	PCB-1	RACB3-CT-114-1-35	CTCB_01	506297	5043636	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	PCB-1	RACB3-CT-114-2-35	CTCB_02	506298	5043639	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	PCB-1	RACB3-CT-114-3-35	CTCB_03	506299	5043642	62.70	5.18	3.56	17.21	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.77412E-03	2.09421E-03	2.76485E-05	9.23917E-06	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-1-11	CTWTR_01	506036.99	5043917.3	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-2-11	CTWTR_02	506041.55	5043917.6	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-3-11	CTWTR_03	506049.25	5043917.6	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-4-11	CTWTR_04	506053.37	5043917.4	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-5-11	CTWTR_05	506037.1	5043904	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-6-11	CTWTR_06	506041.66	5043904.3	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-7-11	CTWTR_07	506048.6	5043904.5	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-8-11	CTWTR_08	506053.48	5043904.4	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-9-11	CTWTR_09	506036.74	5043892.3	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-10-11	CTWTR_10	506042.65	5043892.3	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-11-11	CTWTR_11	506049.21	5043892.6	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	WATR	RAWTR1-CH918-12-11	CTWTR_12	506053.84	5043892.3	62.70	22.25	3.66	14.94	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.08262E-02	2.91612E-03	3.85033E-05	1.28652E-05	0.00000E+00	0.00000E+00
COOLTOW	AL4	AL4-CHW-CT2	CTA4_01	508843.13	5037820.4	69.40	7.10	2.44	8.28	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.57220E-04	4.07963E-04	2.69304E-06	1.79984E-06	0.00000E+00	0.00000E+00
COOLTOW	AL4	AL4-CHW-CT3	CTA4_02	508850.11	5037827.2	69.40	7.10	2.44	8.28	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.57220E-04	4.07963E-04	2.69304E-06	1.79984E-06	0.00000E+00	0.00000E+00
COOLTOW	F15	F15-CT29-1-1	CTF15_01	508966.76	5037839.6	69.40	11.43	2.84	8.28	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.63465E-03	1.27285E-03	1.29266E-05	5.61549E-06	0.00000E+00	0.00000E+00
COOLTOW	F15	F15-CT29-1-2	CTF15_02	508958.95	5037844.1	69.40	11.43	2.84	8.28	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.63465E-03	1.27285E-03	1.29266E-05	5.61549E-06	0.00000E+00	0.00000E+00
COOLTOW	F15	F15-CT29-1-3	CTF15_03	508949.3	5037849.6	69.40	11.43	3.35	9.55	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	6.17386E-03	1.27285E-03	2.19573E-05	5.61549E-06	0.00000E+00	0.00000E+00
COOLTOW	F15	F15-CT29-1-4	CTF15_04	508937.84	5037856.2	69.40	11.43	3.35	9.55	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	6.17386E-03	1.27285E-03	2.19573E-05	5.61549E-06	0.00000E+00	0.00000E+00
COOLTOW	F15	F15-CT29-1-5	CTF15_05	508941.56	5037862.4	69.40	11.43	3.35	9.55	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	6.17386E-03	1.27285E-03	2.19573E-05	5.61549E-06	0.00000E+00	0.00000E+00
COOLTOW	F15	F15-CT29-1-6-1	CTF15_06	508973.89	5037851.8	69.40	11.43	2.13	4.54	293.15	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.11059E-03	2.28459E-04	3.94979E-06	1.00791E-06	0.00000E+00	0.00000E+00
PSSS	D1B	F20-SC-134-1-100	PSDB_01	506665.95	5043736	62.70	28.96	1.07	5.47	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	6.83472E-04	6.83472E-04	2.24838E-06	2.24838E-06	0.00000E+00	0.00000E+00
PSSS	D1C	D1C Combined Modeling Stack	PSDC_M	506678.31	5043478.3	62.70	23.47	0.91	2.13	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	7.45606E-04	7.45606E-04	2.45278E-06	2.45278E-06	0.00000E+00	0.00000E+00
PSSS	D1D	D1D Combined Modeling Stack	PSDD_M	506495	5043302.7	62.70	27.13	0.91	7.09	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.11841E-03	1.11841E-03	3.67917E-06	3.67917E-06	0.00000E+00	0.00000E+00
PSSS	CUB2	D1C-SC133-1-200	SCC2_01	506538.3	5043483.1	62.70	14.02	0.25	27.58	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	6.21338E-05	6.21338E-05	2.04398E-07	2.04398E-07	0.00000E+00	0.00000E+00
PSSS	RP1	RP1-SC134-1-100	PSRP1_01	506719.16	5043351.4	62.70	25.91	1.07	6.57	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	5.21924E-04	5.21924E-04	1.71694E-06	1.71694E-06	0.00000E+00	0.00000E+00
PSSS	CUB3	SC-133-1-200	SCC3_01	506269.27	5043482.1	62.70	13.72	0.46	17.02	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.24268E-04	1.24268E-04	4.08796E-07	4.08796E-07	0.00000E+00	0.00000E+00
PSSS	D1XM1	D1XM1 Combined Modeling Stack	PSM1_M	506292.09	5043322.5	62.70	36.58	1.27	3.31	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.98828E-03	1.98828E-03	6.54074E-06	6.54074E-06	0.00000E+00	0.00000E+00
PSSS	D1XM2	D1XM2 Combined Modeling Stack	PSM2_M	506132.4	5043250.6	62.70	36.58	1.27	3.31	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.98828E-03	1.98828E-03	6.54074E-06	6.54074E-06	0.00000E+00	0.00000E+00
PSSS	D1XM3	D1XM3 Combined Modeling Stack	PSM3_M	505977.34	5043186.3	62.70	36.58	1.27	3.31	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.98828E-03	1.98828E-03	6.54074E-06	6.54074E-06	0.00000E+00	0.00000E+00
PSSS	D1XM4	D1XM4-SC134-1-00	PSM4_01	506073.33	5042961.1	62.70	30.02	1.88	3.83	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.18054E-03	1.18054E-03	3.88357E-06	3.88357E-06	0.00000E+00	0.00000E+00
PSSS	D1XM4	D1XM4-SC134-2-00	PSM4_02	506075.24	5042957.5	62.70	30.02	1.88	3.83	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.18054E-03	1.18054E-03	3.88357E-06	3.88357E-06	0.00000E+00	0.00000E+00
PSSS	PUB1	PUB1-SC133-1-00	SCPB1_01	506190.72	5043438.6	62.70	36.27	0.91	6.47	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.48535E-04	2.48535E-04	8.17593E-07	8.17593E-07	0.00000E+00	0.00000E+00
PSSS	PUB1	PUB1-SC133-2-00	SCPB1_02	506194.51	5043438.7	62.70	36.27	0.91	6.47	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.48535E-04	2.48535E-04	8.17593E-07	8.17593E-07	0.00000E+00	0.00000E+00
PSSS	F15	F15-SC7-2-12	PSF15_01	508968.32	5037829	69.40	22.25	1.07	9.07	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.24268E-04	1.24268E-04	4.08796E-07	4.08796E-07	0.00000E+00	0.00000E+00
PSSS	F15	F15-SC7-1-7	PSF15_02	508893.72	5037752.1	69.40	22.25	0.61	9.57	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.60376E-04	3.60376E-04	1.18551E-06	1.18551E-06	0.00000E+00	0.00000E+00
PSSS	F15	F15-SC7-2-7	PSF15_03	508805.99	5037833.7	69.40	15.24	1.07	9.07	287.04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.60376E-04	3.60376E-04	1.18551E-06	1.18551E-06	0.00000E+00	0.00000E+00
EGEN	Pump House #1	PH #1	FIRS4_01	505986.52	5043796.5	62.70	19.81	0.13	37.88	765.37	1.65392E-01	2.26564E-03	9.38905E-02	1.17363E-01	4.11494E-03	5.63690E-05	4.11494E-03	5.63690E-05	1.98771E-04	2.72289E-06
EGEN	Pump House #2	PH #2	FIPH2_01	506319.9	5043633.7	62.70	4.57	0.13	84.90	803.71	9.69600E-02	1.32822E-03	4.30813E-02	5.38516E-02	4.11494E-03	5.63690E-05	4.11494E-03	5.63690E-05	1.98771E-04	2.72289E-06
EGEN	Pump House #3	PH #3	FIPH1_01	506814.61	5043923	62.70	4.57	0.10	67.51	708.15	3.69627E-01	5.06338E-03	8.01486E-02	1.00186E-01	1.87740E-02	2.57178E-04	1.87740E-02	2.57178E-04	3.28737E-04	4.50325E-06
EGEN	Pump House #4	PH #4	FIC5_01	505849.77	5043556	62.70	25.30	0.15	39.84	740.37	3.57593E-01	4.89853E-03	7.75391E-02	9.69239E-02	9.93573E-04	1.36106E-05	9.93573E-04	1.36106E-05	3.18034E-04	4.35663E-06
EGEN	RA1	RA1-ELEC-CPS-GEN01	EGR1_01	506791	5043642.8	62.70	28.96	0.25	38.60	742.04	3.54816E+00	2.43025E-02	1.62918E+00	2.03648E+00	1.61280E-01	1.10466E-03	1.61280E-01	1.10466E-03	3.29502E-03	2.25686E-05
EGEN	RA1	RA1-ELEC-CPS-GEN02	EGR1_02	506791	5043639.4	62.70	28.96	0.25	38.60	742.04	3.54816E+00	2.43025E-02	1.62918E+00	2.03648E+00	1.61280E-01	1.10466E-03	1.61280E-01	1.10466E-03	3.29502E-03	2.25686E-05
EGEN	RA1	RA1-ELEC-CPS-GEN03	EGR1_03	506791	5043636.3	62.70	28.96	0.25	38.60	742.04	3.54816E+00	2.43025E-02	1.62918E+00	2.03648E+00	1.61280E-01	1.10466E-03	1.61280E-01	1.10466E-03	3.29502E-03	2.25686E-05
EGEN	RA1	RA1-ELEC-CPS-GEN04	EGR1_04	506791	5043632.9	62.70	28.96	0.25	38.60	742.04	3.54816E+00	2.43025E-02	1.62918E+00	2.03648E+00	1.61280E-01	1.10466E-03	1.61280E-01	1.10466E-03	3.29502E-03	2.25686E-05
EGEN	D1C	D1C-CPS-GEN01	EGDC_01	506673.31	5043439.3	62.70	20.42	0.25	29.65	961.48	4.96944E+00	3.40373E-02	1.36584E+00	1.70730E+00	2.01600E-01	1.38082E-03	2.01600E-01	1.38082E-03	2.69717E-03	1.84738E-05
EGEN	D1C	D1C-CPS-GEN02	EGDC_02	506673.31	5043438.4	62.70	20.42	0.25	29.65	961.48	4.96944E+00	3.40373E-02	1.36584E+00	1.70730E+00	2.01600E-01	1.38082E-03	2.01600E-01	1.38082E-03	2.69717E-03	1.84738E-05
EGEN	D1C	D1C-CPS-GEN03	EGDC_03	506673.31	5043437.6	62.70	20.42	0.25	29.65	961.48	4.96944E+00	3.40373E-02	1.36584E+00	1.70730E+00	2.01600E-01	1.38082E-03	2.01600E-01	1.38082E-03	2.69717E-03	1.84738E-05
EGEN	D1C	D1C-EPS-GEN01	EGDC_04	506673.33	5043513.9	62.70	20.42	0.25	60.19	738.15	2.94541E+00	2.01741E-02	4.13950E-01	5.17437E-01	1.00834E-01	6.90644E-04	1.00834E-01	6.90644E-04	3.91579E-03	2.68205E-05
EGEN	D1C	D1C-EPS-GEN02	EGDC_05	506673.33	5043512	62.70	20.42	0.25	60.19	738.15	2.94541E+00	2.01741E-02	4.13950E-01	5.17437E-01	1.00834E-01	6.90644E-04	1.00834E-01	6.90644E-04	3.91579E-03	2.68205E-05
EGEN	RB1	RB1-EPS-GEN01	EGRB1_01	506638.99	5043634.1	62.70	28.96	0.30	12.51	940.93	8.94771E+00	6.12857E-02	6.15155E-01	7.68943E-01	7.90020E-02	5.41110E-04	7.90020E-02	5.41110E-04	4.39743E-03	3.01194E-05
EGEN	RP1	RP1-EPS-GEN01	EGRP1_01	506651.54	5043269.7	62.70	12.80	0.30	35.67	790.37	4.89258E+00	3.35108E-02	8.74440E-01	1.09305E+00	1.38600E-01	9.49315E-04	1.38600E-01	9.49315E-04	4.35462E-03	2.98262E-05
EGEN	RP1	RP1-GEN-2	EGRP1_02	506651.54	5043267.2	62.70	12.80	0.30	35.67	790.37	4.66502E+00	3.19522E-02	1.97366E+00	2.46708E+00	5.04000E-02	3.45205E-04	5.04000E-02	3.45205E-04	4.35462E-03	2.98262E-05
EGEN	D1D EGEN	EPS-GEN01	EGDD_01	506569.98	5043352.3	62.70	35.05	0.20	62.95	707.65	4.50450E+00	3.08527E-02	6.69060E-01	8.36325E-01	1.38600E-01	9.49315E-04	1.38600E-01	9.49315E-04	4.41119E-03	3.02137E-05
EGEN	D1D EGEN	EPS-GEN02	EGDD_02	506569.98	5043352.3	62.70	35.05	0.20	62.95	707.65	4.50450E+00	3.08527E-02	6.69060E-01	8.36325E-01	1.38600E-01	9.49315E-04	1.38600E-01	9.49315E-04	4.41119E-03	3.02137E-05
EGEN	D1D EGEN	EPS-GEN03	EGDD_03	506569.98	5043352.3	62.70	35.05	0.20	62.95	707.65	4.50450E+00	3.08527E-02	6.69060E-01	8.36325E-01	1.38600E-01	9.49315E-04	1.38600E-01	9.49315E-04	4.41119E-03	3.02137E-05
EGEN	D1D EGEN	EPS-GEN04	EGDD_04	506569.98	5043352.3	62.70	35.05	0.20	62.95	707.65	4.50450E+00	3.08527E-02	6.69060E-01	8.36325E-01	1.38600E-01	9.49315E-04	1.38600E-01	9.49315E-04	4.41119E-03	3.02137E-05
EGEN	D1D EGEN	EPS-GEN05	EGDD_05	506569.98	5043352.3	62.70	35.05	0.20	62.95	707.65	4.50450E+00	3.08527E-02	6.69060E-01	8.36325E-01	1.38600E-01	9.49315E-04	1.38600E-01	9.49315E-04	4.41119E-03	3.02137E-05
EGEN	D1D EGEN	EPS-GEN06	EGDD_06	506569.98	5043352.3	62.70	35.05	0.20	62.95	707.65	4.50450E+00	3.08527E-02	6.69060E-01	8.36325E-01	1.38600E-01	9.49315E-04	1.38600E-01	9.49315E-04	4.41119E-03	3.02137E-05
EGEN	D1D EGEN	D1D-GEN-7	EGDD_07	506569.98	5043352.3	62.70	35.05	0.20	62.95	707.65	4.50450E+00	3.08527E-02	6.69060E-01	8.36325E-01	1.38600E-01	9.49315E-04	1.38600E-01	9.49315E-04	4.41119E-03	3.02137E-05
EGEN	RS4	RS4-ELEC-EG-4-1	EGRS4_01	506001.58	5043791.3	62.70	5.49	0.13	10.92	940.93	1.11878E+00	7.66286E-03	3.23036E-01	4.03795E-01	9.46410E-02	6.48226E-04	9.46410E-02	6.48226E-04	6.86525E-04	4.70223E-06
EGEN	RS6	RS6-ELEC-EG-6-1	EGRS6_01	505987.76	5043560.5	62.70	5.49	0.13	10.92	940.93	1.11878E+00	7.66286E-03	3.23036E-01	4.03795E-01	9.46410E-02	6.48226E-04	9.46410E-02	6.48226E-04	6.86525E-04	4.70223E-06
EGEN	RS6	RS6-GEN-2	EGRS6_02	505987.77	5043558.8	62.70	5.49	0.20	62.95	707.65	4.50450E+00	3.08527E-02	6.69060E-01	8.36325E-01	1.38600E-01	9.49315E-04	1.38600E-01	9.49315E-04	4.41119E-03	3.02137E-05
EGEN	D1X EGEN1	D1X-GEN-1A	EGE1_01	506155.26	5043820.5	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-1B	EGE1_02	506153.79	5043822.3	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-1C	EGE1_03	506160	5043825.7	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-2A	EGE1_04	506158.66	5043827.6	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-2B	EGE1_05	506164.13	5043829.9	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-2C	EGE1_06	506162.5	5043832	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-3A	EGE1_07	506168.77	5043834.3	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-3B	EGE1_08	506185.64	5043852.6	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-3C	EGE1_09	506183.92	5043854	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-4A	EGE1_10	506189.85	5043857.4	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05

EGEN	D1X EGEN1	D1X-GEN-4B	EGE1_11	506188.4	5043858.8	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-5C	EGE1_12	506194.66	5043862	62.70	15.54	0.61	36.84	715.93	6.02317E+00	4.12546E-02	1.41247E-01	1.76559E-01	1.21069E-02	8.29238E-05	1.21069E-02	8.29238E-05	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-4C	EGE1_13	506192.64	5043863.1	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	7.06234E-01	8.82793E-01	8.07125E-02	5.52826E-04	8.07125E-02	5.52826E-04	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-5A	EGE1_14	506199.06	5043866.4	62.70	15.54	0.61	36.84	715.93	6.14881E+00	4.21151E-02	4.73897E-02	5.92371E-02	1.27224E-02	8.71400E-05	1.27224E-02	8.71400E-05	6.52123E-03	4.46659E-05
EGEN	D1X EGEN1	D1X-GEN-5B	EGE1_15	506197.76	5043867.4	62.70	15.54	0.61	36.84	715.93	6.14881E+00	4.21151E-02	4.73897E-02	5.92371E-02	1.90837E-03	1.30710E-05	1.90837E-03	1.30710E-05	6.52123E-03	4.46659E-05
EGEN	D1X EGEN1	D1X-GEN-6A	EGE1_16	506202.67	5043870.6	62.70	15.54	0.61	36.84	715.93	6.14881E+00	4.21151E-02	4.73897E-02	5.92371E-02	1.90837E-03	1.30710E-05	1.90837E-03	1.30710E-05	6.52123E-03	4.46659E-05
EGEN	D1X EGEN1	D1X-GEN-6B	EGE1_17	506201.1	5043871.7	62.70	15.54	0.61	36.84	715.93	6.14881E+00	4.21151E-02	4.73897E-02	5.92371E-02	1.90837E-03	1.30710E-05	1.90837E-03	1.30710E-05	6.52123E-03	4.46659E-05
EGEN	D1X EGEN1	D1X-GEN-6C	EGE1_18	506208.48	5043875.8	62.70	15.54	0.61	36.84	715.93	6.14881E+00	4.21151E-02	4.73897E-02	5.92371E-02	1.90837E-03	1.30710E-05	1.90837E-03	1.30710E-05	6.52123E-03	4.46659E-05
EGEN	D1X EGEN1	D1X-GEN-7A	EGE1_19	506206.28	5043877.6	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	1.41247E-01	1.76559E-01	1.21069E-02	8.29238E-05	1.21069E-02	8.29238E-05	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-7B	EGE1_20	506210.87	5043879	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	1.41247E-01	1.76559E-01	1.21069E-02	8.29238E-05	1.21069E-02	8.29238E-05	5.55336E-03	3.80367E-05
EGEN	D1X EGEN1	D1X-GEN-7C	EGE1_21	506208.89	5043880.9	62.70	15.54	0.51	18.19	715.93	6.02317E+00	4.12546E-02	1.41247E-01	1.76559E-01	1.21069E-02	8.29238E-05	1.21069E-02	8.29238E-05	5.55336E-03	3.80367E-05
EGEN	CUB5	D1X2-GEN-1A	EGC5_01	505880.6	5043410.9	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-1B	EGC5_02	505880.6	5043416.1	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-1C	EGC5_03	505880.6	5043424.3	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-2A	EGC5_04	505880.6	5043432.3	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-2B	EGC5_05	505880.6	5043445.1	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-2C	EGC5_06	505880.6	5043451.2	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-3A	EGC5_07	505880.6	5043456.9	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-3B	EGC5_08	505880.6	5043479.5	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-3C	EGC5_09	505880.6	5043485.6	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-4A	EGC5_10	505880.6	5043491.7	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-4B	EGC5_11	505880.6	5043497.8	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-4C	EGC5_12	505880.6	5043515.2	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-5A	EGC5_13	505880.6	5043521.3	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-5B	EGC5_14	505880.6	5043527.4	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-5C	EGC5_15	505880.6	5043532.8	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-6A	EGC5_16	505880.6	5043527.4	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-6B	EGC5_17	505880.6	5043521.3	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-6C	EGC5_18	505880.6	5043515.2	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-7A	EGC5_19	505880.6	5043497.8	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-7B	EGC5_20	505880.6	5043491.7	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	CUB5	D1X2-GEN-7C	EGC5_21	505880.6	5043485.6	62.70	25.92	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	D1B	F20-EPS-1	EGDB_01	506725.14	5043877.9	62.70	10.67	0.25	38.60	953.71	6.14881E+00	4.21151E-02	4.73897E-02	5.92371E-02	1.90837E-03	1.30710E-05	1.90837E-03	1.30710E-05	6.52123E-03	4.46659E-05
EGEN	D1B	F20-EPS-2	EGDB_02	506725.14	5043875.1	62.70	10.67	0.25	38.60	953.71	6.14881E+00	4.21151E-02	4.73897E-02	5.92371E-02	1.90837E-03	1.30710E-05	1.90837E-03	1.30710E-05	6.52123E-03	4.46659E-05
EGEN	D1B	F20-CPS-1	EGDB_03	506719.91	5043809.6	62.70	13.72	0.25	38.60	953.71	6.08126E+00	4.16525E-02	1.39362E+00	1.74203E+00	6.36331E-02	4.35843E-04	6.36331E-02	4.35843E-04	3.07484E-03	2.10605E-05
EGEN	F15	F15-EG01	EGF15_01	508927.12	5037851.6	69.40	19.66	0.30	23.47	779.82	3.29566E+00	2.25730E-02	1.39432E+00	1.74290E+00	6.36331E-02	4.35843E-04	6.36331E-02	4.35843E-04	3.07637E-03	2.10710E-05
EGEN	F15	F15-EG02	EGF15_02	508928.16	5037851.1	69.40	19.66	0.30	30.09	768.15	3.29566E+00	2.25730E-02	1.39432E+00	1.74290E+00	6.36331E-02	4.35843E-04	6.36331E-02	4.35843E-04	3.07637E-03	2.10710E-05
EGEN	F15	F15-EG03	EGF15_03	508929.2	5037850.5	69.40	19.66	0.30	30.09	768.15	3.29566E+00	2.25730E-02	1.39432E+00	1.74290E+00	6.36331E-02	4.35843E-04	6.36331E-02	4.35843E-04	3.07637E-03	2.10710E-05
EGEN	F5	F15.5-EG01	EGF5_01	509104.57	5037792.7	69.40	20.42	0.30	30.09	768.15	6.92244E+00	4.74140E-02	1.74132E+00	2.17665E+00	7.30800E-02	5.00548E-04	7.30800E-02	5.00548E-04	3.29196E-03	2.25477E-05
EGEN	F5	F15.5-EG02	EGF5_02	509109.61	5037797.5	69.40	20.42	0.30	30.09	768.15	8.84898E+00	6.06095E-02	1.28016E+00	1.60020E+00	6.80400E-02	4.66027E-04	6.80400E-02	4.66027E-04	3.29807E-03	2.25896E-05
EGEN	N2 Plant	N2-GEN-1A	EGN2_01	506274.7	5043906.6	62.70	6.10	0.36	36.83	829.82	9.88533E-01	6.77077E-03	8.36451E-02	1.04556E-01	5.95350E-03	4.07774E-05	5.95350E-03	4.07774E-05	9.22758E-04	6.32026E-06
EGEN	IWW	H2-GEN-1	EGH2_01	506437.39	5044073.8	62.70	7.93	0.22	27.43	770.15	3.64593E-01	2.49721E-03	8.63510E-02	1.07939E-01	3.16620E-03	2.16863E-05	3.16620E-03	2.16863E-05	7.07932E-04	4.84885E-06
EGEN	IWW	IWW-GEN-2	EGIW_01	506152.98	5044046.4	62.70	6.70	0.22	91.83	720.26	6.14881E+00	4.21151E-02	4.73897E-02	5.92371E-02	1.90837E-03	1.30710E-05	1.90837E-03	1.30710E-05	6.52123E-03	4.46659E-05
EGEN	IWW PS	IWW-GEN-1	EGIW_02	506161.38	5044046.5	62.70	5.91	0.22	91.83	720.26	6.14881E+00	4.21151E-02	4.73897E-02	5.92371E-02	1.90837E-03	1.30710E-05	1.90837E-03	1.30710E-05	6.52123E-03	4.46659E-05
EGEN	RS7	IWW-PS-1	EGIW_03	505881.34	5043340.4	62.70	6.70	0.22	91.83	720.26	9.01821E-01	6.17685E-03	1.67781E-02	2.09726E-02	3.14589E-03	2.15472E-05	3.14589E-03	2.15472E-05	1.15440E-03	7.90687E-06
EGEN	H2 Plant	MAX-EGEN	EGRS8_01	507424.81	5043383.9	62.70	2.44	0.10	46.14	940.93	9.01821E-01	6.17685E-03	2.81963E-01	3.52454E-01	1.06055E-02	7.26405E-05	1.06055E-02	7.26405E-05	5.12218E-04	3.50834E-06
EGEN	D1A	D1A-GEN-1	EGDA_01	506754.32	5043977	62.70	23.29	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	D1A	D1A-GEN-2	EGDA_02	506757.32	5043977	62.70	23.29	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	D1A	D1A-GEN-3	EGDA_03	506754.32	5043970	62.70	23.29	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	D1A	D1A-GEN-4	EGDA_04	506757.32	5043970	62.70	23.29	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	D1A	D1A-GEN-5	EGDA_05	506754.32	5043963	62.70	23.29	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	D1A	D1A-GEN-6	EGDA_06	506757.32	5043963	62.70	23.29	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	D1A	D1A-GEN-7	EGDA_07	506754.32	5043956	62.70	23.29	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
EGEN	D1A	D1A-GEN-8	EGDA_08	506757.32	5043956	62.70	23.29	0.51	53.04	716.48	8.56171E+00	5.86419E-02	1.11735E-01	1.39669E-01	1.11585E-02	7.64283E-05	1.11585E-02	7.64283E-05	7.68786E-03	5.26566E-05
LIME	Lime Silo	Lime Silo Combined	LIME	506321.13	5043487	62.70					0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.27710E-02	1.27710E-02	1.27710E-02	1.27710E-02	0.00000E+00	0.00000E+00

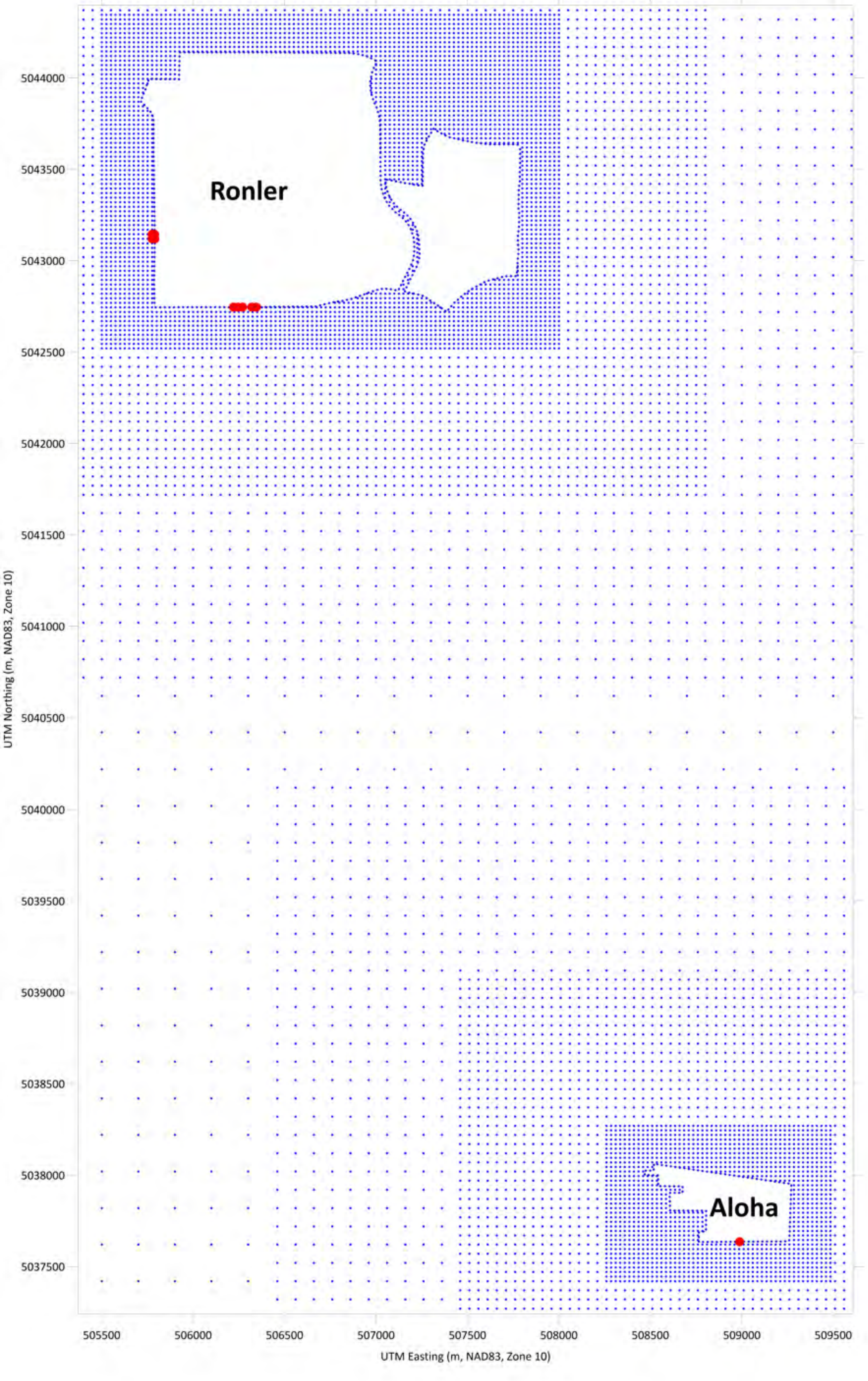
Attachment C

Modeling Support Data


UTM Northing (m, NAD83, Zone 10)
UTM Easting (m, NAD83, Zone 10)
5044200
5044000
5043800
5043600
5043400
5043200
5043000
5042800
5042600
505600
505800
506000
506200
506400
506600
506800
507000
507200
507400
507600
507800



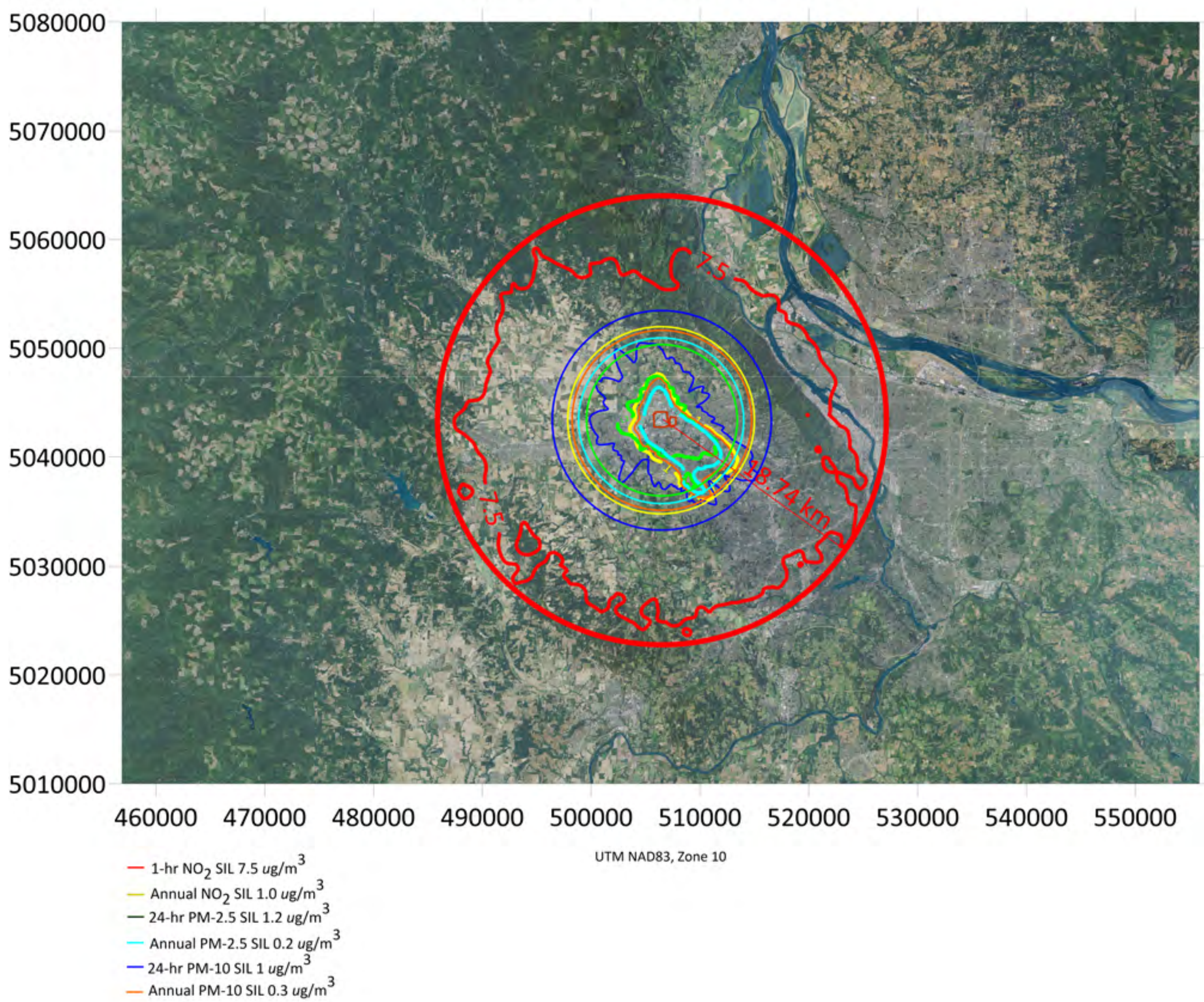
5038100
5038050
5038000
5037950
5037900
5037850
5037800
5037750
5037700
5037650
5037600
5037550
5037500
UTM Northing (m, NAD83, Zone 10)
508500
508600
508700
508800
508900
509000
509100
509200
509300
UTM Easting (m, NAD83, Zone 10)
AL4_1-AL4_3
AL3_1-AL3_6
ALTWR
ALCTTK
CSWCMW
F5_2
F5_3
F15_4
F15_3
F15_2
B5
AS1


Ronler
Aloha
5044000
5043500
5043000
5042500
5042000
5041500
5041000
5040500
5040000
5039500
5039000
5038500
5038000
5037500
UTM Northing (m, NAD83, Zone 10)
505500
506000
506500
507000
507500
508000
508500
509000
509500
UTM Easting (m, NAD83, Zone 10)

Combined SIA

Pollutant	Averaging Period	Class I SIL (ug/m3)	Modeled	Significant (Y/N)	Pollutant	Averaging Period	Class II SIL (ug/m3)	Modeled	Significant (Y/N)	Max Distance (m)	Number of Receptors within SIL Radius	Receptors Falling Within SIL Radius File Name	Number of Receptors Exceeding SIL	Receptors Exceeding SIL File Name
CO	1-HR	-	-	-	CO	1-HR	2000	708.8	N	-	-	-	-	-
CO	8-HR	-	-	-	CO	8-HR	500	199.6	N	-	-	-	-	-
SO2	1-HR	-	-	-	SO2	1-HR	7.8	46.1	Y	-	-	-	-	-
SO2	24-HR	0.2	0.0164	N	SO2	24-HR	5	20.1	Y	-	-	-	-	-
SO2	Annual	0.1	0.0016	N	SO2	Annual	1	3.8	Y	-	-	-	-	-
PM10	24-HR	0.3	0.0619	N	PM10	24-HR	1	9.3	Y	10224.2	19936	Intel-Hillsboro-24HR-PM10-Radius.ROU	16594	Intel-Hillsboro-24HR-PM10-Exceed.ROU
PM10	Annual	0.2	0.0062	N	PM10	Annual	0.2	2.1	Y	8233.0	18644	Intel-Hillsboro-ANNUAL-PM10-Radius.ROU	12690	Intel-Hillsboro-ANNUAL-PM10-Exceed.ROU
PM25	24-HR	0.27	0.0374	N	PM25	24-HR	1.2	7.4	Y	6941.5	19874	Intel-Hillsboro-24HR-PM25-Radius.ROU	10475	Intel-Hillsboro-24HR-PM25-Exceed.ROU
PM25	Annual	0.05	0.0049	N	PM25	Annual	0.3	1.7	Y	6952.0	16892	Intel-Hillsboro-ANNUAL-PM25-Radius.ROU	6451	Intel-Hillsboro-ANNUAL-PM25-Exceed.ROU
NO2	1-HR	-	-	-	NO2	1-HR	7.5	128.2	Y	18709.2	21662	INTEL-1STSIL-1HR-NO2-Radius.ROU	21599	INTEL-1STSIL-1HR-NO2-Exceed.ROU
NO2	Annual	0.1	0.0376	N	NO2	Annual	1	13.3	Y	8531.5	18899	Intel-Hillsboro-ANNUAL-NO2-Radius.ROU	13709	Intel-Hillsboro-ANNUAL-NO2-Exceed.ROU

Criteria Pollutant
Isopleth and Significant Impact Areas



MERP Qlik Data

State	County	Metric	Precursor	Emissions	Stack	MERP	MaxConc
Oregon	Morrow	8-hr Ozone	NOx	500	10	258	1.939568996
Oregon	Morrow	8-hr Ozone	VOC	500	10	1087	0.460180402
Oregon	Morrow	Annual PM2.5	NOx	500	10	7942	0.012590836
Oregon	Morrow	Annual PM2.5	SO2	500	10	11877	0.008419393
Oregon	Morrow	Daily PM2.5	NOx	500	10	3003	0.199790135
Oregon	Morrow	Daily PM2.5	SO2	500	10	2314	0.259274006

MERP Qlik Distance Corrected Data

State	County	Distance	Metric	Precursor	Emissions	Stack	Concentration
Oregon	Morrow	10	Daily PM2..	NOx	500	10	0.19979
Oregon	Morrow	10	Daily PM2..	SO2	500	10	0.259274
Oregon	Morrow	20	Daily PM2..	NOx	500	10	0.169711
Oregon	Morrow	20	Daily PM2..	SO2	500	10	0.258138
Oregon	Morrow	40	Daily PM2..	NOx	500	10	0.143349
Oregon	Morrow	40	Daily PM2..	SO2	500	10	0.183953
Oregon	Morrow	60	Daily PM2..	NOx	500	10	0.132754
Oregon	Morrow	60	Daily PM2..	SO2	500	10	0.186308
Oregon	Morrow	80	Daily PM2..	NOx	500	10	0.096651
Oregon	Morrow	80	Daily PM2..	SO2	500	10	0.16239
Oregon	Morrow	100	Daily PM2..	NOx	500	10	0.078512
Oregon	Morrow	100	Daily PM2..	SO2	500	10	0.128952
Oregon	Morrow	120	Daily PM2..	NOx	500	10	0.05442
Oregon	Morrow	120	Daily PM2..	SO2	500	10	0.094666
Oregon	Morrow	140	Daily PM2..	NOx	500	10	0.04506
Oregon	Morrow	140	Daily PM2..	SO2	500	10	0.082554
Oregon	Morrow	160	Daily PM2..	NOx	500	10	0.03768
Oregon	Morrow	160	Daily PM2..	SO2	500	10	0.06921
Oregon	Morrow	180	Daily PM2..	NOx	500	10	0.030171
Oregon	Morrow	180	Daily PM2..	SO2	500	10	0.054444
Oregon	Morrow	200	Daily PM2..	NOx	500	10	0.025453
Oregon	Morrow	200	Daily PM2..	SO2	500	10	0.04928
Oregon	Morrow	220	Daily PM2..	NOx	500	10	0.026368
Oregon	Morrow	220	Daily PM2..	SO2	500	10	0.049355
Oregon	Morrow	240	Daily PM2..	NOx	500	10	0.022697
Oregon	Morrow	240	Daily PM2..	SO2	500	10	0.049382
Oregon	Morrow	260	Daily PM2..	NOx	500	10	0.01716
Oregon	Morrow	260	Daily PM2..	SO2	500	10	0.046912
Oregon	Morrow	280	Daily PM2..	NOx	500	10	0.013974
Oregon	Morrow	280	Daily PM2..	SO2	500	10	0.042476
Oregon	Morrow	300	Daily PM2..	NOx	500	10	0.013349
Oregon	Morrow	300	Daily PM2..	SO2	500	10	0.039629
Oregon	Morrow	10	Annual PM	NOx	500	10	0.010718
Oregon	Morrow	10	Annual PM	SO2	500	10	0.005588
Oregon	Morrow	20	Annual PM	NOx	500	10	0.012591
Oregon	Morrow	20	Annual PM	SO2	500	10	0.008419
Oregon	Morrow	40	Annual PM	NOx	500	10	0.007258
Oregon	Morrow	40	Annual PM	SO2	500	10	0.004916
Oregon	Morrow	60	Annual PM	NOx	500	10	0.00529
Oregon	Morrow	60	Annual PM	SO2	500	10	0.00371
Oregon	Morrow	80	Annual PM	NOx	500	10	0.004619
Oregon	Morrow	80	Annual PM	SO2	500	10	0.003168
Oregon	Morrow	100	Annual PM	NOx	500	10	0.003881
Oregon	Morrow	100	Annual PM	SO2	500	10	0.00288
Oregon	Morrow	120	Annual PM	NOx	500	10	0.003419

Oregon	Morrow	120	Annual PM SO2	500	10	0.002564
Oregon	Morrow	140	Annual PM NOx	500	10	0.002956
Oregon	Morrow	140	Annual PM SO2	500	10	0.0024
Oregon	Morrow	160	Annual PM NOx	500	10	0.002599
Oregon	Morrow	160	Annual PM SO2	500	10	0.002372
Oregon	Morrow	180	Annual PM NOx	500	10	0.002163
Oregon	Morrow	180	Annual PM SO2	500	10	0.002181
Oregon	Morrow	200	Annual PM NOx	500	10	0.001741
Oregon	Morrow	200	Annual PM SO2	500	10	0.002163
Oregon	Morrow	220	Annual PM NOx	500	10	0.001652
Oregon	Morrow	220	Annual PM SO2	500	10	0.002284
Oregon	Morrow	240	Annual PM NOx	500	10	0.001515
Oregon	Morrow	240	Annual PM SO2	500	10	0.002291
Oregon	Morrow	260	Annual PM NOx	500	10	0.001374
Oregon	Morrow	260	Annual PM SO2	500	10	0.002255
Oregon	Morrow	280	Annual PM NOx	500	10	0.001086
Oregon	Morrow	280	Annual PM SO2	500	10	0.002123
Oregon	Morrow	300	Annual PM NOx	500	10	0.000935
Oregon	Morrow	300	Annual PM SO2	500	10	0.001945

REGION	FIPS COUI	COUNTY (	COUNTY NAME	SourceNu	SourceName	Address	City	Zip Code	LatitudeC	Longitude	UTM-e(m)	UTM-n(m)	Distance	COPSEL(tp	CO Comb	NOXPSEL(t	NOx Comb	PM10PSEL	PM10 Com	PM25PSEL	PM25 Com	SO2PSEL(t	SO2 Comb	VOCPSEL(t	CO ROI	CO Ratio	NOx ROI	NOx Ratio	PM10 ROI	PM10 Rati	PM25 ROI	PM25 Rati	SO2 ROI	SO2 Ratio	CO Sig	NOx Sig	PM10 Sig	PM25 Sig	SO2 Sig	PermitTyp	Operating	SourceID	EIProjectID
NWR	41067	34	WASHINGTON	34-2813	Jireh Semiconductor Incorporated	3131 NE BROOKWOOD PKWY	HILLSBORO	97124	45.5465	-122.931	505418	5043665	0.995766	99		39	289							39			57.8	1.72E-02							No	Yes	No	No	No	Standard	Active	2050	9
NWR	41067	34	WASHINGTON	34-0157	STACK Infrastructure, Inc.	3145 NE BROOKWOOD PKWY	HILLSBORO	97124-5303	45.5471	-122.929	505464	5044054	1.087664	99		39	289	14		9		39		39			57.8	1.88E-02							No	Yes	No	No	No	Simple	Active	5569	9
NWR	41067	34	WASHINGTON	34-0017	Dynic USA Corp.	4750 NE DAWSON CREEK DR	HILLSBORO	97124	45.5467	-122.933	505254	5043687	1.161157	99		39	289							39			57.8	2.01E-02							No	Yes	No	No	No	Simple	Active	1831	9
NWR	41067	34	WASHINGTON	34-0241	Flexential Colorado Corp	5737 NE Huffman Street	Hillsboro	97124	45.557	-122.923	506033.1	5044832	1.381586	99		39	289										57.8	2.39E-02							No	Yes	No	No	No	Simple	Active	6208	9
NWR	41067	34	WASHINGTON	34-0183	STACK Infrastructure, Inc.	8135 NE Evergreen Pkwy	Hillsboro	97124	45.5509	-122.921	507845	5043656	1.453396	99		39	289	14		9		39		39			57.8	2.51E-02							No	Yes	No	No	No	Simple	Active	5818	9
NWR	41067	34	WASHINGTON	34-2790	Tokyo Ohka Kogyo America, Inc.	4600 NW Brookwood Pkwy	HILLSBORO	97124	45.5519	-122.924	505760	5044854	1.497637			39	289							39			57.8	2.59E-02							No	Yes	No	No	No	Simple	Active	2037	9
NWR	41067	34	WASHINGTON	34-0222	QTS Investment Properties Hillsboro, LLC	4951 NE Huffman St	Hillsboro	97124	45.5571	-122.927	505681.9	5044843	1.522728	99		39	289	14		9							57.8	2.63E-02							No	Yes	No	No	No	Standard	Active	6085	9
NWR	41067	34	WASHINGTON	34-0055	Qorvo US, Inc.	2300 NE BROOKWOOD PKWY	HILLSBORO	97124	45.5413	-122.937	504887	5043087	1.568355	99		39	289							39			57.8	2.71E-02							No	Yes	No	No	No	Standard	Active	1867	9
NWR	41067	34	WASHINGTON	34-9507	Genentech, Inc.	4625 NW Brookwood Parkway	HILLSBORO	97124-9332	45.5572	-122.926	505463	5045165	1.910548	99		39	289	14		9				39			57.8	3.31E-02							No	Yes	No	No	No	Simple	Active	3071	9
NWR	41067	34	WASHINGTON	34-0186	Beaver Ventures LLC	6675 NE 62nd Ave	Hillsboro	97124	45.566	-122.916	506555	5045832	2.337533	99		39	289	14		9		39		39			57.8	4.04E-02							No	Yes	No	No	No	Simple	Active	5845	9
NWR	41067	34	WASHINGTON	34-0238	KoMiCo Hillsboro LLC	6231 NE Croeni Ave	Hillsboro	97124	45.5649	-122.906	507366.7	5045711	2.413165	99		39	289							39			57.8	4.18E-02							No	Yes	No	No	No	Simple	Active	6192	9
NWR	41067	34	WASHINGTON	34-0235	NTT Global Data Centers HI, LLC	4050 NE Evergreen Road	Hillsboro	97124	45.55	-122.973	502131	5044052	4.30454	99		39	289										57.8	7.45E-02							No	Yes	No	No	No	Standard	Active	6165	9
NWR	41067	34	WASHINGTON	34-2753	Clean Water Services	3235 SW RIVER ROAD	HILLSBORO	97123	45.4977	-122.949	503906	5038498	5.589279	99		52	302	14				39		39			60.4	9.25E-02							No	Yes	No	No	No	Standard	Active	2003	9
NWR	41067	34	WASHINGTON	34-0004	Hillsboro Landfill Inc.	3205 SE MINTER BRIDGE ROAD	HILLSBORO	97123	45.493	-122.97	502344	5037386	7.337038	99		39	289	14		9		97		39			57.8	0.126938							No	Yes	No	No	No	Standard	Active	1818	9
NWR	41067	34	WASHINGTON	34-2804	Analog Devices, Inc.	14320 SW JENKINS RD	BEAVERTON	97005-1155	45.5021	-122.825	513703	5038745	8.714576	99		39	289	14		9				75			57.8	0.150771							No	Yes	No	No	No	Standard	Active	2041	9
NWR	41067	34	WASHINGTON	34-2638	Tektronix, Inc.	14150 SW KARL BRAUN DR	BEAVERTON	97077	45.499	-122.818	514063	5038512	9.143397	99		58	308	14		9		99		39			61.6	0.148432							No	Yes	No	No	No	Standard	Active	1951	9
NWR	41067	34	WASHINGTON	34-2783	Bimbo Bakeries USA, Inc.	10750 SW 5TH ST	BEAVERTON	97005	45.4831	-122.787	516615	5036641	12.30415	99		39	289	14		9				57			57.8	0.212875							No	Yes	No	No	No	Standard	Active	2030	9
NWR	41051	26	MULTNOMAH	26-3067	Owens Corning Roofing and Asphalt, LLC	11910 NW SAINT HELENS RD	PORTLAND	97231-2306	45.6061	-122.789	516375	5050739	12.32492	157		39	289	14		9		106		39			57.8	0.213234							No	Yes	No	No	No	Title V	Active	1333	9
NWR	41067	34	WASHINGTON	34-0009	International Paper Company	5500, 5570, & 5800 SW WESTERI	BEAVERTON	97005-4116	45.4801	-122.782	517194	5036298	12.9761			39	289					39		39			57.8	0.2245							No	Yes	No	No	No	Simple	Active	1823	9
NWR	41051	26	MULTNOMAH	26-3002	Siltronic Corporation	7200 NW FRONT AVE	PORTLAND	97210-3676	45.5775	-122.755	519099	5047136	13.20928	99		83	333	12		12				54			66.6	0.198338							No	Yes	No	No	No	Standard	Active	1299	9
NWR	41067	34	WASHINGTON	34-2678	TTM Technologies North America, LLC	1521 POPLAR LN	FOREST GROVE	97116-2033	45.5134	-123.081	493642	5039988	13.23256	99		39	289							39			57.8	0.228937							No	Yes	No	No	No	Simple	Active	1971	9
NWR	41051	26	MULTNOMAH	26-2492	Northwest Pipe Company	12005 N BURGARD WAY	PORTLAND	97203	45.609	-122.773	517669	5050631	13.33572			39	289	28		18				95			57.8	0.230722							No	Yes	No	No	No	Title V	Active	1193	9
NWR	41051	26	MULTNOMAH	26-1891	Ash Grove Cement Company	13939 N RIVERGATE BLVD	PORTLAND	97203	45.6229	-122.784	517151	5051852	13.61396	99		39	289	42		21		39		39			57.8	0.235536							No	Yes	No	No	No	Standard	Active	1119	9
NWR	41051	26	MULTNOMAH	26-1889	J. R. Simplot Company	14003 N RIVERGATE BLVD	PORTLAND	97203-6514	45.6248	-122.785	516745	5052384	13.63615	99		39	289	14		9							57.8	0.235919							No	Yes	No	No	No	Standard	Active	1117	9
NWR	41051	26	MULTNOMAH	26-0386	Hexion Inc.	10915 N LOMBARD ST	PORTLAND	97203	45.6055	-122.766	518270.9	5050244	13.65285	99		39	289							39			57.8	0.236208							No	Yes	No	No	No	Simple	Active	6176	9
NWR	41051	26	MULTNOMAH	26-2025	Zenith Energy Terminals Holdings, LLC	5501 NW FRONT AVE	PORTLAND	97210-1115	45.5607	-122.737	520291	5045195	13.99403	99		77	327	14				81		179			65.4	0.213976							No	Yes	No	No	No	Title V	Active	1148	9
NWR	41051	26	MULTNOMAH	26-2028	Kinder Morgan Liquids Terminals LLC	5880 NW ST HELENS RD	PORTLAND	97210-1146	45.5625	-122.744	520291	5045195	13.99403	99		44	294	14				104		236			58.8	0.237994							No	Yes	No	No	No	Title V	Active	1151	9
NWR	41051	26	MULTNOMAH	26-2043	CertainTeed Corporation	6350 NW FRONT AVE	PORTLAND	97210	45.568	-122.743	520288	5046306	14.16863	99		39	289	24		9		39		60			57.8	0.245132							No	Yes	No	No	No	Standard	Active	1154	9
NWR	41051	26	MULTNOMAH	26-1865	EVRAZ Inc. NA	14400 N RIVERGATE BLVD	PORTLAND	97203	45.6256	-122.779	517148	5052963	14.32019	823		493	743	340		209		39		131			148.6	0.096367							No	Yes	No	No	No	Title V	Active	1109	9
NWR	41051	26	MULTNOMAH	26-0368	Cintas Corporation No. 3	9045 N RAMSEY BLVD	PORTLAND	97203	45.6242	-122.77	517929.6	5052321	14.51674	99		39	289	14		9				39			57.8	0.251155							No	Yes	No	No	No	Simple	Active	6097	9
NWR	41051	26	MULTNOMAH	26-3310	Metropolitan Service District	9363 N COLUMBIA BLVD	PORTLAND	97203-1048	45.6142	-122.752	519494	5050748	14.96617	99		39	289	14		9		39		39			57.8	0.25893							No	Yes	No	No	No	Title V	Active	1432	9
NWR	41051	26	MULTNOMAH	26-1815	Owens Corning Roofing and Asphalt, LLC	3750 NW YEON AVE	PORTLAND	97210	45.5493	-122.719	521856	5044089	15.46722	99		39	289	99				0		46			57.8	0.267599							No	Yes	No	No	No	Standard	Active	1100	9
NWR	41051	26	MULTNOMAH	26-2944	Gunderson LLC	4350 NW FRONT AVE	PORTLAND	97210	45.5536	-122.72	521894	5044512	15.52701			39	289	108		108				300			57.8	0.268633							No	Yes	No	No	No	Title V	Active	1281	9
NWR	41051	26	MULTNOMAH	26-2197	Daimler Trucks North America, LLC	6936 N FATHOM ST	PORTLAND	97217	45.5728	-122.715	521848	5046311	15.70167	99		39	289	14				39		470			57.8	0.271655							No	Yes	No	No	No	Title V	Active	1171	9
NWR	41051	26	MULTNOMAH	26-3224	Vigor Industrial, LLC	5555 N CHANNEL AVE Bldg 71	PORTLAND	97217-7655	45.5625	-122.716	521848	5046311	15.70167	99		39	289	124				39		464			57.8	0.271655							No	Yes	No	No	No	Title V	Active	1360	9
NWR	41051	26	MULTNOMAH	26-1885	Zinkpower-Portland LLC	2406 NW 30TH AVE	PORTLAND	97210-2014	45.5394	-122.712	522469	5042903	16.08009	99		39	289	14		9							57.8	0.278202							No	Yes	No	No	No	Simple	Active	1115	9
NWR	41051	26	MULTNOMAH	26-1814	Solenis LLC	3366 NW YEON AVE	PORTLAND	97210	45.5473	-122.709	522637	5044092	16.24779	99		39	289	14		9		55		39			57.8	0.281104							No	Yes	No	No	No	Standard	Active	1099	9
NWR	41051	26	MULTNOMAH	26-0100	City of Portland,Bureau of Environmental	5001 N. COLUMBIA BLVD.	PORTLAND	97203	45.5965	-122.718	521837	5049644	16.61474	99		39	289	14		9		39		51			57.8	0.287452							No	Yes	No	No	No	Standard	Active	1021	9
NWR	41051	26	MULTNOMAH	26-2068	ESCO Group, LLC	2141 NW 25TH AVE	PORTLAND	97210	45.5428	-122.7	523421	5042984	17.02882	283		41	291	30		30		39		59			58.2	0.292591							No	Yes	No	No	No	Title V	Active	1161	9
NWR	41051	26	MULTNOMAH	26-1894	Herbert Malarkey Roofing Company	3131 N COLUMBIA BLVD	PORTLAND	97217-7472	45.5911	-122.7	523401	5048539	17.73205	99		39	289	14				39		56			57.8	0.306783							No	Yes	No	No	No	Standard	Active	1121	9
NWR	41051	26	MULTNOMAH	26-3048	Oil Re-Refining Company Inc.	4150 N SUTTLE RD	PORTLAND	97217-7717	45.6135	-122.711	522613	5050758	17.76344	99		39	289	14		9		39		39			57.8	0.307326							No	Yes	No	No	No	Standard	Active	1322	9
NWR	41067	34	WASHINGTON	34-9514	Regenvo LLC	13240 SW Wall St	Portland	97223	45.4256	-122.759	518751	5030570	17.88105	99		39	289							39			57.8	0.309361							No	Yes	No	No	No	Simple	Active	3233	9
NWR	41051	26	MULTNOMAH	26-2832	Portland State University	1900 SW 4th Ave	PORTLAND	97201	45.5098	-122.681	524215	5039654	18.22542	99		39	289	14				39		39			57.8	0.315319							No	Yes	No	No	No	Simple	Active	1264	9
NWR	41051	26	MULTNOMAH	26-2390	Supreme Perlite Company	4600 N SUTTLE RD	PORTLAND	97217	45.6157	-122.715	522609	5051869	18.24204	99		39	289	14		9		39					57.8	0.315606							No	Yes	No	No	No	Simple	Active	1179	9
NWR	41051	26	MULTNOMAH	26-2777	Graphic Packaging International, Inc	3400 N MARINE DR	PORTLAND	97217	45.6119	-122.702	523392	5050761	18.47837	99		39	289	21		21		39		350			57.8	0.319695							No	Yes	No	No	No	Title V	Active	1248	9
NWR	41051	26	MULTNOMAH	26-3009	Arclin Surfaces, Inc.	2301 N COLUMBIA BLVD	PORTLAND	97217-6954	45.5888	-122.691	524181	5048542	18.48204	99		45	295	9		9		39		400			59	0.313255							No	Yes	No	No	No	Title V	Active	1303	9
NWR	41051	26	MULTNOMAH	26-2050	Oregon Health and Sciences University	3181 SW SAM JACKSON PARK RD	PORTLAND	97239	45.4995	-122.685	524219	5038543	18.49564	99		83	333	14		9		39		39			66.6	0.277712							No	Yes	No	No	No	Title V	Active	1157	9
NWR	41051	26	MULTNOMAH	26-3021	EcoLube Recovery LLC	11535 N FORCE AVE	PORTLAND	97217	45.6062	-122.694	524172	5050764	19.19921	99		39	289	14		9		39		39			57.8	0.332166							No	Yes	No	No	No	Standard	Active	1309	9
NWR	41051	26	MULTNOMAH	26-0285	Portland General Electric Company	26 SW SALMON ST	PORTLAND	97204	45.5153	-122.672	525400	5040303	19.26709	99		39	289										57.8	0.333341							No	Yes	No	No	No	Simple	Active	5813	9
NWR	41051	26	MULTNOMAH	26-2968	Mondelez Global LLC	100 NE COLUMBIA BLVD	PORTLAND	97211	45.5818	-122.664	525745	5047437	19.74156	99		39	289					39		54			57.8	0.341549							No	Yes	No	No	No	Standard	Active	1290	9
NWR	41067	34	WASHINGTON	34-0063	Lam Research Corporation	11155 SW LEVETON DR	TUALATIN	97062	45.386	-122.792	516283	5025853	20.22598	99		39	289							39			57.8	0.34993							No	Yes	No	No	No	Simple	Active	1875	9
NWR	41067	34	WASHINGTON	34-2623	Clean Water Services	16580 SW 85TH AVE	TIGARD	97224-5500	45.4008	-122.762	518784	5027415	20.30002	99		62	312	14		9		39		43			62.4	0.325321							No	Yes	No	No	No	Standard	Active	1941	9
NWR	41051	26	MULTNOMAH	26-2952	United States Bakery	340 NE 11TH AVE	PORTLAND	97232-2755	45.5257	-122.655	526981	5041410	20.68685	99		39	289							96			57.8	0.357904							No	Yes	No	No	No	Standard	Active	1283	9
NWR	41067	34	WASHINGTON	34-0005	Valmont Coatings, Inc.	9700 SW HERMAN RD	TUALATIN	97062-8151	45.3839	-122.778	517388	5025622	20.98473	99		39	289	14									57.8	0.363058							No	Yes	No	No	No	Simple	Active	1819	9
NWR	41051	26	MULTNOMAH	26-9550	Portland General Electric Company	3700 SE 17TH AVE	PORTLAND	97202-3833	45.4959	-122.648	527526	5038068	21.81317	99		39	289	14		9		39		39			57.8	0.377391							No	Yes	No	No	No	Simple	Active	3251	9
NWR	41067	34	WASHINGTON	34-0149	Portland General Electric Company	10800 SW AVERY ST	TUALATIN	97062-8585	45.3716	-122.788	516444	5024075	21.86807	99		39	289	14		9		39		39			57.8	0.37834							No	Yes	No	No	No	Simple	Active	5427	9
NWR	41051	26	MULTNOMAH	26-3135	Bullseye Glass Co.	3722 SE 21ST AVE	PORTLAND	97202	45.4961	-122.645	528126	5038560	22.28054	99		39	289	14		9		39		39			57.8	0.385477							No	Yes	No	No	No	Title V	Active	1358	9
NWR	41067	34	WASHINGTON	34-0134	Ardent Mills, LLC	21151 SW 115TH AVE	TUALATIN	97062-6959	45.3667	-122.785	516845	5023710	22.37727	99		39	289							39			57.8	0.38715							No	Yes	No	No	No	Simple	Active	5293	9
NWR	41067	34	WASHINGTON	34-2066	Stimson Lumber Company	49800 SW SCOGGINS VALLEY RD	GASTON	97119	45.4673	-123.188	485148	5035181	22.82221	168		118	368	140				39		165			73.6	0.310084							No	Yes	No	No	No	Title V	Active	1911	9
NWR	41051	26	MULTNOMAH	26-3291	The Boeing Company	4635 NE CORNFOOT RD	PORTLAND	97218-1291	45.5779	-122.614	530426	5047458	24.34983	99		39	289	14		9		39		39			57.8	0.421277							No	Yes	No	No	No	Standard	Active	1416	9
NWR	41051	26	MULTNOMAH	26-3241	Hydro Extrusion Portland, Inc.	5325 NE SKYPORT WAY	PORTLAND	97218-1243	45.5755	-122.608	530569	5046959	24.41527	99		39	289							39			57.8	0.422409							No	Yes	No	No	No	Standard	Active	1372	9
NWR	41005	3	CLACKAMAS	03-0010	Water Environment Services	11525 SE MCLOUGHLIN BLVD	MILWAUKIE	97222	45.4404	-122.64	528156	5031894	24.65812	99		39	289					39		39			57.8	0.426611							No	Yes	No	No	No	Simple	Active	1542	9
NWR	41051	26	MULTNOMAH	26-3317	Silver Eagle Manufacturing Co.	5825 NE SKYPORT WAY	PORTLAND	97218-1249	45.574	-122.6	531210	5046796	25.02798	99		39	289							39			57.8	0.43301							No	Yes	No	No	No	Standard	Active	1439	9
NWR	41051	26	MULTNOMAH	26-3254	Oregon Air National Guard	6801 NE CORNFOOT RD	PORTLAND	97218-2797	45.5749	-122.591	531992	5046355	25.75076	99		39	289	14				39		39			57.8	0.445515							No	Yes	No	No	No	Standard	Active	1383	9
NWR	41051	26	MULTNOMAH	26-1867	PCC Structurals, Inc.	4600 SE HARNEY DR	PORTLAND	97206-0825	45.4623	-122.614	530491	5034127	25.85013	99		58	308	54				39		99			61.6	0.419645							No	Yes	No	No	No	Standard	Active	1110	9
NWR	41051	26	MULTNOMAH	26-2914	Port of Portland	7200 NE AIRPORT WAY	PORTLAND	97218	45.5871	-122.589	531981	5048577	26.07994	99		46	296	14		9		39		39			59.2	0.44054							No	Yes	No	No	No	Standard	Active	1272	9
NWR	41005	3	CLACKAMAS	03-2624	Blount, Inc.	4909 SE INTERNATIONAL WAY	MILWAUKIE	97222-0080	45.4356	-122.613	530293	5031415	26.77541	99		39	289	14		9				39			57.8	0.463242							No	Yes	No	No	No	Simple	Active	1620	9
NWR	41005	3	CLACKAMAS	03-0093	Dave's Killer Bread, Inc.	5209 SE INTERNATIONAL WAY	MILWAUKIE	97222-4603	45.4331	-122.611	530459	5031138	27.04911	99		39	289							39			57.8	0.467978							No	Yes	No	No	No	Standard	Active	5373	9
NWR	41051	26	MULTNOMAH	26-1876	Owens Brockway Glass Container Inc.	9710 NE Glass Plant Road	PORTLAND	97220	45.5631	-122.565	534339	5045256	27.99413	99		382	632	109		100		184		39			126.4	0.221473							No	Yes	No	No	No	Title V	Active	1114	9
WR	41071	36	YAMHILL	36-9504	City of Newberg	2301 WYNOOSKI ROAD	NEWBERG	97132	45.2858	-122.953	503921	5015168	28.44025	99		39	289	14				39		39			57.8	0.492046							No	Yes	No	No	No	Simple	Active	3115	9
NWR	41005	3	CLACKAMAS	03-0020	PCC Structurals, Inc.	13350 SE JOHNSON RD	MILWAUKIE	97222-1289	45.4265	-122.582	532692	5030416	29.36767	99		39	289	14						39			57.8	0.508091							No	Yes	No	No	No	Standard	Active	1552	9
NWR	41005	3	CLACKAMAS	03-2674	PCC Structurals, Inc.	13340 SE 84TH	CLACKAMAS	97015	45.4261	-122.57	533623	5030376	30.22137	99		39	289	14						39			57.8	0.522861							No	Yes	No	No	No	Standard	Active	1641	9
NWR	41005	3	CLACKAMAS	03-0011	Water Environment Services	15941 AGNES AVE	OREGON CITY	97045-1003	45.3759	-122.589	532100	5025247	31.5224	99		39	289					39		39			57.8	0.54537							No	Yes	No	No	No	Simple	Active	1543	9
NWR	41005	3	CLACKAMAS	03-2145	Willamette Falls Paper Company, Inc.	4800 MILL ST	WEST LINN	97068-3357	45.3564	-122.615	530124	5022615	31.60714	99		396	646	84		84		743		161			129.2	0.244637							No	Yes	No	No	No	Title V	Active	1603	9
WR	41071	36	YAMHILL	36-0041	M & W Fiberglass, Inc.	20929 NE NIEDERBERGER ROAD	DUNDEE	97115	45.274	-123.046	496078	5012946	32.25044	99		39	289	14		9		39		39			57.8	0.557966							No	Yes	No	No	No	Simple	Active	5474	9
NWR	41005	3	CLACKAMAS	03-2738	Consolidated Metco, Inc.	10448 HWY 212	CLACKAMAS	97015	45.4074	-122.555	534862	5028305	32.26412	99		39	289	14									57.8	0.558203							No	Yes	No	No	No	Simple	Active	1661	9
NWR	41005	3	CLACKAMAS	03-2754	Albertson's LLC	9450 SE MANGAN DR	CLACKAMAS	97015-9576	45.3997	-122.559	534484	5027448	32.34776	99		39	289							76			57.8	0.55965							No	Yes	No	No	No	Standard	Active	1673	9
NWR	41005	3	CLACKAMAS	03-0004	Fred Meyer, Inc.	16253 SE 122ND AVE	CLACKAMAS	97015-9136	45.4048	-122.539	536069	5028023	33.46322	99		39	289							58			57.8	0.578948							No	Yes	No	No	No	Standard	Active	1536	9
WR	41047	24	MARION	24-0148	Columbia Helicopters, Inc.	14452 ARNDT RD NE	AURORA	97002	45.2587	-122.765	518045	5011859	33.71586	99		39	289	14		9		39		39			57.8	0.583319							No	Yes	No	No	No	Simple	Active	5568	9
NWR	41051	26	MULTNOMAH	26-0289	Portland Specialty Baking LLC	3423 NE 172ND PLACE	PORTLAND	97230	45.5463	-122.486	540140	5043769	33.74107	99		39	289	14		9		39		39			57.8	0.583756							No	Yes	No	No	No	Simple	Active	5836	9
NWR	41051	26	MULTNOMAH	26-3267	U.S. Bancorp	17650 NE SANDY BLVD	PORTLAND	97230	45.5465	-122.481	540590	5044183	34.19682	99		39	289					39					57.8	0.591641							No	Yes	No	No	No	Simple	Active	1396	9
NWR	41051	26	MULTNOMAH	26-9537	Owens Corning Foam Insulation, LLC	18456 NE WILKES RD	PORTLAND	97230	45.5401	-122.473	541089	5043142	34.69085	99		39	289	14		9				39			57.8	0.600188							No	Yes	No	No	No	Standard	Active	3067	9
NWR	41051	26	MULTNOMAH	26-0238	Graphic Packaging International, Inc.	18683 NE SANDY BLVD	GRESHAM	97230-6807	45.5456	-122.47	541343	5043699	34.94357	99		39	289							39			57.8	0.60456							No	Yes	No	No	No	Simple	Active	5368	9
NWR	41051	26	MULTNOMAH	26-3051	International Paper Company	1601 NE 192ND AVE	PORTLAND	97230-7095	45.5346	-122.468	541385	5041966	35.01861	99		39	289	14		9		39		39			57.8	0.605858							No	Yes	No	No	No	Simple	Active	1325	9
NWR	41009	5	COLUMBIA	05-1849	Cascade Tissue Group-Oregon	1300 Kaster Rd	Saint Helens	97051	45.8502	-122.812	515528	5077401	35.10838	106		103	353	14		9		39		140			70.6	0.497286							No	Yes	No	No	No	Title V	Active	2769	9
NWR	41051	26	MULTNOMAH	26-2204	Boeing Company (The)	19000 NE SANDY BLVD	PORTLAND	97230-6810	45.5431	-122.465	541735	5043424	35.33508	99		39	289	14		9		39		39			57.8	0.611334							No	Yes	No	No	No	Standard	Active	1172	9
NWR	41005	3	CLACKAMAS	03-2505	Orchid Orthopedic Solutions Oregon, Inc	13963 S FIR ST	OREGON CITY	97045-8299	45.3296	-122.581	532865	5019651	35.62543			39	289	14		9							57.8	0.616357							No	Yes	No	No	No	Simple	Active	1609	9
NWR	41005	3	CLACKAMAS	03-2634	Clarios, LLC	800 NW 3RD AVE	CANBY	97013	45.261	-122.704	523215	5011987	35.71853	99		39	289	14									57.8	0.617968							No	Yes	No	No	No	Standard	Active	1625	9
NWR	41051	26	MULTNOMAH	26-3228	City Of Gresham	20015 NE SANDY BLVD	GRESHAM	97030	45.5454	-122.459	542151	5044193	35.75772	99		39	289					39		39			57.8	0.618646							No	Yes	No	No	No	Simple	Active	1364	9
NWR	41051	26	MULTNOMAH	26-3038	Cascade Corporation	2201 NE 201ST AVE	FAIRVIEW	97024	45.5387	-122.458	542159	5043082	35.76144	99		39	289	14		9				54			57.8	0.61871							No	Yes	No	No	No	Standard	Active	1319	9
NWR	41051	26	MULTNOMAH	26-3240	Microchip Technology Incorporated	21015 SE STARK ST	GRESHAM	97030-2015	45.5206	-122.447	542955	5040866	36.64977	99		39	289	14		9		39		39			57.8	0.634079							No	Yes	No	No	No	Standard	Active	1371	9
NWR	41005	3	CLACKAMAS	03-2729	Northwest Pipeline LLC	15124 S SPRINGWATER RD	OREGON CITY	97045	45.3869	-122.49	539922	5026402	37.63065	115		536	786	16				39		39			157.2	0.239381							No	Yes	No	No	No	Title V	Active	1656	9
NWR	41051	26	MULTNOMAH	26-0027	SemiConductor Components Industries, L	23400 NE GLISAN ST	GRESHAM	97030	45.5282	-122.423	545289	5041993	38.91819	99		39	289	14		9		39		39			57.8	0.673325							No	Yes	No	No	No	Standard	Active	960	9
NWR	41009	5	COLUMBIA	05-2605	Forest Energy Oregon, LLC	2305 2ND STREET	COLUMBIA CITY	97018	45.8937	-122.81	514741	5081843	39.23975	99		39	289	14				39		39			57.8	0.678888							No	Yes	No	No	No	Simple	Active	3084	9
NWR	41005	3	CLACKAMAS	03-0037	J and D Fertilizer Ltd.	9205 S KRAXBERGER RD	CANBY	97013-9317	45.2269	-122.679	525120	5008551	39.64683			39	289	14		9		39					57.8	0.685931							No	Yes	No	No	No	Simple	Active	1567	9
WR	41071	36	YAMHILL	36-5034	Cascade Steel Rolling Mills, Inc.	3200 N HWY 99W	MCMINNVILLE	97128	45.2289	-123.163	487440	5008513	39.79412	731		318	568	77		72		70		87			113.6	0.3503							No	Yes	No	No	No	Title V	Active	2093	9
NWR	41051	26	MULTNOMAH	26-0088	Mutual Materials Company	2300 SE HOGAN ROAD	GRESHAM	97080-9267	45.4812	-122.412	546111	5036444	40.333	99		39	289	14				39		39			57.8	0.697803							No	Yes	No	No	No	Simple	Active	1012	9
NWR	41009	5	COLUMBIA	05-2042	Dyno Nobel Incorporated	63149 COLUMBIA RIVER HWY	Deer Island	97054-9401	45.9122	-122.829	513293	5084307	41.38508	99		39	289	55		55		39		39			57.8	0.716005							No	Yes	No	No	No	Standard	Active	2772	9
WR	41071	36	YAMHILL	36-0052	Ultimate RB, Inc.	904 NE 10TH AVE	MCMINNVILLE	97128	45.2144	-123.189	485175.3	5006785	42.40823	99		39	289	14		9				39			57.8	0.733706							No	Yes	No	No	No	Simple	Active	6211	9
WR	41047	24	MARION	24-0010	Fleetwood Homes, Inc.	2655 PROGRESS WAY	WOODBURN	97071-9774	45.1565	-122.835	512575	5000737	43.20654	99		39	289	14		9		39		39			57.8	0.747518							No	Yes	No	No	No	Simple	Active	724	9
NWR	41005	3	CLACKAMAS	03-0016	Wolf Steel Foundry, Inc.	6160 S WHISKEY HILL RD	HUBBARD	97032-9408	45.1743	-122.739	520485	5002346	43.49757	99		39	289	14						39			57.8	0.752553							No	Yes	No	No	No	Simple	Active	1548	9
WR	41047	24	MARION	24-0070	Specialty Polymers, Inc.	2475 Progress Way	Woodburn	97071-9768	45.1553	-122.837	512883	5000271	43.71242			39	289							39			57.8	0.75627							No	Yes	No	No	No	Simple	Active	782	9
NWR	41005	3	CLACKAMAS	03-9507	Northwest Natural Gas Company	10405 SOUTH BARNARDS ROAD	MOLALLA	97038	45.1725	-122.653	527251	5002172	46.29004	99		39	289										57.8	0.800866							No	Yes	No	No	No	Simple	Active	3041	9
NWR	41005	3	CLACKAMAS	03-1791	Sanders Wood Products, Inc.	28890 HWY 213	LIBERAL	97038	45.1904	-122.587	532207	5004139	47.06686	99		39	289	21		21		39		82			57.8	0.814306							No	Yes	No	No	No	Standard	Active	1588	9
NWR	41005	3	CLACKAMAS	03-2631	Eagle Foundry Co.	23123 SE EAGLE CREEK RD	EAGLE CREEK	97022	45.3552	-122.354	550607	5022613	48.893			39	289	17						46			57.8	0.8459							No	Yes	No	No	No	Standard	Active	1623	9
NWR	41009	5	COLUMBIA	05-0028	Northwest Natural Gas Company	68301 COLUMBIA RIVER HWY	RAINIER	97048	45.9862	-122.871	509960.3	5092522	49.15137	99		39	289							39			57.8	0.85037							No	Yes	No	No	No	Simple	Active	6205	9
WR	41071	36	YAMHILL	36-0011	Riverbend Landfill Co.	13469 SW HIGHWAY 18	MCMINNVILLE	97128	45.1606	-123.244	481137	5000753	49.65406	249		146	396	14		9		204		39			79.2	0.626945							No	Yes	No	No	No	Title V	Active	2063	9

REGION	FIPS COU	COUNTY (	COUNTY NAME	SourceNur	SourceName	Address	City	Zip Code	LatitudeCc	Longitude	UTM-e(m)	UTM-n(m)	DistancetoSite	COPSEL(tp	CO Comb /	NOXPSEL(t	NOx Comb	PM10PSEL	PM10 Com	PM25PSEL	PM25 Com	SO2PSEL(t	SO2 Comb	VOCPSEL(t	CO ROI	CO Ratio	NOx ROI	NOx Ratio	PM10 ROI	PM10 Rati	PM25 ROI	PM25 Rati	SO2 ROI	SO2 Ratio	CO Sig	NOx Sig	PM10 Sig	PM25 Sig	SO2 Sig	PermitTyp	Operating	SourceID	EIProjectID
NWR	41067	34	WASHINGTON	34-2813	Jireh Semiconductor Incorpora	3131 NE BROOKWOOD PKWY	HILLSBORO	97124	45.5465	-122.931	505418	5043665	1.00	99	899	39	289							39	22.475	4.43E-02	57.8	1.72E-02							Yes	Yes	No	No	No	Standard	Active	2050	9
NWR	41067	34	WASHINGTON	34-0157	STACK Infrastructure, Inc.	3145 NE BROOKWOOD PKWY	HILLSBORO	97124-5303	45.5471	-122.929	505464	5044054	1.09	99	899	39	289	14	114	9	109	39		39	22.475	4.84E-02	57.8	1.88E-02	22.8	4.77E-02	21.8	4.99E-02			Yes	Yes	Yes	Yes	Yes	Simple	Active	5569	9
NWR	41067	34	WASHINGTON	34-0017	Dynic USA Corp.	4750 NE DAWSON CREEK DR	HILLSBORO	97124	45.5467	-122.933	505254	5043687	1.16	99	899	39	289							39	22.475	5.17E-02	57.8	2.01E-02							Yes	Yes	No	No	No	Simple	Active	1831	9
NWR	41067	34	WASHINGTON	34-0241	Flexential Colorado Corp	5737 NE Huffman Street	Hillsboro	97124	45.557	-122.923	506033.1	5044832	1.38	99	899	39	289								22.475	6.15E-02	57.8	2.39E-02							Yes	Yes	No	No	No	Simple	Active	6208	9
NWR	41067	34	WASHINGTON	34-0183	STACK Infrastructure, Inc.	8135 NE Evergreen Pkwy	Hillsboro	97124	45.5509	-122.921	507845	5043656	1.45	99	899	39	289	14	114	9	109	39		39	22.475	6.47E-02	57.8	2.51E-02	22.8	6.37E-02	21.8	6.67E-02			Yes	Yes	Yes	Yes	Yes	Simple	Active	5818	9
NWR	41067	34	WASHINGTON	34-2790	Tokyo Ohka Kogyo America, In	4600 NW Brookwood Pkwy	HILLSBORO	97124	45.5519	-122.924	505760	5044854	1.50			39	289							39			57.8	2.59E-02							No	Yes	No	No	No	Simple	Active	2037	9
NWR	41067	34	WASHINGTON	34-0222	QTS Investment Properties Hill	4951 NE Huffman St	Hillsboro	97124	45.5571	-122.927	505681.9	5044843	1.52	99	899	39	289	14	114	9	109				22.475	6.78E-02	57.8	2.63E-02	22.8	6.68E-02	21.8	6.98E-02			Yes	Yes	Yes	Yes	Yes	Standard	Active	6085	9
NWR	41067	34	WASHINGTON	34-0055	Qorvo US, Inc.	2300 NE BROOKWOOD PKWY	HILLSBORO	97124	45.5413	-122.937	504887	5043087	1.57	99	899	39	289							39	22.475	6.98E-02	57.8	2.71E-02							Yes	Yes	No	No	No	Standard	Active	1867	9
NWR	41067	34	WASHINGTON	34-9507	Genentech, Inc.	4625 NW Brookwood Parkway	HILLSBORO	97124-9332	45.5572	-122.926	505463	5045165	1.91	99	899	39	289	14	114	9	109			39	22.475	8.50E-02	57.8	3.31E-02	22.8	8.38E-02	21.8	8.76E-02			Yes	Yes	Yes	Yes	Yes	Simple	Active	3071	9
NWR	41067	34	WASHINGTON	34-0186	Beaver Ventures LLC	6675 NE 62nd Ave	Hillsboro	97124	45.566	-122.916	506555	5045832	2.34	99	899	39	289	14	114	9	109	39		39	22.475	0.104006	57.8	4.04E-02	22.8	0.102523	21.8	0.107226			Yes	Yes	Yes	Yes	Yes	Simple	Active	5845	9
NWR	41067	34	WASHINGTON	34-0238	KoMiCo Hillsboro LLC	6231 NE Croeni Ave	Hillsboro	97124	45.5649	-122.906	507366.7	5045711	2.41	99	899	39	289							39	22.475	0.107371	57.8	4.18E-02							Yes	Yes	No	No	No	Simple	Active	6192	9
NWR	41067	34	WASHINGTON	34-0235	NTT Global Data Centers HI, LL	4050 NE Evergreen Road	Hillsboro	97124	45.55	-122.973	502131	5044052	4.30	99	899	39	289								22.475	0.191526	57.8	7.45E-02							Yes	Yes	No	No	No	Standard	Active	6165	9
NWR	41067	34	WASHINGTON	34-2753	Clean Water Services	3235 SW RIVER ROAD	HILLSBORO	97123	45.4977	-122.949	503906	5038498	5.59	99	899	52	302	14	114			39		39	22.475	0.248689	60.4	9.25E-02	22.8	0.245144					Yes	Yes	Yes	No	No	Standard	Active	2003	9
NWR	41067	34	WASHINGTON	34-0004	Hillsboro Landfill Inc.	3205 SE MINTER BRIDGE ROAD	HILLSBORO	97123	45.493	-122.97	502344	5037386	7.34	99	899	39	289	14	114	9	109	97		39	22.475	0.326453	57.8	0.126938	22.8	0.3218	21.8	0.336561			Yes	Yes	Yes	Yes	Yes	Standard	Active	1818	9
NWR	41067	34	WASHINGTON	34-2804	Analog Devices, Inc.	14320 SW JENKINS RD	BEAVERTON	97005-1155	45.5021	-122.825	513703	5038745	8.71	99	899	39	289	14	114	9	109			75	22.475	0.387745	57.8	0.150771	22.8	0.382218	21.8	0.399751			Yes	Yes	Yes	Yes	Yes	Standard	Active	2041	9
NWR	41067	34	WASHINGTON	34-2638	Tektronix, Inc.	14150 SW KARL BRAUN DR	BEAVERTON	97077	45.499	-122.818	514063	5038512	9.14	99	899	58	308	14	114	9	109	99		39	22.475	0.406825	61.6	0.148432	22.8	0.401026	21.8	0.419422			Yes	Yes	Yes	Yes	Yes	Standard	Active	1951	9
NWR	41067	34	WASHINGTON	34-2021	Knife River Corporation North	21880 SW FARMINGTON RD	BEAVERTON	97007-5470	45.4566	-122.896	507818	5034057	9.55					20	120	9	109								24	0.39787	21.8	0.438022			No	No	Yes	Yes	Yes	Standard	Active	1907	9
NWR	41067	34	WASHINGTON	34-2783	Bimbo Bakeries USA, Inc.	10750 SW 5TH ST	BEAVERTON	97005	45.4831	-122.787	516615	5036641	12.30	99	899	39	289	14	114	9	109			57	22.475	0.547459	57.8	0.212875	22.8	0.539656	21.8	0.564411			Yes	Yes	Yes	Yes	Yes	Standard	Active	2030	9
NWR	41051	26	MULTNOMAH	26-3067	Owens Corning Roofing and As	11910 NW SAINT HELENS RD	PORTLAND	97231-2306	45.6061	-122.789	516375	5050739	12.32	157	957	39	289	14	114	9	109	106		39	23.925	0.515148	57.8	0.213234	22.8	0.540567	21.8	0.565363			Yes	Yes	Yes	Yes	Yes	Title V	Active	1333	9
NWR	41067	34	WASHINGTON	34-2756	DMH, Inc.	3802 & 3804 24TH AVE	FOREST GROVE	97116	45.5247	-123.081	493752	5040722	12.95					15	115	10	110			83					23	0.563021	22	0.588613			No	No	Yes	Yes	Yes	Title V	Active	2006	9
NWR	41067	34	WASHINGTON	34-0009	International Paper Company	5500, 5570, & 5800 SW WESTERN AV	BEAVERTON	97005-4116	45.4801	-122.782	517194	5036298	12.98			39	289					39		39			57.8	0.2245							No	Yes	No	No	No	Simple	Active	1823	9
NWR	41051	26	MULTNOMAH	26-2909	Kinder Morgan Bulk Terminals	11040 N LOMBARD ST	PORTLAND	97203	45.6017	-122.774	517937	5049632	13.07					14	114	9	109								22.8	0.573042	21.8	0.599329			No	No	Yes	Yes	Yes	Standard	Active	1270	9
NWR	41051	26	MULTNOMAH	26-3002	Siltronic Corporation	7200 NW FRONT AVE	PORTLAND	97210-3676	45.5775	-122.755	519099	5047136	13.21	99	899	83	333	12	112	12	112			54	22.475	0.587732	66.6	0.198338	22.4	0.5897	22.4	0.5897			Yes	Yes	Yes	Yes	Yes	Standard	Active	1299	9
NWR	41067	34	WASHINGTON	34-2678	TTM Technologies North Amer	1521 POPLAR LN	FOREST GROVE	97116-2033	45.5134	-123.081	493642	5039988	13.23	99	899	39	289							39	22.475	0.588768	57.8	0.228937							Yes	Yes	No	No	No	Simple	Active	1971	9
NWR	41051	26	MULTNOMAH	26-2492	Northwest Pipe Company	12005 N BURGARD WAY	PORTLAND	97203	45.609	-122.773	517669	5050631	13.34			39	289	28	128	18	118			95			57.8	0.230722	25.6	0.520927	23.6	0.565073			No	Yes	Yes	Yes	Yes	Title V	Active	1193	9
NWR	41051	26	MULTNOMAH	26-1891	Ash Grove Cement Company	13939 N RIVERGATE BLVD	PORTLAND	97203	45.6229	-122.784	517151	5051852	13.61	99	899	39	289	42	142	21	121	39		39	22.475	0.605738	57.8	0.235536	28.4	0.479365	24.2	0.56256			Yes	Yes	Yes	Yes	Yes	Standard	Active	1119	9
NWR	41051	26	MULTNOMAH	26-1889	J. R. Simplot Company	14003 N RIVERGATE BLVD	PORTLAND	97203-6514	45.6248	-122.785	516745	5052384	13.64	99	899	39	289	14	114	9	109				22.475	0.606725	57.8	0.235919	22.8	0.598077	21.8	0.625511			Yes	Yes	Yes	Yes	Yes	Standard	Active	1117	9
NWR	41051	26	MULTNOMAH	26-0386	Hexion Inc.	10915 N LOMBARD ST	PORTLAND	97203	45.6055	-122.766	518270.9	5050244	13.65	99	899	39	289							39	22.475	0.607468	57.8	0.236208							Yes	Yes	No	No	No	Simple	Active	6176	9
NWR	41051	26	MULTNOMAH	26-2025	Zenith Energy Terminals Holdi	5501 NW FRONT AVE	PORTLAND	97210-1115	45.5607	-122.737	520291	5045195	13.99	99	899	77	327	14	114			81		179	22.475	0.622649	65.4	0.213976	22.8	0.613773					Yes	Yes	Yes	No	No	Title V	Active	1148	9
NWR	41051	26	MULTNOMAH	26-2028	Kinder Morgan Liquids Termin	5880 NW ST HELENS RD	PORTLAND	97210-1146	45.5625	-122.744	520291	5045195	13.99	99	899	44	294	14	114			104		236	22.475	0.622649	58.8	0.237994	22.8	0.613773					Yes	Yes	Yes	No	No	Title V	Active	1151	9
NWR	41051	26	MULTNOMAH	26-2043	CertainTeed Corporation	6350 NW FRONT AVE	PORTLAND	97210	45.568	-122.743	520288	5046306	14.17	99	899	39	289	24	124	9	109	39		60	22.475	0.630418	57.8	0.245132	24.8	0.571316	21.8	0.649937			Yes	Yes	Yes	Yes	Yes	Standard	Active	1154	9
NWR	41051	26	MULTNOMAH	26-1865	EVRAZ Inc. NA	14400 N RIVERGATE BLVD	PORTLAND	97203	45.6256	-122.779	517148	5052963	14.32	823	1623	493	743	340	440	209	309	39		131	40.575	0.352931	148.6	0.096367	88	0.162729	61.8	0.231718			Yes	Yes	Yes	Yes	Yes	Title V	Active	1109	9
NWR	41051	26	MULTNOMAH	26-0368	Cintas Corporation No. 3	9045 N RAMSEY BLVD	PORTLAND	97203	45.6242	-122.77	517929.6	5052321	14.52	99	899	39	289	14	114	9	109			39	22.475	0.645906	57.8	0.251155	22.8	0.636699	21.8	0.665905			Yes	Yes	Yes	Yes	Yes	Simple	Active	6097	9
NWR	41051	26	MULTNOMAH	26-3071	SSA Pacific, Inc.	15550 N LOMBARD ST	PORTLAND	97203-6428	45.6346	-122.771	517928	5052965	14.92					14	114	9	109								22.8	0.654202	21.8	0.684211			No	No	Yes	Yes	Yes	Simple	Active	1335	9
NWR	41051	26	MULTNOMAH	26-3310	Metropolitan Service District	9363 N COLUMBIA BLVD	PORTLAND	97203-1048	45.6142	-122.752	519494	5050748	14.97	99	899	39	289	14	114	9	109	39		39	22.475	0.665903	57.8	0.25893	22.8	0.656411	21.8	0.686522			Yes	Yes	Yes	Yes	Yes	Title V	Active	1432	9
NWR	41051	26	MULTNOMAH	26-1815	Owens Corning Roofing and As	3750 NW YEON AVE	PORTLAND	97210	45.5493	-122.719	521856	5044089	15.47	99	899	39	289	99	199			0		46	22.475	0.688197	57.8	0.267599	39.8	0.388624					Yes	Yes	Yes	No	No	Standard	Active	1100	9
NWR	41051	26	MULTNOMAH	26-2944	Gunderson LLC	4350 NW FRONT AVE	PORTLAND	97210	45.5536	-122.72	521894	5044512	15.53			39	289	108	208	108	208			300			57.8	0.268633	41.6	0.373246	41.6	0.373246			No	Yes	Yes	Yes	Yes	Title V	Active	1281	9
NWR	41051	26	MULTNOMAH	26-2807	Columbia Export Terminal, LLC	15660 N LOMBARD ST	PORTLAND	97203-6427	45.6358	-122.769	517925	5054076	15.64					14	114	9	109								22.8	0.68606	21.8	0.717531			No	No	Yes	Yes	Yes	Standard	Active	1261	9
NWR	41051	26	MULTNOMAH	26-3224	Vigor Industrial, LLC	5555 N CHANNEL AVE Bldg 71	PORTLAND	97217-7655	45.5625	-122.716	521848	5046311	15.70	99	899	39	289	124	224			39		464	22.475	0.698628	57.8	0.271655	44.8	0.350484					Yes	Yes	Yes	No	No	Title V	Active	1360	9
NWR	41051	26	MULTNOMAH	26-2197	Daimler Trucks North America	6936 N FATHOM ST	PORTLAND	97217	45.5728	-122.715	521848	5046311	15.70	99	899	39	289	14	114			39		470	22.475	0.698628	57.8	0.271655	22.8	0.68867					Yes	Yes	Yes	No	No	Title V	Active	1171	9
NWR	41051	26	MULTNOMAH	26-1869	Columbia Steel Casting Co., Inc	10425 N BLOSS AVE	PORTLAND	97203-6143	45.5996	-122.729	521127	5049598	15.94	99	899			28	128					72	22.475	0.709214			25.6	0.62264					Yes	No	Yes	No	No	Standard	Active	1111	9
NWR	41051	26	MULTNOMAH	26-1885	Zinkpower-Portland LLC	2406 NW 30TH AVE	PORTLAND	97210-2014	45.5394	-122.712	522469	5042903	16.08	99	899	39	289	14	114	9	109				22.475	0.715465	57.8	0.278202	22.8	0.705267	21.8	0.737619			Yes	Yes	Yes	Yes	Yes	Simple	Active	1115	9
NWR	41051	26	MULTNOMAH	26-1814	Solenis LLC	3366 NW YEON AVE	PORTLAND	97210	45.5473	-122.709	522637	5044092	16.25	99	899	39	289	14	114	9	109	55		39	22.475	0.722927	57.8	0.281104	22.8	0.712622	21.8	0.745311			Yes	Yes	Yes	Yes	Yes	Standard	Active	1099	9
NWR	41051	26	MULTNOMAH	26-0100	City of Portland,Bureau of Env	5001 N. COLUMBIA BLVD.	PORTLAND	97203	45.5965	-122.718	521837	5049644	16.61	99	899	39	289	14	114	9	109	39		51	22.475	0.739254	57.8	0.287452	22.8	0.728717	21.8	0.762144			Yes	Yes	Yes	Yes	Yes	Standard	Active	1021	9
NWR	41051	26	MULTNOMAH	26-0026	Rodda Paint Co.	6123 N MARINE DR	PORTLAND	97203-6443	45.6261	-122.736	520266	5052972	16.79					14	114	9	109			39					22.8	0.736509	21.8	0.770294			No	No	Yes	Yes	Yes	Standard	Active	959	9
NWR	41051	26	MULTNOMAH	26-2068	ESCO Group, LLC	2141 NW 25TH AVE	PORTLAND	97210	45.5428	-122.7	523421	5042984	17.03	283	1083	41	291	30	130	30	130	39		59	27.075	0.62895	58.2	0.292591	26	0.654955	26	0.654955			Yes	Yes	Yes	Yes	Yes	Title V	Active	1161	9
NWR	41051	26	MULTNOMAH	26-1894	Herbert Malarkey Roofing Con	3131 N COLUMBIA BLVD	PORTLAND	97217-7472	45.5911	-122.7	523401	5048539	17.73	99	899	39	289	14	114			39		56	22.475	0.788968	57.8	0.306783	22.8	0.777721					Yes	Yes	Yes	No	No	Standard	Active	1121	9
NWR	41051	26	MULTNOMAH	26-3048	Oil Re-Refining Company Inc.	4150 N SUTTLE RD	PORTLAND	97217-7717	45.6135	-122.711	522613	5050758	17.76	99	899	39	289	14	114	9	109	39		39	22.475	0.790365	57.8	0.307326	22.8	0.779098	21.8	0.814837			Yes	Yes	Yes	Yes	Yes	Standard	Active	1322	9
NWR	41051	26	MULTNOMAH	26-0146	Ash Grove Cement Company	3737 N PORT CENTER WAY	PORTLAND	97217	45.5512	-122.695	524198	5044098	17.81					14	114										22.8	0.781055					No	No	Yes	No	No	Simple	Active	1059	9
NWR	41067	34	WASHINGTON	34-9514	Regenyx LLC	13240 SW Wall St	Portland	97223	45.4256	-122.759	518751	5030570	17.88	99	899	39	289							39	22.475	0.795598	57.8	0.309361							Yes	Yes	No	No	No	Simple	Active	3233	9
NWR	41051	26	MULTNOMAH	26-2832	Portland State University	1900 SW 4th Ave	PORTLAND	97201	45.5098	-122.681	524215	5039654	18.23	99	899	39	289	14	114			39		39	22.475	0.81092	57.8	0.315319	22.8	0.799361					Yes	Yes	Yes	No	No	Simple	Active	1264	9
NWR	41051	26	MULTNOMAH	26-2390	Supreme Perlite Company	4600 N SUTTLE RD	PORTLAND	97217	45.6157	-122.715	522609	5051869	18.24	99	899	39	289	14	114	9	109	39			22.475	0.811659	57.8	0.315606	22.8	0.800089	21.8	0.836791			Yes	Yes	Yes	Yes	Yes	Simple	Active	1179	9
NWR	41051	26	MULTNOMAH	26-2777	Graphic Packaging Internation	3400 N MARINE DR	PORTLAND	97217	45.6119	-122.702	523392	5050761	18.48	99	899	39	289	21	121	21	121	39		350	22.475	0.822174	57.8	0.319695	24.2	0.763569	24.2	0.763569			Yes	Yes	Yes	Yes	Yes	Title V	Active	1248	9
NWR	41051	26	MULTNOMAH	26-3009	Arclin Surfaces, Inc.	2301 N COLUMBIA BLVD	PORTLAND	97217-6954	45.5888	-122.691	524181	5048542	18.48	99	899	45	295	9	109	9	109	39		400	22.475	0.822338	59	0.313255	21.8	0.8478	21.8	0.8478			Yes	Yes	Yes	Yes	Yes	Title V	Active	1303	9
NWR	41051	26	MULTNOMAH	26-2050	Oregon Health and Sciences U	3181 SW SAM JACKSON PARK RD	PORTLAND	97239	45.4995	-122.685	524219	5038543	18.50	99	899	83	333	14	114	9	109	39		39	22.475	0.822943	66.6	0.277712	22.8	0.811212	21.8	0.848424			Yes	Yes	Yes	Yes	Yes	Title V	Active	1157	9
NWR	41051	26	MULTNOMAH	26-2003	Temco, LLC A Limited Liability	800 N RIVER ST.	PORTLAND	97227	45.5362	-122.675	524983	5042990	18.59					21	121	9	109								24.2	0.768182	21.8	0.852752			No	No	Yes	Yes	Yes	Standard	Active	1141	9
NWR	41051	26	MULTNOMAH	26-3272	OLDCASTLE APG, INC.	1402 N RIVER ST	PORTLAND	97227	45.5402	-122.68	524983	5042990	18.59					14	114	9	109								22.8	0.815351	21.8	0.852752			No	No	Yes	Yes	Yes	Simple	Active	1401	9
NWR	41051	26	MULTNOMAH	26-0242	Glass to Glass LLC	866 N COLUMBIA BLVD	PORTLAND	97217-1104	45.5841	-122.676	524965	5047434	18.98					14	114	9	109								22.8	0.832335	21.8	0.870516			No	No	Yes	Yes	Yes	Simple	Active	5470	9
NWR	41067	34	WASHINGTON	34-0007	Fought & Company, Inc.	14255 SW 72ND AVE	TIGARD	97224-8042	45.4171	-122.749	519559	5029639	19.11					14	114					39					22.8	0.838266					No	No	Yes	No	No	Standard	Active	1821	9
NWR	41051	26	MULTNOMAH	26-3021	EcoLube Recovery LLC	11535 N FORCE AVE	PORTLAND	97217	45.6062	-122.694	524172	5050764	19.20	99	899	39	289	14	114	9	109	39		39	22.475	0.854247	57.8	0.332166	22.8	0.842071	21.8	0.880698			Yes	Yes	Yes	Yes	Yes	Standard	Active	1309	9
NWR	41051	26	MULTNOMAH	26-0285	Portland General Electric Com	26 SW SALMON ST	PORTLAND	97204	45.5153	-122.672	525400	5040303	19.27	99	899	39	289								22.475	0.857268	57.8	0.333341							Yes	Yes	No	No	No	Simple	Active	5813	9
NWR	41051	26	MULTNOMAH	26-2968	Mondelez Global LLC	100 NE COLUMBIA BLVD	PORTLAND	97211	45.5818	-122.664	525745	5047437	19.74	99	899	39	289					39		54	22.475	0.878378	57.8	0.341549							Yes	Yes	No	No	No	Standard	Active	1290	9
NWR	41051	26	MULTNOMAH	26-9818	Ultimate RB, Inc.	9945 N BURGARD WAY	PORTLAND	97203	45.6133	-122.778	525741	5048548	19.99					14	114	9	109								22.8	0.876707	21.8	0.916923			No	No	Yes	Yes	Yes	Simple	Active	4736	9

SourceNumber	ESCode	ProcessCode	ESDescription	NOX	ReleasePointCode	ReleasePointDescription	Height	Diameter	ExitGasTem	ExitGasV	ExitGasFlov	Latitude	Longitude	
03-1924														
03-2032														
05-2042	EU2	P-1	Cleaver Brooks Boilers 1 and 2	5.4	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.9122	-122.8286	Dyno Nobel Incorporated
05-2042	EU8	P-1	Tail Gas Vent and Stack	2.58	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.9122	-122.8286	Dyno Nobel Incorporated
05-2042	EU1	P-2	Reformer Bros Furnace	0.907	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.9122	-122.8286	Dyno Nobel Incorporated
03-2145	AI	P-1	Aggregate Insignificant Activities	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.3564	-122.6154	Willamette Falls Paper Company, Inc.
03-2145	B1/B2	P-2	Boilers	59.8	STK-1	Boiler 1 and 2 stack	185	12.7	317	8.9	66837	45.3543	-122.6183	Willamette Falls Paper Company, Inc.
03-2145	B1/B2	P-1	Boilers	0	STK-1	Boiler 1 and 2 stack	185	12.7	317	8.9	66837	45.3543	-122.6183	Willamette Falls Paper Company, Inc.
03-2145	B3	P-2	Boiler	16	STK-2	Boiler 3 stack	170	6.3	319	30	57908	45.3544	-122.618	Willamette Falls Paper Company, Inc.
03-2145	B3	P-1	Boiler	0	STK-2	Boiler 3 stack	170	6.3	319	30	57908	45.3544	-122.618	Willamette Falls Paper Company, Inc.
03-2145	PM1	P-1	Paper Machine 1	0.518	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.3564	-122.6154	Willamette Falls Paper Company, Inc.
03-2145	PM2	P-1	Paper Machine 2	0.238	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.3564	-122.6154	Willamette Falls Paper Company, Inc.
03-2145	PM3	P-1	Paper Machine 3	0.085	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.3564	-122.6154	Willamette Falls Paper Company, Inc.
03-2475														Wilsonville Concrete Products, LLC
03-2505	NGC	P-1	Natural Gas Combustion	1.34	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.3296	-122.5806	Orchid Orthopedic Solutions Oregon, Inc
05-2605	DRYER NG	P-1	DRYER NATURAL GAS	5.33	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.8937	-122.8102	Forest Energy Oregon, LLC
05-2605	DRYER	P-1	D-107 DRYER	0	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.8937	-122.8102	Forest Energy Oregon, LLC
03-2624	AI	P-1	Aggregate Insignificant Activities	0	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.4356	-122.6127	Blount, Inc.
03-2624	NGC	P-1	Natural Gas Combustion	3.55	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4356	-122.6127	Blount, Inc.
03-2631	HTO	P-1	Heat Treat Ovens	0.934	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.3552	-122.3539	Eagle Foundry Co.
03-2634	NGC	P-1	Natural Gas Combustion	1.51	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.261	-122.7041	Clarios, LLC
03-2661														Willamette Egg Farms, LLC, Limited Liability Company of Delaware
03-2668														Eagle Creek Rock Products, LLC
03-2674	NGC	P-1	Natural Gas Combustion	8.86	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4261	-122.5702	PCC Structurals, Inc.
03-2729	AI	P-1	Aggregate Insignificant	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.3892	-122.4862	Northwest Pipeline LLC
03-2729	EU5	P-1	Space Heater	0.037	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.3892	-122.4862	Northwest Pipeline LLC
03-2729	EU6	P-1	Turbine	1.33	STK-2		39.8	5.3	693.5	53.2	70421.36	45.3869	-122.4895	Northwest Pipeline LLC
03-2729	EU1	P-2	IC Engines	154	STK-1		27.1	1.4	744.7	57.3	5292.39	45.3869	-122.4895	Northwest Pipeline LLC
03-2738	NG	P-1	NATURAL GAS COMBUSTION	2.67	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4074	-122.5545	Consolidated Metco, Inc.
03-2754	NGC	P-1	Natural Gas Combustion	1.9	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.3997	-122.5594	Albertson's LLC
03-2754	PGC	P-1	Propane Gas Combustion Back-up	0	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.3997	-122.5594	Albertson's LLC
03-9507	TURBINES	P-1	TURBINES	0.00265	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.1725	-122.6532	Northwest Natural Gas Company
03-9508														The S. Morris Co.
03-9677														Clackamas Community College
03-0002														Oldcastle Infrastructure, Inc.
03-0004	NG COMB	P-1	Boilers and Ovens	2.75	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4048	-122.5391	Fred Meyer, Inc.
03-0007														Glacier Northwest, Inc.
03-0010	GEN	P-1	Generator	1.3	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4404	-122.6397	Water Environment Services
03-0010	BLRS-DG	P-1	Boilers	0.208	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4404	-122.6397	Water Environment Services
03-0010	BLRS-NG	P-1	Boilers	0.045	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4404	-122.6397	Water Environment Services
03-0010	FLR	P-1	Flare	0.586	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.4404	-122.6397	Water Environment Services
03-0011	GEN	P-1	GENERATOR	5.5	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.3759	-122.5892	Water Environment Services
03-0011	BLRS-DG	P-1	Boilers	0.384	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.3759	-122.5892	Water Environment Services
03-0011	BLRS-NG	P-1	Boilers	0.219	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.3759	-122.5892	Water Environment Services
03-0011	GEN	P-2	GENERATOR	0.093	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.3759	-122.5892	Water Environment Services
03-0011	FLR	P-1	Flare	0.867	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.3759	-122.5892	Water Environment Services
03-0016	NGCOMB	P-1	Natural Gas Combustion	0.085	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.1743	-122.7393	Wolf Steel Foundry, Inc.
03-0020	SAWDUST	P-1	SAWDUST	1.65	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.4265	-122.5821	PCC Structurals, Inc.
03-0020	FBE	P-1	Fuel Burning Equipment	5.61	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.4265	-122.5821	PCC Structurals, Inc.
03-0023														Bowers Forest Products Corporation
03-0037	NGC	P-1	Natural Gas Combustion	0.469	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.2269	-122.6794	J and D Fertilizer Ltd.
03-0037	DC	P-1	Diesel Combustion (Back-up)	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.2269	-122.6794	J and D Fertilizer Ltd.
03-0040														North Clackamas County Water Commission
03-0043														Sunrise Water Facility
03-0048														Kaiser Foundation Health Plan of the NW
03-0050														Xerox Corporation
03-0051														Kaiser Foundation Health Plan of the NW
03-0087														Water Environment Services
03-0093	NGC	P-1	Natural Gas Combustion	1.39	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4331	-122.6106	Dave's Killer Bread, Inc.
03-1791	BLRS-NG	P-1	Boilers-NG	10.2	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.1904	-122.5872	Sanders Wood Products, Inc.
03-1791	AI	P-1	Aggregate Insignificant Activities	1	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.1904	-122.5872	Sanders Wood Products, Inc.
05-0009														Eagle Star Rock Products, LLC
05-0028	ENGINES	P-1	COMPRESSOR ENGINES	0.066	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.9862	-122.8714	Northwest Natural Gas Company
05-1849	AI	P-1	Aggregate Insignificant Activities	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.8476	-122.803	Cascade Tissue Group-Oregon
05-1849	EU15	P-2	Power Boilers	54.3	STK-1	EU11 Recovery Furnace No. 2	190	8	288	65	194314	45.8475	-122.8022	Cascade Tissue Group-Oregon
05-1849	EU29a-3c	P-1	Paper Machine 3- Dryers	3.8	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.8476	-122.803	Cascade Tissue Group-Oregon
05-1849	EU29a-2c	P-1	Paper Machine 2- Dryers	1	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.8476	-122.803	Cascade Tissue Group-Oregon
24-0010														Fleetwood Homes, Inc.
24-0056														Tree Top, Inc., A Washington Corporation
24-0057														Valley Fresh Foods, Inc.
24-0062														United Pacific Forest Products, Inc.
24-0069														Oregon Youth Authority
24-0070	NGC	P-1	Natural Gas Combustion	0.672	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.1553	-122.8367	Specialty Polymers, Inc.
24-0131														Bruce Packing Company, Inc. dba BrucePac
24-0138														US Foods, Inc.
24-0144														Valley Crematorium, Inc.
24-0148	TEST CELL	P-1	TEST CELL		RP-GS	Default parameters for release pc	40	5	72	40	47100	45.2587	-122.7653	Columbia Helicopters, Inc.
24-8062														Foster Farms, LLC
24-8063														UFP Woodburn, LLC
24-9188														Knife River Corporation - Northwest
24-9198														North Valley Seeds, Inc.
24-9212														The Quikrete Companies, LLC
26-0004														Zarfas Coffee Inc.
26-0007														Groundwork Coffee PNW, LLC
26-0024														Craft Brew Alliance, Inc.
26-0027	BLR	P-1	BOILER	1.96	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5282	-122.4227	SemiConductor Components Industries, LLC
26-0027	TO	P-1	THERMAL OXIDIZER	0.345	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5282	-122.4227	SemiConductor Components Industries, LLC
26-0040														Tata Communications (US) Inc.
26-0041														Boden Store Fixtures, Inc.
26-0045														Western Pacific Building Materials, Inc.
26-0070														Portland Roasting Holdings, L.L.C.
26-0072														Pacific Architectural Wood Products, Inc.
26-0086														Environmentally Conscious Recycling, Inc
26-0088	KILN	P-1	TUNNEL KILN	3.73	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.4812	-122.412	Mutual Materials Company
26-0092														Aramark Uniform & Career Apparel, LLC
26-0100	BLRS	P-1	BLRS	5.9	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5965	-122.7176	City of Portland,Bureau of Environmental
26-0100	BLRS	P-2	BLRS	2.86	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5965	-122.7176	City of Portland,Bureau of Environmental
26-0100	GENS	P-2	GENS	0.0071	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5965	-122.7176	City of Portland,Bureau of Environmental
26-0100	GENS	P-1	GENS	0.00435	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5965	-122.7176	City of Portland,Bureau of Environmental
26-0100	FLARES	P-1	DIGESTER GAS FLARES	0.00301	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5965	-122.7176	City of Portland,Bureau of Environmental
26-0101														Knife River Corporation - Northwest
26-0125														Omega Cremation and Burial Service, Inc.
26-0129														Knife River Corporation - Northwest
26-0130														PCC Structurals
26-0132														vXchnge-Facilities, LLC
26-0133														Skyline Tower, LLC
26-0136														Providence Health & Services - Oregon
26-0141														The Kroger Co.
26-0151														Portland Cremation Center, LLC
26-0155														Family Animal Services, Inc.
26-0159														Bob Thomas Auto Body, Inc.
26-0164														U-Haul Repair Center
26-0227														STUMPTOWN COFFEE CORP
26-0229														Multnomah County
26-0238	NG	P-1	NATURAL GAS COMBUSTION	0.006	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5456	-122.4704	Graphic Packaging International, Inc.
26-0241														Portland State University
26-0285	ENGS	P-1	DIESEL ENGINES	0.276	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5153	-122.6723	Portland General Electric Company
26-0289	NG COMB	P-1	NATURAL GAS COMBUSTION	1.3	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5463	-122.4858	Portland Specialty Baking LLC
26-0368	NGC	P-1	NATURAL GAS	1.64	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6242	-122.77	Cintas Corporation No. 3
26-0386														Hexion Inc.
26-1767														Porter W. Yett Company
26-1799														Legacy Emanuel Hospital & Health Center
26-1803														Legacy Emanuel Hospital & Health Center
26-1804														Providence Portland Medical Center
26-1814	BOILER	P-1	Boiler	2.61	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5473	-122.709	Solenis LLC
26-1814	BOILER	P-2	Boiler	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5473	-122.709	Solenis LLC
26-1815	NG COMB	P-1	Natural Gas Combustion	1.98	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5493	-122.719	Owens Corning Roofing and Asphalt, LLC
26-1865	AI	P-1	Aggregate Insignificant	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.6256	-122.7794	EVRAZ Inc. NA
26-1865	EU-27	P-1	Pipe Mill Building Fugitives	0.934	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.6256	-122.7794	EVRAZ Inc. NA
26-1865	EU-13	P-1	Other Natural Gas Sources	16.3	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6256	-122.7794	EVRAZ Inc. NA
26-1865	EU-10	P-1	Reheat Furnace	91.6	STK-1		72.7	5.7	702.3	24.7	37817.06	45.6256	-122.7794	EVRAZ Inc. NA
26-1865	EU-23	P-1	Coil Furnaces	5.41	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6256	-122.7794	EVRAZ Inc. NA
26-1865	EU-21	P-1	Heat Treat Process	4.89	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6256	-122.7794	EVRAZ Inc. NA
26-1865	EU-12	P-2	Other Torching Operations	3.3	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6256	-122.7794	EVRAZ Inc. NA
26-1865	EU-20	P-1	Low NOx NG sources	2.08	STK-2		78.9	4.4	389.3	21.8	19888.54	45.6256	-122.7794	EVRAZ Inc. NA
26-1867	NGC	P-1	Natural Gas Combustion CAPS TOT	18.7	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4623	-122.6143	PCC Structurals, Inc.
26-1876	EU6	P-1	Misc combustion sources	3	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5631	-122.5647	Owens Brockway Glass Container Inc.

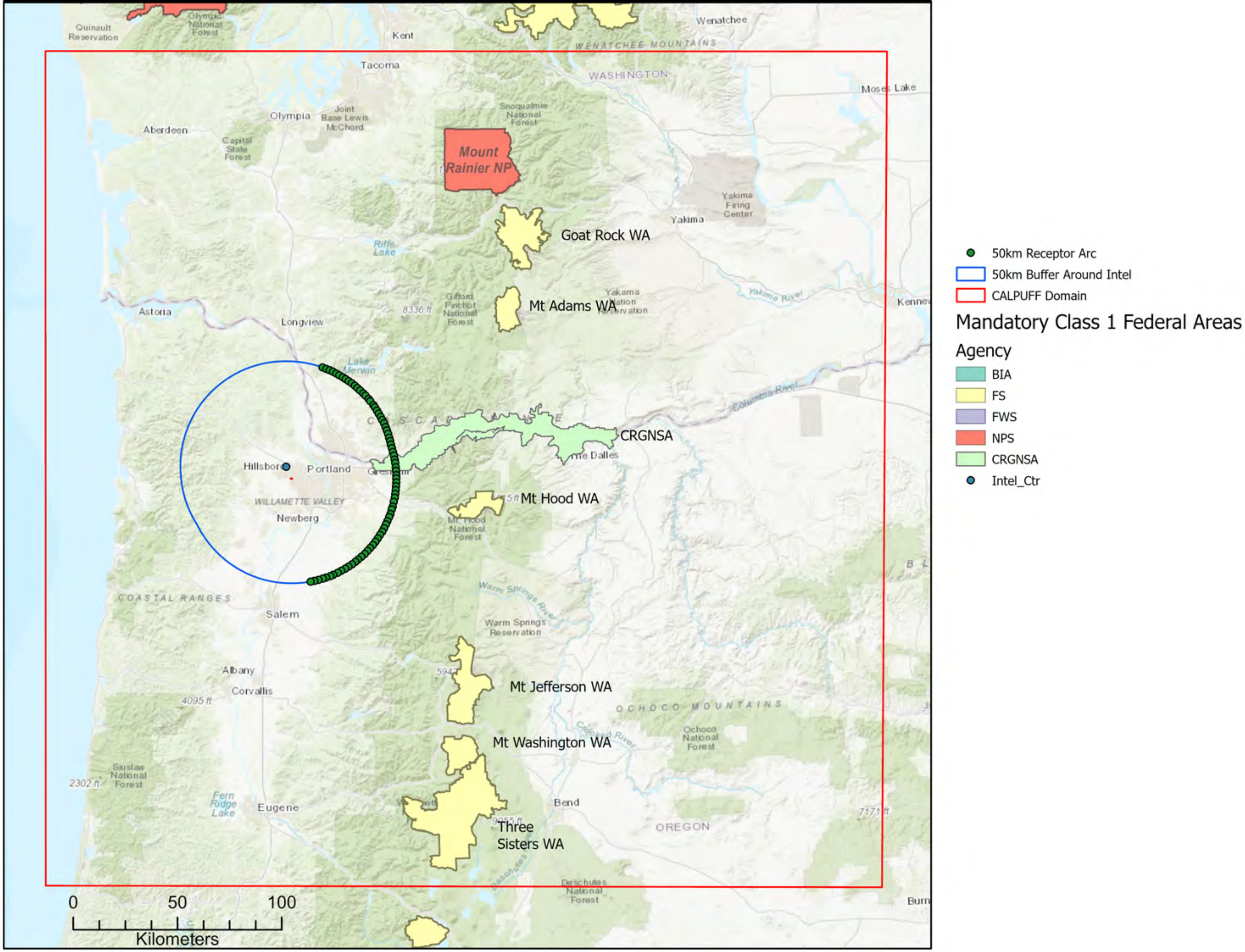
26-1876	EU7	P-1	Boiler	0.945	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5631	-122.5647	Owens Brockway Glass Container Inc.
26-1876	EU7	P-2	Boiler	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5631	-122.5647	Owens Brockway Glass Container Inc.
26-1876	EU4	P-3	FURNACE	81	STK-1	Furnace A stacks	71.4	3.1	336.7	50.7	22960.03	45.4623	-122.6143	Owens Brockway Glass Container Inc.
26-1876	EU4	P-1	FURNACE	66.3	STK-1	Furnace A stacks	71.4	3.1	336.7	50.7	22960.03	45.4623	-122.6143	Owens Brockway Glass Container Inc.
26-1885	BOILER	P-1	NG BOILER	1.86	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5394	-122.7122	Zinkpower-Portland LLC
26-1889	NG COMB	P-1	GAS COMBUSTION	0.12	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6248	-122.7852	J. R. Simplot Company
26-1891	PRODUCTION	P-1	Production	1.41	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6229	-122.7838	Ash Grove Cement Company
26-1894	NG	P-1	NATURAL GAS	9.11	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5911	-122.7001	Herbert Malarkey Roofing Company
26-1894	OVEN	P-1	Fiberglass Mat Curing Oven	2.33	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5911	-122.7001	Herbert Malarkey Roofing Company
26-1917														Portland Sand and Gravel Company
26-1941														Ross Island Sand & Gravel Co.
26-2013														Grain Craft
26-2025	BOIL/FURN	P-1	Boilers and furnaces	1.94	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5607	-122.7369	Zenith Energy Terminals Holdings, LLC
26-2025	BOIL/FURN	P-2	Boilers and furnaces	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5607	-122.7369	Zenith Energy Terminals Holdings, LLC
26-2025	BOIL/FURN	P-3	Boilers and furnaces	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5607	-122.7369	Zenith Energy Terminals Holdings, LLC
26-2028	BOILER	P-1	Boilers	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5625	-122.7437	Kinder Morgan Liquids Terminals LLC
26-2028	BOILER	P-2	Boilers	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5625	-122.7437	Kinder Morgan Liquids Terminals LLC
26-2043	NG COMB	P-1	NATURAL GAS COMBUSTION	2.43	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.568	-122.743	CertainTeed Corporation
26-2043	OIL COMB	P-1	OIL COMBUSTION	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.568	-122.743	CertainTeed Corporation
26-2050	AI	P-1	Aggregate Insignificant Activities	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.4991	-122.6853	Oregon Health and Sciences University
26-2050	EU1	P-1	Boiler 2	0.022	STK-1	Boiler 2 - EU 1 Exhaust duct is rec	214	12	385	22	149288.45	45.4991	-122.6853	Oregon Health and Sciences University
26-2050	EU1	P-2	Boiler 2	0	STK-1	Boiler 2 - EU 1 Exhaust duct is rec	214	12	385	22	149288.45	45.4991	-122.6853	Oregon Health and Sciences University
26-2050	EU2	P-1	Boiler 5	0.594	STK-2	Boiler 5 - EU2	31.3	5	539	20	23561.94	45.4991	-122.6853	Oregon Health and Sciences University
26-2050	EU2	P-2	Boiler 5	0.011	STK-2	Boiler 5 - EU2	31.3	5	539	20	23561.94	45.4991	-122.6853	Oregon Health and Sciences University
26-2050	EU3	P-1	Boiler 6 and 7	7.02	STK-3	Boiler 6 - EU3	31	3.5	347	34	19627.1	45.4991	-122.6853	Oregon Health and Sciences University
26-2050	EU3	P-2	Boiler 6 and 7	0.035	STK-3	Boiler 6 - EU3	31	3.5	347	34	19627.1	45.4991	-122.6853	Oregon Health and Sciences University
26-2068	3U-10	P-1	NG	2.42	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5374	-122.703	ESCO Group, LLC
26-2068	3U-1	P-1	MELT	8.27	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029	ESCO Group, LLC
26-2068	3U-1	P-2	MELT	0.436	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029	ESCO Group, LLC
26-2068	3U-1	P-3	MELT	0.133	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029	ESCO Group, LLC
26-2068	3U-1	P-4	MELT	0.133	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029	ESCO Group, LLC
26-2068	3U-1	P-5	MELT	0.00214	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029	ESCO Group, LLC
26-2068	3U-3	P-1	MH/SR	0.895	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5374	-122.703	ESCO Group, LLC
26-2068	3U-2	P-1	PCS	0.037	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5374	-122.703	ESCO Group, LLC
26-2068	3U-2	P-2	PCS	0.00193	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5374	-122.703	ESCO Group, LLC
26-2068	3U-2	P-3	PCS	0.000115	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5374	-122.703	ESCO Group, LLC
26-2068	3U-2	P-4	PCS	0.000115	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5374	-122.703	ESCO Group, LLC
26-2197	8-AGG	P-1	Aggregate Insignificant Activities	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.5728	-122.7152	Daimler Trucks North America, LLC
26-2197	5-BO	P-1	Natural Gas Combustion Devices	3.51	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5728	-122.7152	Daimler Trucks North America, LLC
26-2197	6- CUT	P-1	Metal Cutting	0	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5728	-122.7152	Daimler Trucks North America, LLC
26-2204	COMBUSTION	P-1	NATURAL GAS EXTERNAL COMBUS	9.08	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5431	-122.4654	Boeing Company (The)
26-2390	NG COMB	P-1	NATURAL GAS COMBUSTION	3.69	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6157	-122.7145	Supreme Perlite Company
26-2426														David Douglas Sr Hs Bldg
26-2492	AI	P-1	Aggregate Insignificant Activities	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.609	-122.7734	Northwest Pipe Company
26-2492	5-NG	P-1	Natural Gas Combustion Devices	0.713	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.609	-122.7734	Northwest Pipe Company
26-2545														Riverview Abbey Mausoleum Co.
26-2557														Blasen & Blasen Lumber Corp.
26-2579														ALSCO Inc., A Corporation of Nevada
26-2777	AI	P-1	Aggregate Insignificant Activities	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.6119	-122.7022	Graphic Packaging International, Inc
26-2777	BLRS/DRYER	P-1	Boilers and Dryers	2.45	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6119	-122.7022	Graphic Packaging International, Inc
26-2777	BLRS/DRYER	P-2	Boilers and Dryers	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6119	-122.7022	Graphic Packaging International, Inc
26-2778														Lewis & Clark College
26-2784														The Reed Institute
26-2832	PS-2	P-1	TURBINE	0.258	STK-1		30	2	350	25	4712.39	45.5098	-122.6813	Portland State University
26-2914	BLRS	P-2	BOILERS	3.86	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5871	-122.5889	Port of Portland
26-2914	BLRS	P-1	BOILERS	2.7	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5871	-122.5889	Port of Portland
26-2914	FLARE	P-1	DIECING FLARE	0.07	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5871	-122.5889	Port of Portland
26-2914	LARGE GENS	P-1	GENERATORS OVER 600 HP	0.000267	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5871	-122.5889	Port of Portland
26-2914	SMALL GENS	P-1	GENERATORS UNDER 600 HP	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5871	-122.5889	Port of Portland
26-2926														Legacy Good Samaritan Hospital and Medical Center
26-2944	AGG	P-1	Aggregate insignificant emissions	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.5538	-122.7195	Gunderson LLC
26-2944	4-NG	P-1	Natural gas combustion devices	0.85	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5538	-122.7195	Gunderson LLC
26-2944	3-TC	P-1	Plasma/Oxy-fuel metal cutting dev	0.079	RP-GS	For GS-3, there are actually multi	40	5	72	40	47100	45.5538	-122.7195	Gunderson LLC
26-2944	3-TC	P-2	Plasma/Oxy-fuel metal cutting dev	0.058	RP-GS	For GS-3, there are actually multi	40	5	72	40	47100	45.5538	-122.7195	Gunderson LLC
26-2944	3-TC	P-3	Plasma/Oxy-fuel metal cutting dev	0.000705	RP-GS	For GS-3, there are actually multi	40	5	72	40	47100	45.5538	-122.7195	Gunderson LLC
26-2949														The Portland Memorial, Inc
26-2952	OVENS NG	P-1	NATURAL GAS FOR THE OVENS	2.58	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5257	-122.6545	United States Bakery
26-2952	BOILERS	P-1	Boiler	1.19	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5257	-122.6545	United States Bakery
26-2952	BOILERS	P-2	Boiler	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5257	-122.6545	United States Bakery
26-2968	OVENS	P-1	OVENS NATRUAL GAS	7.16	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5818	-122.6638	Mondelez Global LLC
26-2968	BOILER	P-1	BOILER	3.37	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5818	-122.6638	Mondelez Global LLC
26-2968	BOILER	P-2	BOILER	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5818	-122.6638	Mondelez Global LLC
26-3002	BOILERS	P-1	NATURAL GAS BOILERS	0.733	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5775	-122.7552	Siltronic Corporation
26-3002	GEN	P-1	DIESEL GENERATORS	0.242	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5775	-122.7552	Siltronic Corporation
26-3002	NG COMBUSTIO	P-1	OTHER BOILERS AND TO	0.085	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5775	-122.7552	Siltronic Corporation
26-3002	SCRUBBER	P-1	NOx SCRUBBER	0.000007	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5775	-122.7552	Siltronic Corporation
26-3009	AIE	P-1	Aggregate Insignificant Activities	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.5888	-122.6908	Arclin Surfaces, Inc.
26-3009	EU-4	P-1	Boilers	3.35	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5888	-122.6908	Arclin Surfaces, Inc.
26-3009	EU-2	P-2	Coating Line 3	8.61	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5888	-122.6908	Arclin Surfaces, Inc.
26-3009	EU-2	P-3	Coating Line 3	2.46	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5888	-122.6908	Arclin Surfaces, Inc.
26-3009	EU-2	P-1	Coating Line 3	1.56	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5888	-122.6908	Arclin Surfaces, Inc.
26-3021	HTR-3	P-1	HEATER #3	2.11	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6062	-122.6938	EcoLube Recovery LLC
26-3021	BLRS 1-2	P-1	BOILERS	0.354	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6062	-122.6938	EcoLube Recovery LLC
26-3021	TO-01	P-1	THERMAL OXIDIZER	0.344	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6062	-122.6938	EcoLube Recovery LLC
26-3021	HTR-4	P-1	HEATER #4	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6062	-122.6938	EcoLube Recovery LLC
26-3021	PESCO	P-1	REFINERY	0.0000315	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6062	-122.6938	EcoLube Recovery LLC
26-3021	OPS-1	P-1	OIL POLISHING SYSTEM	0	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6062	-122.6938	EcoLube Recovery LLC
26-3038	NG COMB	P-1	NATRUAL GAS COMBUSTION SOU	5.45	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5387	-122.4578	Cascade Corporation
26-3038	EG-1	P-1	EMERGENCY GENERATOR	0.057	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5387	-122.4578	Cascade Corporation
26-3048	BLR	P-1	BOILER	2.18	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6135	-122.7111	Oil Re-Refining Company Inc.
26-3048	TK HEATERS	P-1	COOK TANK HEATERS	2.18	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6135	-122.7111	Oil Re-Refining Company Inc.
26-3048	ROCKET	P-1	ROCKET SYSTEM	0	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6135	-122.7111	Oil Re-Refining Company Inc.
26-3048	ROCKET	P-2	ROCKET SYSTEM	0	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6135	-122.7111	Oil Re-Refining Company Inc.
26-3051	NG COMB	P-1	NATURAL GAS COMBUSTION	3.06	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5346	-122.4682	International Paper Company
26-3062														Purina Animal Nutrition LLC
26-3067	EU2	P-1	Boilers & Pre-heaters	7.8	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.6061	-122.7891	Owens Corning Roofing and Asphalt, LLC
26-3067	EU1	P-2	Asphalt Convertors	8.14	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6061	-122.7891	Owens Corning Roofing and Asphalt, LLC
26-3067	EU1	P-1	Asphalt Convertors	0	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6061	-122.7891	Owens Corning Roofing and Asphalt, LLC
26-3088														Coffee Bean International, Inc.
26-3091														Uniservice Corporation
26-3131														PFS Crematory, Gresham
26-3135	FURNACES	P-1	EU6S, T, F FURNACES	5.78	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.4961	-122.6447	Bullseye Glass Co.
26-3135	NG COMB	P-1	NATURAL GAS COMBUSTION	2.36	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.4961	-122.6447	Bullseye Glass Co.
26-3135	AI	P-1	AGGREGATE INSIGNIFICANT EMIS	1	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.4961	-122.6447	Bullseye Glass Co.
26-3224	AI	P-1	Aggregate Insignificant	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.5662	-122.7218	Vigor Industrial, LLC
26-3224	CUB	P-1	Boilers (2)	5.64	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5662	-122.7218	Vigor Industrial, LLC
26-3228	FLRS	P-1	FLARES	0.733	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5454	-122.4587	City Of Gresham
26-3228	EM GEN	P-1	EMERGENCY GEN SETS	0.172	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5454	-122.4587	City Of Gresham
26-3228	BLR	P-1	BOILER	0.076	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5454	-122.4587	City Of Gresham
26-3228	GEN 9302	P-1	COGEN 3508LE	4.88	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5454	-122.4587	City Of Gresham
26-3228	GEN 9301	P-1	COGEN 3508LE	0.8	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.5454	-122.4587	City Of Gresham
26-3240	BLRS B2	P-1	BUILDING 2 BOILERS NG	1.7	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5206	-122.4474	Microchip Technology Incorporated
26-3240	BLRS B1	P-1	BUILDING 1 BLRS	1.09	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5206	-122.4474	Microchip Technology Incorporated
26-3240	GEN B2	P-1	BUILDING 2 GENERATORS DIESLE	0.736	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5206	-122.4474	Microchip Technology Incorporated
26-3240	CTO	P-1	CTO BURINING NATURAL GAS	0.419	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5206	-122.4474	Microchip Technology Incorporated
26-3240	GEN B1	P-1	BUILDING 1 GENERATORS DIESEL	0.331	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5206	-122.4474	Microchip Technology Incorporated
26-3240	BRLS B2	P-2	BUILDING 2 BOILERS OIL	0.00279	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5206	-122.4474	Microchip Technology Incorporated
26-3240	FIRE PUMP	P-1	FIRE PUMP	0.00000217	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5206	-122.4474	Microchip Technology Incorporated
26-3240	BLRS B1	P-2	BUILDING 1 BLRS	0	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5206	-122.4474	Microchip Technology Incorporated
26-3241	NG COMB	P-1	NATURAL GAS rto AND OTHER EQI	2.89	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5755	-122.6082	Hydro Extrusion Portland, Inc.
26-3242														Lakeside Industries, Inc.
26-3243														H&H Lumber, LLC
26-3253														Darigold, Inc.
26-3254	GEN B433	P-1	Emergency Generator	9.98	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B145	P-1	Emergency Generator	5.27	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B252	P-1	Emergency Generator	2.07	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B210	P-1	Emergency Generator	2.06	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B251	P-1	Emergency Generator	2.05	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B254	P-1	Emergency Generator	1.86	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B155	P-1	Emergency Generator	1.57	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B180	P-1	Emergency Generator	1.38	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	NG	P-1	Natural Gas Combustion in heatin	1.05	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B255	P-1	Emergency Generator	0.75	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	ETC	P-4	Engine Test Cell	0.282	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B253	P-1	Emergency Generator	0.281	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B302	P-1	Emergency Generator	0.254	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN B098	P-1	Emergency Generator	0.247	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	ETC	P-5	Engine Test Cell	0.204	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard

26-3254	ETC	P-1	Engine Test Cell	0.012	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN NE	P-1	Emergency Generator	0.000256	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN SE	P-1	Emergency Generator	0.000256	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN NW	P-1	Emergency Generator	0.000226	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3254	GEN SW	P-1	Emergency Generator	0.000226	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5749	-122.5914	Oregon Air National Guard
26-3265														Glacier Northwest, Inc.
26-3267	GENS	P-1	GENS	4.91	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5465	-122.4805	U.S. Bancorp
26-3291	NG COMB	P-1	NATURAL GAS COMBUSTION	1.98	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5779	-122.614	The Boeing Company
26-3291	FP	P-1	FIRE PUMPS	0.917	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5779	-122.614	The Boeing Company
26-3291	GENS	P-1	GENERATORS	0.328	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5779	-122.614	The Boeing Company
26-3305														Lakeside Industries, Inc.
26-3310	Landfill	P-1	Landfill Gas Flares	1.41	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.6142	-122.7516	Metropolitan Service District
26-3317	NG	P-1	NATRUAL GAS COMBUSTION	0.244	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.574	-122.6	Silver Eagle Manufacturing Co.
26-9535														Cadman Materials, Inc.
26-9537	EU3	P-1	Space Heaters	0.364	RP-GSF	Default parameters for release pc	60	8	300	37	111589.35	45.5406	-122.4737	Owens Corning Foam Insulation, LLC
26-9545														Regency Portland
26-9550	ENGS	P-1	ENGS	0.27	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4959	-122.6483	Portland General Electric Company
34-0001														Peterkort Roses, L.L.C.
34-0002														Legacy Meridian Park Hospital
34-0004	FLARE	P-1	FLARE	7.24	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.493	-122.97	Hillsboro Landfill Inc.
34-0004	TUB GRIND	P-1	TUB GRINDER	7.88	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.493	-122.97	Hillsboro Landfill Inc.
34-0004	TIPPER	P-1	TIPPER	4	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.493	-122.97	Hillsboro Landfill Inc.
34-0005	NG	P-1	NATURAL GAS COMBUSTION	2.33	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.3839	-122.7779	Valmont Coatings, Inc.
34-0009	NG COMB	P-1	NATURAL GAS COMBUSTION	2.08	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4801	-122.7821	International Paper Company
34-0017	NG COMB	P-1	Natrual Gas	0.757	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5467	-122.9327	Dynic USA Corp.
34-0048														Cascade Funeral Directors
34-0055	NG COMB	P-1	NATURAL GAS COMBUSTION	2.5	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5413	-122.9374	Qorvo US, Inc.
34-0063	BLRS	P-1	BOILERS	2.97	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.386	-122.792	Lam Research Corporation
34-0070	CRE		CREMATORY	0.225329315	RP-GSF	Default parameters	60	8	300	37	111600	45.4901	-122.8672	Springer & Son, Inc.
34-0079	CR		COFFEE ROASTER	0.108638862	RP-GSF	Default parameters	60	8	300	37	111600	45.5665	-122.8985	West Coast Coffee Company
34-0080	GEN		GENERATOR	0.018112752	RP-GSF	Default parameters	60	8	300	37	111600	45.5413	-122.9374	Qorvo US, Inc.
34-0083	GEN		GENERATOR	0.8247771	RP-GSF	Default parameters	60	8	300	37	111600	45.5227	-122.9904	Flexential Colorado Corp.
34-0090														Finley-Sunset Hills Mortuary
34-0096	GEN		GENERATOR	0.21616707	RP-GSF	Default parameters	60	8	300	37	111600	45.5323	-122.9382	Clean Water Services / Clean Water Institute
34-0101														Landmark Ford, Inc.
34-0134	NG	P-1	NATURAL GAS COMBUSTION	0.51	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.3667	-122.7849	Ardent Mills, LLC
34-0142	GEN		GENERATOR	0.283917388	RP-GSF	Default parameters	60	8	300	37	111600	45.5498	-122.9919	City of Hillsboro
34-0149	ENG	P-1	AVERY GENERATOR DSG	0.0000465	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.3716	-122.7879	Portland General Electric Company
34-0157	EMGEN	P-1	EM GEN 1-16	0.491	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5471	-122.9287	STACK Infrastructure, Inc.
34-0157	LSGEN	P-1	LS GEN 1-3	0.0018	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5471	-122.9287	STACK Infrastructure, Inc.
34-0183	GEN	P-1	GEN	20.9	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5509	-122.9207	STACK Infrastructure, Inc.
34-0186	GEN		GENERATOR	21.6274884	RP-GSF	Default parameters	60	8	300	37	111600	45.566	-122.916	Beaver Ventures LLC
34-0222	ENGS	P-1	ENGS	2.05	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5571	-122.9272	QTS Investment Properties Hillsboro, LLC
34-0235	GENS 101-111	P-1	EMERGENCY GENERATORS	0.977	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.55	-122.9727	NTT Global Data Centers HI, LLC
34-0235	GEN 1H	P-1	EMERGENCY GENERATOR 1H	0.09	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.55	-122.9727	NTT Global Data Centers HI, LLC
34-0238	NOT RUNNING			0										KoMiCo Hillsboro LLC
34-0241	GEN1-3	P-1	GENERATORS 1-3	0.89	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.557	-122.9227	Flexential Colorado Corp
34-0241	GEN5-10	P-1	GENERATORS 5-10	0.734	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.557	-122.9227	Flexential Colorado Corp
34-0241	GEN4	P-1	GENERATOR 4	0.348	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.557	-122.9227	Flexential Colorado Corp
34-2066	H-BLR	P-2	Hog Fuel Boilers	22.8	STK-1		114.8	5.6	357	38.7	57191.05	45.4673	-123.1881	Stimson Lumber Company
34-2066	H-BLR	P-1	Hog Fuel Boilers	13.9	STK-1		114.8	5.6	357	38.7	57191.05	45.4673	-123.1881	Stimson Lumber Company
34-2510	NO NOX			0										Jewett-Cameron Seed Company
34-2565														Hampton Lumber Mills - Banks Inc.
34-2584														Woodfold Mfg., Inc.
34-2585														Providence St. Vincent Medical Center
34-2623	GENS	P-1	GENERTORS	29.1	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4008	-122.7619	Clean Water Services
34-2623	HEATERS	P-1	HEATERS	0.34	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4008	-122.7619	Clean Water Services
34-2623	BLRS	P-1	BOILERS	0.048	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4008	-122.7619	Clean Water Services
34-2623	BLRS	P-2	BOILERS	0.019	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4008	-122.7619	Clean Water Services
34-2623	FLARES	P-1	FLARES	0.000987	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.4008	-122.7619	Clean Water Services
34-2636														Rogers Northwest, Inc.
34-2638	NG COMB	P-1	NATURAL GAS COMBUSTION	2.54	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.499	-122.8179	Tektronix, Inc.
34-2639	BLR		BOILER	1.11		DEFAULT PARAMETERS	60	8	300	37	111600	45.567	-122.8605	Portland Community College
34-2640														Wilsonville Concrete Products
34-2674														Knife River Corporation - Northwest
34-2678	NG	P-1	NATURAL GAS COMBUSTION	1.7	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5134	-123.0814	TTM Technologies North America, LLC
34-2688														Oregon-Canadian Forest Products, Inc.
34-2750	CR		COFFEE ROASTER	0.088678881	RP-GSF	Default parameters	60	8	300	37	111600	45.5556	-122.919	Longbottom Coffee & Tea Inc.
34-2753	FLARES	P-1	FLARES DIGESTER GAS	0.52	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.4977	-122.9492	Clean Water Services
34-2753	GENS	P-1	ENGINE GENERATORS DIGESTER G	40.9	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4977	-122.9492	Clean Water Services
34-2753	NG COMB	P-1	NATURAL GAS COMBUSTION	1.21	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4977	-122.9492	Clean Water Services
34-2753	BLRS	P-1	BOILERS DIGESER GAS	0.173	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4977	-122.9492	Clean Water Services
34-2769	C		CONCRETE	0.016933462	RP-GSF	Default parameters	60	8	300	37	111600	45.5375	-122.8969	Glacier Northwest, Inc.
34-2775														Knife River Corporation - Northwest
34-2783	BO	P-1	NATURAL GAS BAKE OVENS NG CC	1.91	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4831	-122.7874	Bimbo Bakeries USA, Inc.
34-2783	BLR	P-1	SUPERIOR NG BOILER	1.49	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.4831	-122.7874	Bimbo Bakeries USA, Inc.
34-2790	NG	P-1	COMBUSTION	1.99	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5519	-122.9244	Tokyo Ohka Kogyo America, Inc.
34-2804	BLRS	P-2	NG BOILERS	1.05	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5021	-122.8246	Analog Devices, Inc.
34-2804	BLRS	P-1	NG BOILERS	0.465	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5021	-122.8246	Analog Devices, Inc.
34-2804	ENG B59	P-1	ENGINE BUILDING 59	0.103	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5021	-122.8246	Analog Devices, Inc.
34-2804	ENG B57	P-1	ENGINE BUILDING 57	0.063	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5021	-122.8246	Analog Devices, Inc.
34-2804	ENG B60	P-1	ENGINE BUILDING 60	0.011	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5021	-122.8246	Analog Devices, Inc.
34-2813	BLRS	P-1	BOILERS 1-5	0.949	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5465	-122.9306	Jireh Semiconductor Incorporated
34-2813	ENG 1-3	P-1	ENGINES 1-3	0.176	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5465	-122.9306	Jireh Semiconductor Incorporated
34-2813	ENG 4	P-1	ENGINE 4	0.021	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5465	-122.9306	Jireh Semiconductor Incorporated
34-9507	BLR 1-2	P-1	BOILERS 1-2	2.35	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5572	-122.9262	Genentech, Inc.
34-9507	EG2	P-2	EMERGENCY GEN 2	0.095	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5572	-122.9262	Genentech, Inc.
34-9507	BLR 3-5	P-1	BOILERS 3-5	0.094	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5572	-122.9262	Genentech, Inc.
34-9507	EG1	P-2	EMERGENCY GEN 1	0.052	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5572	-122.9262	Genentech, Inc.
34-9507	FWP	P-2	FIRE WATER PUMP	0.031	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.5572	-122.9262	Genentech, Inc.
34-9514	PO	P-1	PROCESS OPERATIONS	0.78	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.4256	-122.7594	Regenyx LLC
34-9514	NG	P-1	NATURAL GAS COMBUSTION	0.55	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.4256	-122.7594	Regenyx LLC
34-9514	PROPANE	P-1	PROPANE COMBUSTION	0	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.4256	-122.7594	Regenyx LLC
34-9691														Fuiten-Rose & Mortuary Chapels, Inc.
36-0007														UFP McMinnville, LLC
36-0011	AI	P-1	Aggregate Insignificant	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.1606	-123.2444	Riverbend Landfill Co.
36-0011	TIP	P-1	Tipper	0	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.1606	-123.2444	Riverbend Landfill Co.
36-0011	FLRN	P-1	Enclosed flare	10.3	STK-2		30	6.3	640.6	27.5	51434.54	45.1606	-123.2444	Riverbend Landfill Co.
36-0011	ENG	P-1	Engines (6)	40.4	STK-1		32	5	1200		29179	45.1606	-123.2444	Riverbend Landfill Co.
36-0012														Carlton Seed, L.L.C.
36-0014														Macy & Son Co. dba Macy & Son Funeral Directors
36-0025														Tissa, Inc. dba Caravan Coffee
36-0029														Providence Health System-Oregon
36-0031														City of Newberg
36-0041	NG	P-1	NATURAL GAS COMBUSTION	0.018	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.274	-123.0463	M & W Fiberglass, Inc.
36-0052	NG COMB	P-1	NATURAL GAS COMBUSTION	0.525	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.2144	-123.1888	Ultimate RB, Inc.
36-1033														TMS International, LLC
36-5034	AI	P-1	Aggregate Insignificant Activities	1	RP-FS	Default parameters for release pc	20	50	72	7	824667.9	45.2289	-123.1627	Cascade Steel Rolling Mills, Inc.
36-5034	EU-1	P-1	Melt Shop Baghouses	115	STK-1	EAF BH exhaust	50	12.3	121	104	741454.67	45.2289	-123.1627	Cascade Steel Rolling Mills, Inc.
36-5034	EU-3	P-1	Melt Shop Roof	16.5	STK-2	EAF roof monitor	75	12.3	93	10	71293.72	45.2289	-123.1627	Cascade Steel Rolling Mills, Inc.
36-5034	Other NG	P-1	Other NG Usage	6.51	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.2289	-123.1627	Cascade Steel Rolling Mills, Inc.
36-5034	EU-7	P-1	Rod and Bar Mill	30.9	STK-3	Reheat furnace 1	75	5.7	702.3	24.7	36309	45.2289	-123.1627	Cascade Steel Rolling Mills, Inc.
36-5034	EU-6	P-1	Rolling Mill	0	STK-3	Reheat furnace 1	75	5.7	702.3	24.7	36309	45.2289	-123.1627	Cascade Steel Rolling Mills, Inc.
36-5034	EU-4	P-1	Melt Shop Vertical Preheater	0.759	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.2289	-123.1627	Cascade Steel Rolling Mills, Inc.
36-5088														C.C. Meisel Co., Inc.
36-5313														Linfield College
36-5330														Knife River Corporation - Northwest
36-6214														West Coast Feed & Seed, LLC
36-9504	EG	P-1	EMERGENCY GENERATOR	1.16	RP-GSF	Default parameters for release pc	60	8	300	37	111600	45.2858	-122.9525	City of Newberg
36-9504	DEHYDRATION	P-1	WOOD DEHYDRATOR	0.161	RP-GS	Default parameters for release pc	40	5	72	40	47100	45.2858	-122.9525	City of Newberg

SourceNumber	ESCode	ProcessCode	ESDescription	CO	PM10	PM2_5	ReleasePointCode	ReleasePointDescription	Height	Diameter	ExitGasTemperature	ExitGasVelocity	ExitGasFlowRate	Latitude	Longitude
26-2068	3U-2	P-1	PCS	50.6	1.14	1.14	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703
26-1865	EU-20	P-1	Low NOx NG sourc	42.1	0.417	0.417	STK-2		78.9	4.4	389.3	21.8	19888.54	45.6256	-122.7794
26-3067	EU1	P-2	Asphalt Convertor	40.7	3.05	3.05	RP-GS	Default parameters for release	40	5	72	40	47100	45.6061	-122.7891
34-0004	FLARE	P-1	FLARE	39.4	1.81	1.81	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.493	-122.97
26-1865	EU-10	P-1	Reheat Furnace	34.5	3.48	3.48	STK-1		72.7	5.7	702.3	24.7	37817.06	45.6256	-122.7794
26-1894	CL	P-1	Coater and Lamina	27.1			RP-GS	Default parameters for release	40	5	72	40	47100	45.5911	-122.7001
26-2068	3U-1	P-1	MELT	23.1	0.242	0.242	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029
34-2753	GENS	P-1	ENGINE GENERAT	19	0.657	0.657	RP-GSF	Default parameters for release	60	8	300	37	111600	45.4977	-122.9492
26-1865	EU-13	P-1	Other Natural Gas	14.1	1.27	1.27	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6256	-122.7794
34-0183	GEN	P-1	GEN	12.1	0.698	0.698	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5509	-122.9207
26-3067	EU2	P-1	Boilers & Pre-heat	6.55	0.195	0.195	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6061	-122.7891
26-1815	COATER	P-1	Asphalt Coater	6.08			RP-GS	Default parameters for release	40	5	72	40	47100	45.5493	-122.719
26-1894	NG	P-1	NATURAL GAS	5.47			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5911	-122.7001
26-3009	EU-2	P-2	Coating Line 3	5.37			RP-GS	Default parameters for release	40	5	72	40	47100	45.5888	-122.6908
26-0100	BLRS	P-1	BLRS	4.96	0.148	0.148	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5965	-122.7176
34-2753	FLARES	P-1	FLARES DIGESTER (	4.47	0.162	0.162	RP-FS	Default parameters for release	60	8	300	37	111600	45.4977	-122.9492
26-1865	EU-23	P-1	Coil Furnaces	3.78	0.342	0.342	RP-GS	Default parameters for release	40	5	72	40	47100	45.6256	-122.7794
26-1869	STEEL	P-1	Steel Arc Furnaces	3.35	0.266	0.266	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291
26-2050	EU3	P-1	Boiler 6 and 7	3.17	0.566	0.566	STK-3	Boiler 6 - EU3	31	3.5	347	34	19627.1	45.4991	-122.6853
26-2390	NG COMB	P-1	NATURAL GAS CON	3.1			RP-GSF	Default parameters for release	60	8	300	37	111600	45.6157	-122.7145
26-3067	EU3	P-1	Storage Tanks 1-2	3.03	0.1	0.1	RP-GS	Default parameters for release	40	5	72	40	47100	45.6061	-122.7891
34-2804	BLRS	P-2	NG BOILERS	2.76	0.082	0.082	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5021	-122.8246
26-1815	TK 18&19	P-1	Asphalt Storage Ta	2.74			RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5493	-122.719
26-2068	3U-2	P-2	PCS	2.66	1.08	1.08	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703
26-1891	PRODUCTION	P-1	Production	2.5	2.58	1.33	RP-GS	Default parameters for release	40	5	72	40	47100	45.6229	-122.7838
34-2813	BLRS	P-1	BOILERS 1-5	2.49			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5465	-122.9306
26-0100	BLRS	P-2	BLRS	2.4	0.071	0.071	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5965	-122.7176
26-1865	EU-21	P-1	Heat Treat Process	2.32	0.464	0.464	RP-GS	Default parameters for release	40	5	72	40	47100	45.6256	-122.7794
34-2638	NG COMB	P-1	NATURAL GAS CON	2.14	0.064	0.064	RP-GSF	Default parameters for release	60	8	300	37	111600	45.499	-122.8179
34-0055	NG COMB	P-1	NATURAL GAS CON	2.1	0.063	0.063	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5413	-122.9374
26-2777	BLRS/DRYER	P-1	Boilers and Dryers	2.06	0.061	0.061	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6119	-122.7022
26-2043	NG COMB	P-1	NATURAL GAS CON	2.04	0.184	0.184	RP-GSF	Default parameters for release	60	8	300	37	111600	45.568	-122.743
26-2068	3U-10	P-1	NG	2.03	0.061	0.061	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5374	-122.703
34-0004	TUB GRIND	P-1	TUB GRINDER	1.8	0.23	0.23	RP-GSF	Default parameters for release	60	8	300	37	111600	45.493	-122.97
26-1815	NG COMB	P-1	Natural Gas Combu	1.66	0.15	0.15	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5493	-122.719
26-2025	BOIL/FURN	P-1	Boilers and furnac	1.63	0.049	0.049	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5607	-122.7369
34-2783	BO	P-1	NATURAL GAS BAK	1.6	0.048	0.048	RP-GSF	Default parameters for release	60	8	300	37	111600	45.4831	-122.7874
26-1885	BOILER	P-1	NG BOILER	1.58			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5394	-122.7122
26-1814	BOILER	P-1	Boiler	1.56	0.047	0.047	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5473	-122.709
26-2043	COATER	P-1	ASPHALT COATER	1.51	0.042	0.042	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
34-0186	GEN		GENERATOR	1.5038982	1.5038982	4.654923		DEFAULT	60	8	300	37	111600	45.566	-122.916
34-2678	NG	P-1	NATURAL GAS CON	1.47			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5134	-123.0814
26-2968	OVENS	P-1	OVENS NATRUAL (	1.43	0.179	0.179	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5818	-122.6638
26-3224	CUB	P-1	Boilers (2)	1.41	0.101	0.101	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5662	-122.7218
26-0368	NGC	P-1	NATURAL GAS	1.37	0.124	0.124	RP-GS	Default parameters for release	40	5	72	40	47100	45.6242	-122.77
26-1894	OVEN	P-1	Fiberglass Mat Cur	1.34			RP-GS	Default parameters for release	40	5	72	40	47100	45.5911	-122.7001
34-9507	BLR 1-2	P-1	BOILERS 1-2	1.34	0.336	0.336	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5572	-122.9262
34-2783	BLR	P-1	SUPERIOR NG BOIL	1.25	0.037	0.037	RP-GSF	Default parameters for release	60	8	300	37	111600	45.4831	-122.7874
26-3002	BOILERS	P-1	NATURAL GAS BOI	1.23	0.037	0.037	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5775	-122.7552
26-2068	3U-1	P-2	MELT	1.22	2.65	2.65	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029
34-2804	BLRS	P-1	NG BOILERS	1.22	0.036	0.036	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5021	-122.8246
26-1869	NG COMB	P-1	Natural Gas Combu	1.1	0.131	0.131	RP-GSF	Default parameters for release	60	8	300	37	111589.35	45.5996	-122.7291
26-1865	AI	P-1	Aggregate Insignifi	1	1		RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794
26-2050	AI	P-1	Aggregate Insignifi	1	1	1	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.4991	-122.6853
26-2197	8-AGG	P-1	Aggregate Insignifi	1	1	1	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5728	-122.7152
26-2777	AI	P-1	Aggregate Insignifi	1	1	1	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6119	-122.7022
26-3009	AIE	P-1	Aggregate Insignifi	1	1		RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5888	-122.6908
26-1869	MANG	P-1	Manganese Arc Fu	0.936	0.968	0.968	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291
34-2639	BLR		BOILER	0.930594	0.02769625	0.02769625		DEFAULT	60	8	300	37	111600	45.567	-122.8605
34-0004	TIPPER	P-1	TIPPER	0.862	0.284	0.284	RP-GSF	Default parameters for release	60	8	300	37	111600	45.493	-122.97
26-3310	Landfill	P-1	Landfill Gas Flares	0.848	0.601	0.601	RP-GS	Default parameters for release	40	5	72	40	47100	45.6142	-122.7516
26-2968	BOILER	P-1	BOILER	0.843	0.06	0.06	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5818	-122.6638
26-3009	EU-4	P-1	Boilers	0.836	0.06	0.06	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5888	-122.6908
26-2197	5-BO	P-1	Natural Gas Combu	0.738	0.422	0.422	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5728	-122.7152
34-0017	NG COMB	P-1	Natrual Gas	0.636			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5467	-122.9327
26-3009	EU-2	P-3	Coating Line 3	0.614	0.044	0.044	RP-GS	Default parameters for release	40	5	72	40	47100	45.5888	-122.6908
26-3048	BLR	P-1	BOILER	0.574	0.632	0.356	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6135	-122.7111
26-3048	TK HEATERS	P-1	COOK TANK HEATE	0.574	0.632	0.356	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6135	-122.7111
26-3021	HTR-3	P-1	HEATER #3	0.527	0.242	0.169	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6062	-122.6938
34-9514	NG	P-1	NATURAL GAS CON	0.462			RP-GS	Default parameters for release	40	5	72	40	47100	45.4256	-122.7594
26-2043	SURFACING	P-1	SURFACING	0.379	0.069	0.069	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
34-0157	EMGEN	P-1	EM GEN 1-16	0.312	0.055	0.055	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5471	-122.9287
26-3021	BLRS 1-2	P-1	BOILERS	0.298	0.00886	0.00886	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6062	-122.6938
26-3021	TO-01	P-1	THERMAL OXIDIZE	0.289	0.00859	0.00859	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6062	-122.6938
26-2068	3U-3	P-1	MH/SR	0.254	0.094	0.094	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703
34-2753	NG COMB	P-1	NATURAL GAS CON	0.254	0.03	0.03	RP-GSF	Default parameters for release	60	8	300	37	111600	45.4977	-122.9492
26-3067	EU5	P-1	Storage Tanks 7-10	0.2	0	0	RP-GS	Default parameters for release	40	5	72	40	47100	45.6061	-122.7891
34-0070	CRE		CREMATORY	0.18927662	0.0403328	0.0403328		DEFAULT	60	8	300	37	111600	45.4901	-122.8672
34-0083	GEN		GENERATOR	0.17751825	0.05735205	0.05735205		DEFAULT	60	8	300	37	111600	45.5227	-122.9904
26-2068	3U-1	P-3	MELT	0.17	0.000558	0.000558	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029
26-2068	3U-1	P-4	MELT	0.17	0.000558	0.000558	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029
34-9507	BLR 3-5	P-1	BOILERS 3-5	0.157	0.00468	0.00468	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5572	-122.9262
26-2043	HOR MIXER	P-1	HORIZONTAL MIXE	0.146	0.442	0.442	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
26-1889	NG COMB	P-1	GAS COMBUSTION	0.101	0.00912	0.00912	RP-GS	Default parameters for release	40	5	72	40	47100	45.6248	-122.7852
34-0079	CR		COFFEE ROASTER	0.09125664	0.401636	0.401636		DEFAULT	60	8	300	37	111600	45.5665	-122.8985
26-2043	ASPH TKS	P-1	ASPHALT TANKS	0.077	0.339	0.339	RP-GS	Default parameters for release	40	5	72	40	47100	45.568	-122.743
26-2043	FLUX TKS	P-1	FLUX TANKS	0.077	0.339	0.339	RP-GS	Default parameters for release	40	5	72	40	47100	45.568	-122.743
34-2750	CR		COFFEE ROASTER	0.07449026	0.03792	0.03792		DEFAULT	60	8	300	37	111600	45.5556	-122.919
34-0235	GENS 101-111	P-1	EMERGENCY GENE	0.071			RP-GSF	Default parameters for release	60	8	300	37	111600	45.55	-122.9727
26-2043	VERT MIXER	P-1	VERTICAL MIXER	0.069	0.177	0.177	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
26-2832	PS-2	P-1	TURBINE	0.066	0.13	0.13	STK-1		30	2	350	25	4712.39	45.5098	-122.6813
34-0142	GEN		GENERATOR	0.06110805	0.0197426	0.0197426		DEFAULT	60	8	300	37	111600	45.5498	-122.9919
26-3067	EU4	P-1	Storage Tanks 3-6	0.06	0	0	RP-GS	Default parameters for release	40	5	72	40	47100	45.6061	-122.7891
26-2043	COOLING	P-1	COOLING SECTION	0.059	0.027	0.027	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
26-0285	ENGS	P-1	DIESEL ENGINES	0.058	0.00349	0.00349	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5153	-122.6723
34-0235	GEN 1H	P-1	EMERGENCY GENE	0.054			RP-GSF	Default parameters for release	60	8	300	37	111600	45.55	-122.9727
26-3002	GEN	P-1	DIESEL GENERATO	0.052	0.017	0.017	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5775	-122.7552
34-0096	GEN		GENERATOR	0.04652603	0.015031485	0.01503149		DEFAULT	60	8	300	37	111600	45.5323	-122.9382
34-2813	ENG 1-3	P-1	ENGINES 1-3	0.04			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5465	-122.9306
26-1815	MLA APPLIC	P-1	MLA Applicator	0.039			RP-GS	Default parameters for release	40	5	72	40	47100	45.5493	-122.719
26-1815	MLA USE TK	P-1	MLA Use Tank	0.039			RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5493	-122.719
26-2043	LAM APP	P-1	LAMINANT APPLIC.	0.036	2.34	2.34	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
34-2753	BLRS	P-1	BOILERS DIGESER (	0.036	0.021	0.021	RP-GSF	Default parameters for release	60	8	300	37	111600	45.4977	-122.9492
34-0241	GEN1-3	P-1	GENERATORS 1-3	0.031	0.012	0.012	RP-GSF	Default parameters for release	60	8	300	37	111600	45.557	-122.9227
34-9514	PO	P-1	PROCESS OPERATI	0.03			RP-GS	Default parameters for release	40	5	72	40	47100	45.4256	-122.7594
26-1815	LAM SEAL USE	P-1	Laminate Sealant U	0.027			RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5493	-122.719
26-1815	SEAL MIX TK	P-1	Sealant MixTank 1	0.027			RP-GS	Default parameters for release	40	5	72	40	47100	45.5493	-122.719
26-1815	SEAL USE TK	P-1	Sealant Use Tank	0.027			RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5493	-122.719
34-2804	ENG B59	P-1	ENGINE BUILDING	0.024	0.034	0.033	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5021	-122.8246
34-0241	GEN5-10	P-1	GENERATORS 5-10	0.022	0.01	0.01	RP-GSF	Default parameters for release	60	8	300	37	111600	45.557	-122.9227
26-1815	TK 21	P-1	MLA Bulk Tank 21	0.021			RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5493	-122.719
26-1815	TK 20	P-1	Bulk Sealant Tank 2	0.02			RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5493	-122.719
26-3067	EU7	P-1	Truck Loading Rack	0.02	0.17	0.17	RP-GS	Default parameters for release	40	5	72	40	47100	45.6061	-122.7891
26-2043	LAM RUN TK	P-1	LAMINANT RUN TA	0.018	0.00822	0.00822	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
26-0100	FLARES	P-1	DIGESTER GAS FLA	0.016	0.000201	0.000201	RP-GS	Default parameters for release	40	5	72	40	47100	45.5965	-122.7176
26-2050	EU1	P-1	Boiler 2	0.016	0.000475	0.000475	STK-1	Boiler 2 - EU 1 Exhaust duct is r	214	12	385	22	149288.45	45.4991	-122.6853
26-1815	LAM SEAL APP	P-1	Laminate Sealant A	0.015			RP-GS	Default parameters for release	40	5	72	40	47100	45.5493	-122.719
26-1815	SEAL EXTR	P-1	Sealant Extruder	0.015	3.57	2.78	RP-GS	Default parameters for release	40	5	72	40	47100	45.5493	-122.719
26-2043	SEAL RUN TK	P-1	SEALANT RUN TAN	0.015	0.00991	0.00991	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
34-2769	C		Concrete Batch Pla	0.01422411	0.56792	0.1675364		DEFAULT	60	8	300	37	111600	45.5375	-122.8969
34-2804	ENG B57	P-1	ENGINE BUILDING	0.014	0.021	0.02	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5021	-122.8246
26-0100	GENS	P-1	GENS	0.012	0.00145	0.00145	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5965	-122.7176
26-3002	NG COMBUSTIO	P-1	OTHER BOILERS AN	0.012	0.00125	0.00125	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5775	-122.7552
26-2068	3U-2	P-3	PCS	0.01	0.000725	0.000725	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703
34-0241	GEN4	P-1	GENERATOR 4	0.01	0.00691	0.00691	RP-GSF	Default parameters for release	60	8	300	37	111600	45.557	-122.9227
34-2804	ENG B60	P-1	ENGINE BUILDING	0.00935	0.000534	0.000534	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5021	-122.8246
34-0222	ENGS	P-1	ENGS	0.009	0.002	0.002	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5571	-122.9272
34-9507	EG2	P-2	EMERGENCY GEN 2	0.00889			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5572	-122.9262
26-2050	EU3	P-2	Boiler 6 and 7	0.00873	0.00401	0.00279	STK-3	Boiler 6 - EU3	31	3.5	347	34	19627.1	45.4991	-122.6853
26-2043	SEAL APP	P-1	SEALANT APPLICAT	0.00705	1.09	1.09	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
34-9507	FWP	P-2	FIRE WATER PUMF	0.00566			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5572	-122.9262
26-2050	EU2	P-1	Boiler 5	0.0054	0.034	0.034	STK-2	Boiler 5 - EU2	31.3	5	539	20	23561.94	45.4991	-122.6853
34-2813	ENG 4	P-1	ENGINE 4	0.00487			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5465	-122.9306
34-9507	EG1	P-2	EMERGENCY GEN 1	0.00484			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5572	-122.9262
34-0080	GEN		GENERATOR	0.00389844	0.001259496	0.0012595		DEFAULT	60	8	300	37	111600	45.5413	-122.9374
26-2068	3U-2	P-5	PCS	0.0034	0.02	0.02	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703
26-2068	3U-2	P-4	PCS	0.00339	0.012	0.012	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703
26-2050	EU2	P-2	Boiler 5	0.00283	0.0013	0.000904	STK-2	Boiler 5 - EU2	31.3	5	539	20	23561.94	45.4991	-122.6853
26-2068	3U-1	P-5	MELT	0.00274	0.00071	0.00071	STK-1	MU-1 Melt EAF stack	55	7	80	32	73890.24	45.5373	-122.7029
34-0157	LSGEN	P-1	LS GEN 1-3	0.002	0.0012	0.0012	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5471	-122.9287
26-0100	GENS	P-2	GENS	0.00153	0.000499	0.000499	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5965	-122.7176
26-2043	SEAL TK	P-1	SEALANT TANK	0.000824	0.00362	0.00362	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743
26-2968	RTO	P-1	RTO NATURAL GAS	0.0000496			RP-GSF	Default parameters for release	60	8	300	37	111600	45.5818	-122.6638
26-3021	PESCO	P-1	REFINERY	0.000033			RP-GS	Default parameters for release	40	5	72	40	47100	45.6062	-122.6938
26-1814	BOILER	P-2	Boiler	0	0	0	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5473	-122.709
26-1894	AP	P-1	Asphalt Pouring	0			RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5911	-122.7001
26-2025	BOIL/FURN	P-2	Boilers and furnac	0	0		RP-GSF	Default parameters for release	60	8	300	37	111600	45.5607	-122.7369
26-2025	BOIL/FURN	P-3	Boilers and furnac	0	0		RP-GSF	Default parameters for release	60	8	300	37	111600	45.5607	-122.7369

26-2028	BOILER	P-1	Boilers	0	0	0	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5625	-122.7437	
26-2028	BOILER	P-2	Boilers	0	0	0	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5625	-122.7437	
26-2043	OIL COMB	P-1	OIL COMBUSTION	0	0	0	RP-GSF	Default parameters for release	60	8	300	37	111600	45.568	-122.743	
26-2050	EU1	P-2	Boiler 2	0	0	0	STK-1	Boiler 2 - EU 1 Exhaust duct is r	214	12	385	22	149288.45	45.4991	-122.6853	
26-2777	BLRS/DRYER	P-2	Boilers and Dryers	0	0	0	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6119	-122.7022	
26-2968	BOILER	P-2	BOILER	0	0		RP-GSF	Default parameters for release	60	8	300	37	111600	45.5818	-122.6638	
26-3021	HTR-4	P-1	HEATER #4	0	0	0	RP-GSF	Default parameters for release	60	8	300	37	111600	45.6062	-122.6938	
26-3021	OPS-1	P-1	OIL POLISHING SYS	0	0	0	RP-GS	Default parameters for release	40	5	72	40	47100	45.6062	-122.6938	
26-3048	ROCKET	P-1	ROCKET SYSTEM	0	0	0	RP-GS	Default parameters for release	40	5	72	40	47100	45.6135	-122.7111	
26-3048	ROCKET	P-2	ROCKET SYSTEM	0	0	0	RP-GS	Default parameters for release	40	5	72	40	47100	45.6135	-122.7111	
26-3067	EU1	P-1	Asphalt Convertors	0	0	0	RP-GS	Default parameters for release	40	5	72	40	47100	45.6061	-122.7891	
34-0238	DID NOT RUN			0	0	0										
34-9514	PROPANE	P-1	PROPANE COMBUS	0			RP-GS	Default parameters for release	40	5	72	40	47100	45.4256	-122.7594	
26-0026	PRODUCTIN	P-2	PAINT PRODUCTION		0.117	0.117	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.6261	-122.7362	
26-0146	611.BF1	P-1	Railcar Loading		0.00486	0.00137	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	611.BF2	P-1	Reclaim Airlift Dust Collector		0.00781	0.00221	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	611.BF3	P-1	Pipe Conveyor Receiving		0.067	0.019	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	611.BF5	P-1	Tank Reclaim To Airlift Dust Colle		0.00173	0.000476	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	611.BF6	P-1	East Rail Loading Spout Dust Colle		0.00161	0.000447	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	614.BF1	P-1	Ship Unloading		0.211	0.06	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	614.BF2	P-1	Conveyance To Storage Tanks		1.03	0.029	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	614.BF3-5	P-1	North Terminal Storage Tanks		0.014	0.00381	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	614.BF6	P-1	Unload Airlift Airslide Dust Collect		0.00339	0.000847	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	621.BF1	P-1	Railcar Unloading		0.049	0.014	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	621.BF2	P-1	South Terminal Storage Silos		0.128	0.036	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	621.BF3	P-1	Truck Load-Out		0.228	0.064	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	621.BF4	P-1	Pipe Conveyor Discharge		0.043	0.012	RP-GS	Default parameters for release	40	5	72	40	47100	45.5512	-122.6946	
26-0146	FU1	P-1	FUGITIVE FROM SHIP		0.127	0.127	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5512	-122.6946	
26-0242	A1	P-1	ASPIRATION		0.53	0.032	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5841	-122.6763	
26-0242	A5	P-1	DRYER		0.186	0.011	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5841	-122.6763	
26-0242	A6	P-1	DUST		0.221	0.013	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5841	-122.6763	
26-0368	DRYERS	P-1	DRYERS		0.247	0.223	RP-GS	Default parameters for release	40	5	72	40	47100	45.6242	-122.77	
26-0368	DRYERS	P-2	DRYERS		1.83	1.37	RP-GS	Default parameters for release	40	5	72	40	47100	45.6242	-122.77	
26-1815	COOL SEC	P-1	Cooling Section		16.5	12.9	RP-GS	Default parameters for release	40	5	72	40	47100	45.5493	-122.719	
26-1815	DUST SYS	P-1	DUST COLLECTOR SYSTEM		0.26	0.26	RP-GS	Default parameters for release	40	5	72	40	47100	45.5493	-122.719	
26-1815	FBS	P-1	Filter Bed System		0.23	0.23	RP-GS	Default parameters for release	40	5	72	40	47100	45.5493	-122.719	
26-1865	EU-1	P-1	Material Handling		0.1	0.1	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794	
26-1865	EU-11	P-1	Rolling Operations		5.19	5.19	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794	
26-1865	EU-12	P-1	Other Torching Operations		21.9	21.9	RP-GS	Default parameters for release	40	5	72	40	47100	45.6256	-122.7794	
26-1865	EU-12	P-2	Other Torching Operations		4.5	4.5	RP-GS	Default parameters for release	40	5	72	40	47100	45.6256	-122.7794	
26-1865	EU-12	P-3	Other Torching Operations		0	0	RP-GS	Default parameters for release	40	5	72	40	47100	45.6256	-122.7794	
26-1865	EU-14	P-1	Paved Roads		33.7	8.30958904	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794	13.2.1 Paved Road
26-1865	EU-15	P-1	Wind Erosion		4.79	0.7185	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794	13.2.5. Wind Erosion
26-1865	EU-16	P-1	Coating Operations		1	1	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794	
26-1865	EU-2	P-1	Storage Piles		0.824	0.12477714	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794	13.2.4 Aggregate Handling & Storage Piles
26-1865	EU-24	P-1	Abrasive Blasting		0		RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794	
26-1865	EU-25	P-1	OD Coater		0		RP-GS	Default parameters for release	40	5	72	40	47100	45.6256	-122.7794	
26-1865	EU-27	P-1	Pipe Mill Building Fugitives		0.164	0.164	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794	
26-1865	EU-3	P-1	Scrap Preparation		0		RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6256	-122.7794	
26-1865	EU-8	P-1	Surface processing		0.072		RP-GS	Default parameters for release	40	5	72	40	47100	45.6256	-122.7794	
26-1869	BLAST	P-1	BLASTING		0.052	0.052	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	BLAST	P-2	BLASTING		0.00504	0.00504	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	BLAST	P-3	BLASTING		0.0035	0.0035	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	BURN/ARC	P-1	BURN/ARC		0.025	0.025	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	BURN/ARC	P-2	BURN/ARC		0.0037	0.0037	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	BURN/WELD	P-1	MAIN FOUNDRY BURN/WELD, CD		0.021	0.021	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	PATTERN	P-1	Pattern Shop, CD#18*		0.00000918	0.00000918	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	ROOFVENTS	P-1	Fugitives		4.54	4.54	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5996	-122.7291	
26-1869	ROOFVENTS	P-2	Fugitives		18.8	18.8	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5996	-122.7291	
26-1869	ROTOBLAST	P-1	ROTOBLAST 1 & 2, CD#7 & CD#24		0.06	0.06	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDCORE	P-1	CORE ROOM, CD#9*		0.011	0.011	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDMAIN	P-1	Sand preparation		0.198	0.198	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDMAIN	P-2	Sand preparation		0.204	0.204	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDMAIN	P-3	Sand preparation		0.054	0.054	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDMILL2	P-1	MILL 2 GROUP 8, CD#6*		0.00459	0.00459	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDMILL4	P-1	MILL 4 GROUP 3&6, CD#8*		0.059	0.059	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDRECL	P-1	Sand reclamation		0.151	0.151	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDRECL	P-2	Sand reclamation		0.067	0.067	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDRECL	P-3	Sand reclamation		0.023	0.023	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1869	SANDRECL	P-4	Sand reclamation		0	0	RP-GS	Default parameters for release	40	5	72	40	47123.88	45.5996	-122.7291	
26-1885	GALVANIZING	P-1	GALVANIZING KETTLES		0.581	0.581	RP-GS	Default parameters for release	40	5	72	40	47100	45.5394	-122.7122	
26-1889	UREA HNDLG	P-1	UREA HANDLING		0.098	0.00558	RP-GS	Default parameters for release	40	5	72	40	47100	45.6248	-122.7852	
26-1891	PRODUCTION	P-2	Production		1.59	0.812	RP-GS	Default parameters for release	40	5	72	40	47100	45.6229	-122.7838	
26-1891	RECEIVED	P-1	Receiving		13.5	6.9	RP-GS	Default parameters for release	40	5	72	40	47100	45.6229	-122.7838	
26-1891	RECEIVED	P-2	Receiving		0.023	0.023	RP-GS	Default parameters for release	40	5	72	40	47100	45.6229	-122.7838	
26-2003	CLEANING	P-1	GRAIN CLEANING		0.074	0.013	RP-GS	Default parameters for release	40	5	72	40	47100	45.5362	-122.6751	
26-2003	HEAD HOUSE	P-1	HEAD HOUSE		0.135	0.023	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5362	-122.6751	
26-2003	HEAD HOUSE	P-2	HEAD HOUSE		0.135	0.023	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5362	-122.6751	
26-2003	LOADOUT	P-1	LOADOUT		0.47	0.086	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5362	-122.6751	
26-2003	REC BRG	P-1	BARGE RECEIVING		0.133	0.018	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5362	-122.6751	
26-2003	REC RC	P-1	RAIL CAR RECEIVING		0.00163	0.00027	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5362	-122.6751	
26-2003	REC TK	P-1	TRUCK RECEIVING		0.00205	0.000341	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5362	-122.6751	
26-2003	SILOS	P-1	CLEANING AREA TRUCK LOADOU		0.497	0.033	RP-GS	Default parameters for release	40	5	72	40	47100	45.5362	-122.6751	
26-2043	BACKING APP	P-1	BACKING APPLICATION		0.000074	0.000074	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743	
26-2043	DRY LOOPER	P-1	MAT DRY LOOPER		0.00779	0.00779	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743	
26-2043	FILLER UNLD	P-1	FILLER UNLOADING		0.028	0.028	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743	
26-2043	GRAN BLEND	P-1	GRANULE BLENDING		0.078	0.078	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743	
26-2043	GRAN DUMP	P-1	GRANULE DUMP		0.00722	0.00722	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743	
26-2043	GRAN XFR	P-1	GRANULE TRANSFER SYSTEM		0.032	0.032	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743	
26-2043	HEADLAP XFR	P-1	HEADLAP TRANSFER		0.00261	0.00261	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743	
26-2043	SAND UNLD	P-1	SAND UNLOADING		0.042	0.042	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.568	-122.743	
26-2043	SWECO TO TKS	P-1	SWECO TO TANKS		0.028	0.028	RP-GS	Default parameters for release	40	5	72	40	47100	45.568	-122.743	
26-2068	3U-4	P-1	S/SB		0.189	0.189	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703	
26-2068	3U-5	P-1	C/G		0.000055	0.000055	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703	
26-2068	3U-5	P-2	C/G		0.00000155	0.00000155	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703	
26-2068	3U-6	P-1	HOTWORK		0.00677	0.00677	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703	
26-2068	3U-6	P-4	HOTWORK		0.018	0.018	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703	
26-2068	3U-7	P-2	MOLD/CORE		0.012	0.012	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703	
26-2068	3U-9	P-1	COATING		0.331	0.331	RP-GS	Default parameters for release	40	5	72	40	47100	45.5374	-122.703	
26-2197	1-AC	P-1	All Coating, Particulate		1.83	1.83	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5728	-122.7152	
26-2197	6- CUT	P-1	Metal Cutting		0	0	RP-GS	Default parameters for release	40	5	72	40	47100	45.5728	-122.7152	
26-2390	PRODUCTION	P-1	PRODUCTION		0.253	0.253	RP-GS	Default parameters for release	40	5	72	40	47100	45.6157	-122.7145	
26-2492	3-CL	P-1	Pipe Coating and Lining		1.93	1.93	RP-GS	HEAF unit, DMSTR 2-4, CYCL1-2	40	5	72	40	47100	45.609	-122.7734	
26-2492	3-CL	P-2	Pipe Coating and Lining		0	0	RP-GS	HEAF unit, DMSTR 2-4, CYCL1-2	40	5	72	40	47100	45.609	-122.7734	
26-2492	3-CL	P-3	Pipe Coating and Lining		0	0	RP-GS	HEAF unit, DMSTR 2-4, CYCL1-2	40	5	72	40	47100	45.609	-122.7734	
26-2492	6-CBP	P-2	Concrete Batch Plant		0.00115	0.001	RP-GS	HEAF unit, DMSTR 2-4, CYCL1-2	40	5	72	40	47100	45.609	-122.7734	
26-2492	8-SBL	P-1	Interior and Exterior Shot Blast		0.042	0.00418	RP-GS	HEAF unit, DMSTR 2-4, CYCL1-2	40	5	72	40	47100	45.609	-122.7734	
26-2492	9-GBL	P-1	Sand (Grit) Blast		0.12	0.012	RP-GS	HEAF unit, DMSTR 2-4, CYCL1-2	40	5	72	40	47100	45.609	-122.7734	
26-2492	AI	P-1	Aggregate Insignificant Activities		1	1	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.609	-122.7734	
26-2777	EXTR	P-1	Extrusion process		1.62	1.62	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6119	-122.7022	
26-2777	TRIMS	P-1	Paper trimmers and slitters		3.95	3.95	RP-GS	Default parameters for release	40	5	72	40	47100	45.6119	-122.7022	
26-2807	BARGE UNL	P-1	BARGE UNLOAD		0	0	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6358	-122.769	
26-2807	BARGE UNL	P-2	BARGE UNLOAD		0.043	0.0043	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6358	-122.769	
26-2807	RAIL UNL	P-1	RAIL UNLOAD		0	0	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6358	-122.769	
26-2807	RAIL UNL	P-2	RAIL UNLOAD		0.014	0.00225	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6358	-122.769	
26-2807	SHIP LOAD	P-1	SHIP LOAD		0	0	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6358	-122.769	
26-2807	SHIP LOAD	P-2	SHIP LOAD		0.034	0.006	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6358	-122.769	
26-2807	TRANSFER LGS	P-1	TRANSFER LEGS		0.48	0.08	RP-GS	Default parameters for release	40	5	72	40	47100	45.6358	-122.769	
26-2807	TRANSFER PTS	P-1	TRANSFER POINTS		0.48	0.08	RP-GS	Default parameters for release	40	5	72	40	47100	45.6358	-122.769	
26-2807	TRUCK UNL	P-1	TRUCK UNLOAD		0	0	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6358	-122.769	
26-2807	TRUCK UNL	P-2	TRUCK UNLOAD		0.000245	0.00004	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6358	-122.769	
26-2909	LOADING	P-1	loading over 16 transfer points		1.13	1.13	RP-GS	Default parameters for release	40	5	72	40	47100	45.6017	-122.7735	
26-2944	2-BLB123	P-1	Shot and grit blasting		0.045	0.045	RP-GS	For GS-3, there are actually mu	40	5	72	40	47100	45.5538	-122.7195	
26-2944	2-BLB123	P-2	Shot and grit blasting		0.197	0.197	RP-GS	For GS-3, there are actually mu	40	5	72	40	47100	45.5538	-122.7195	
26-2944	2-BLB45	P-1	Shot and grit blasting		0.039	0.039	RP-GS	For GS-3, there are actually mu	40	5	72	40	47100	45.5538	-122.7195	
26-2944	2-BLF	P-1	Marine blasting		10.5	10.5	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5538	-122.7195	
26-2944	3-TC	P-1	Plasma/Oxy-fuel metal cutting de		0.00786	0.00786	RP-GS	For GS-3, there are actually mu	40	5	72	40	47100	45.5538	-122.7195	
26-2944	3-TC	P-2	Plasma/Oxy-fuel metal cutting de		0.151	0.151	RP-GS	For GS-3, there are actually mu	40	5	72	40	47100	45.5538	-122.7195	
26-2944	3-TC	P-3	Plasma/Oxy-fuel metal cutting de		0.00212	0.00212	RP-GS	For GS-3, there are actually mu	40	5	72	40	47100	45.5538	-122.7195	
26-2944	5-WLD	P-1	Welding		3.05	3.05	RP-GS	For GS-3, there are actually mu	40	5	72	40	47100	45.5538	-122.7195	
26-2944	8-OSPRY	P-1	Overspray particulate, controlled		0.635	0.635	RP-GS	For GS-3, there are actually mu	40	5	72	40	47100	45.5538	-122.7195	
26-2944	8-OSPRYM	P-1	Overspray particulate, uncontroll		26.1	26.1	RP-GS	For GS-3, there are actually mu	40	5	72	40	47100	45.5538	-122.7195	
26-2944	AGG	P-1	Aggregate insignificant emissions		1	1	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5538	-122.7195	
26-3067	EU8	P-1	Pouring Shed				RP-GS	Default parameters for release	40	5	72	40	47100	45.6061	-122.7891	
26-3071	TREAT	P-1	TREATED PRODUCT		0.46	0.46	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6346	-122.771	
26-3071	UNTREAT	P-1	UNTREATED PRODUCT				RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6346	-122.771	
26-3224	SBI	P-1	Abrasive Blasting Inside				RP-GS	Default parameters for release	40	5	72	40	47100	45.5662	-122.7218	
26-3224	SBO	P-1	Abrasive Blasting Outside		3.67		RP-FS	Default parameters for release	20	50	72	7	824667.9	45.5662	-122.7218	
26-3224	WLD	P-1	Welding Operations		0.000923	0.000923	RP-GS	Default parameters for release	40	5	72	40	47100	45.5662	-122.7218	
26-3272	DRYER	P-1	ROTARY DRYER		9.44	5.66	RP-GS	Default parameters for release	40	5	72	40	47100	45.5402	-122.6798	
26-9818	CAR TIRE	P-1	CAR TIRES		0.038	0.038	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6133	-122.778	
26-9818	TRUCK TIRE	P-1	TRUCK TIRES		0.036	0.036	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.6133	-122.778	
34-0004	MH	P-1	MATERIAL HANDLING		0.729	0.146	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.493	-122.97	
34-0004	MR	P-1	MATERIAL RECYCLING		0.028	0.00427	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.493	-122.97	
34-0004	PILES	P-1	SOIL PILES		0.315	0.047	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.493	-122.97	
34-0004	UNPAVED ROAD	P-1	UNPAVED ROADS		2.55	0.258	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.493	-122.97	
34-0007	BH	P-1	BAG HOUSE		4.48	4.48	RP-GS	Default parameters for release	40	5	72	40	47100	45.4171	-122.7494	
34-2021	CRUSH	P-1	ROCK CRUSHER		12.9	0.776	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.4566	-122.8964	
34-2510	CLEANING		SEED CLEANING		0.0060325	0.0060325										

34-2756	EU-02	P-1	Woodwaste Loadout	0.867	0.867	RP-GS	Default parameters for release	60	8	300	37	111600	45.5247	-123.0809
34-2756	IA	P-1	Insignificant Activities	1	1	RP-FS	Default parameters for release	60	8	300	37	111600	45.5247	-123.0809
34-2783	SILO	P-1	FLOUR SILO	0.494	0.494	RP-FS	Default parameters for release	20	50	72	7	824667.9	45.4831	-122.7874
34-9507	EG1	P-1	EMERGENCY GEN 1	0.00218	0.00218	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5572	-122.9262
34-9507	EG2	P-1	EMERGENCY GEN 2	0.00426	0.00426	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5572	-122.9262
34-9507	FWP	P-1	FIRE WATER PUMP	0.00236	0.00236	RP-GSF	Default parameters for release	60	8	300	37	111600	45.5572	-122.9262

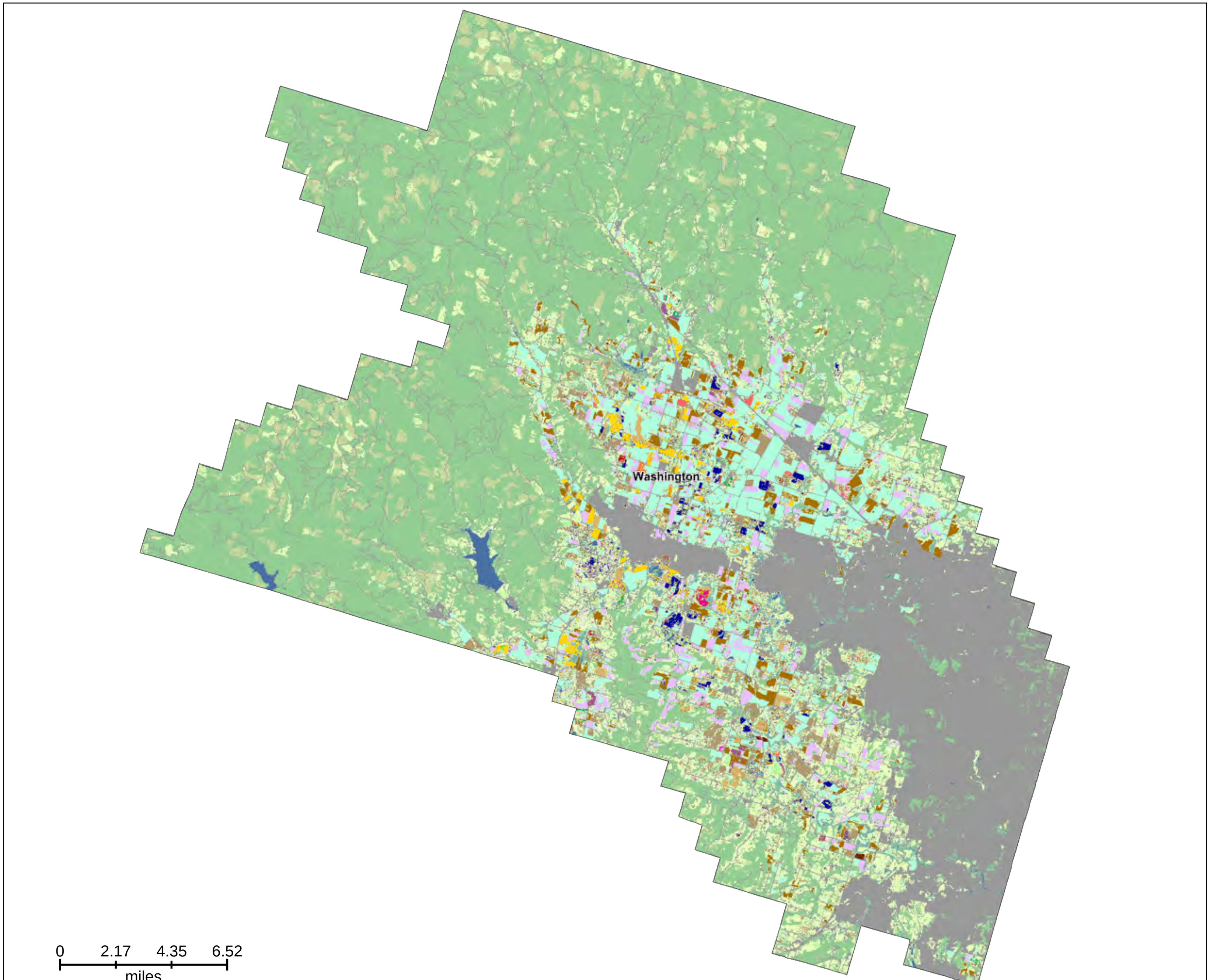


Mount Rainier NP
Goat Rock WA
Mt Adams WA
CRGNSA
Mt Hood WA
Mt Jefferson WA
Mt Washington WA
Three Sisters WA
Hillsboro
Portland
Newberg
Salem
Albany
Corvallis
Eugene
Bend
Tacoma
Olympia
Aberdeen
Astoria
Longview
Yakima
Kent
Wenatchee
Moses Lake
WASHINGTON
OREGON
WILLAMETTE VALLEY
COASTAL RANGES
OCHOCO MOUNTAINS
WENATCHEE MOUNTAINS
Columbia River
0
50
100
Kilometers
50km Receptor Arc
50km Buffer Around Intel
CALPUFF Domain
Mandatory Class 1 Federal Areas
Agency
BIA
FS
FWS
NPS
CRGNSA
Intel_Ctr

Attachment D

Regional Soils and Vegetation Data

CDL2022 CDL, Washington County, Oregon



Land Cover Categories

(by decreasing acreage)

AGRICULTURE*

- Grass/Pasture
- Sod/Grass Seed
- Clover/Wildflowers
- Other Tree Crops
- Winter Wheat
- Other Hay/Non Alfalfa
- Corn
- Blueberries
- Spring Wheat
- Oats
- Grapes
- Hops
- Dry Beans
- Fallow/Idle Cropland
- Alfalfa
- Barley

NON-AGRICULTURE**

- Evergreen Forest
- Mixed Forest
- Developed/Low Intensity
- Developed/Medium Intensity
- Shrubland
- Developed/Open Space

Produced by CropScape - http://nassgeodata.gmu.edu/CropScape

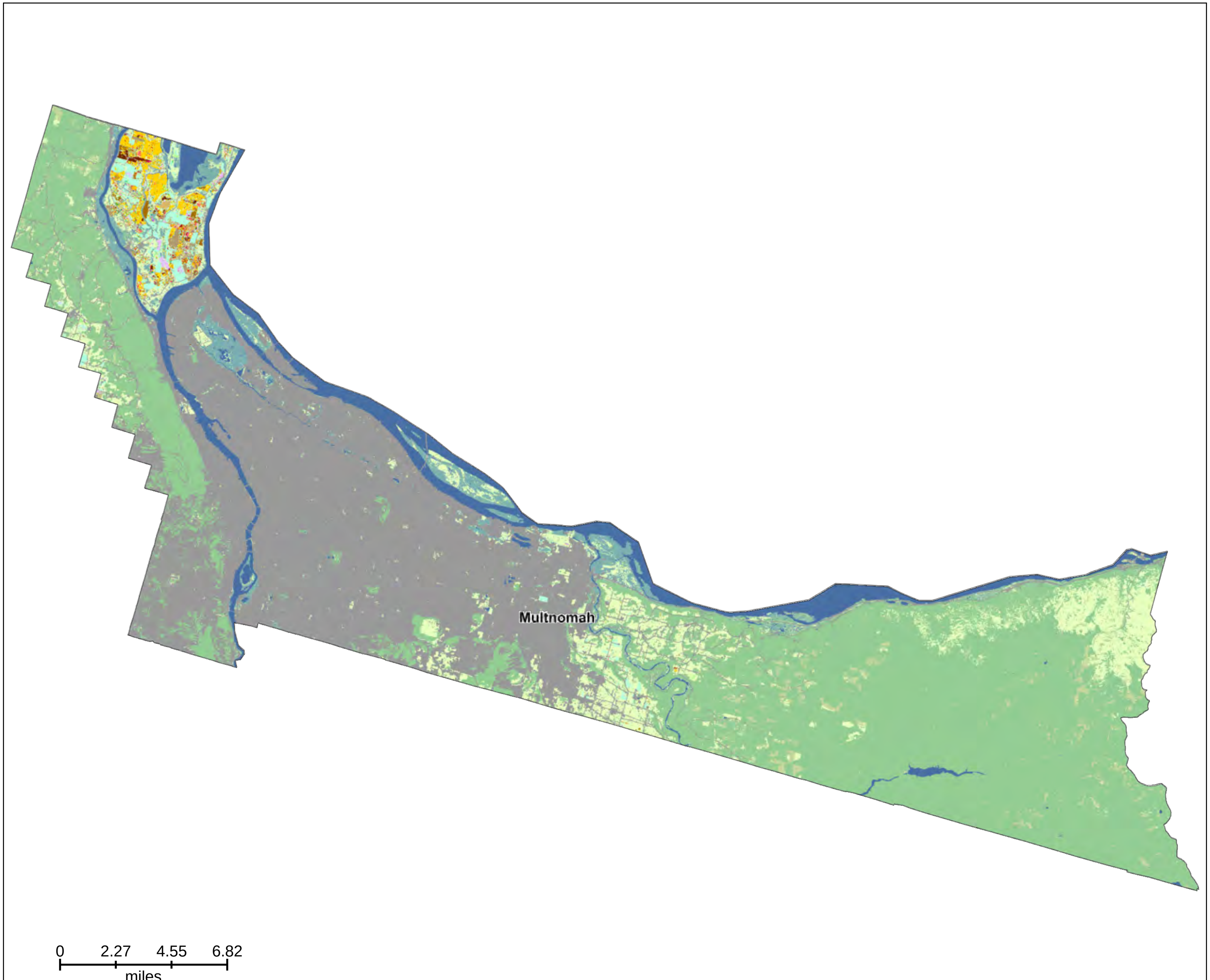
Top 16 agriculture categories / Top 6 non-agriculture categories listed

Washington County Commercial Crop Data

Value	Category	Count	Acreage
1	Corn	49554	11020.5
4	Sorghum	297	66.1
6	Sunflowers	10	2.2
12	Sweet Corn	4528	1007
14	Mint	1801	400.5
21	Barley	2134	474.6
23	Spring Wheat	19457	4327.1
24	Winter Wheat	60858	13534.5
27	Rye	14	3.1
28	Oats	5501	1223.4
31	Canola	102	22.7
34	Rape Seed	98	21.8
35	Mustard	5	1.1
36	Alfalfa	6575	1462.2
37	Other Hay/Non Alfalfa	70294	15633
39	Buckwheat	26	5.8
41	Sugarbeets	1603	356.5
42	Dry Beans	11027	2452.3
43	Potatoes	2308	513.3
44	Other Crops	3300	733.9
47	Misc Vegs & Fruits	103	22.9
49	Onions	605	134.5
50	Cucumbers	274	60.9
53	Peas	1521	338.3
55	Caneberries	2721	605.1
56	Hops	29541	6569.8
57	Herbs	833	185.3
58	Clover/Wildflowers	77847	17312.8
59	Sod/Grass Seed	512642	114008.8
61	Fallow/Idle Cropland	6398	1422.9
66	Cherries	3104	690.3
67	Peaches	115	25.6
68	Apples	80	17.8
69	Grapes	10894	2422.8
70	Christmas Trees	8359	1859
71	Other Tree Crops	248848	55342.5
76	Walnuts	1603	356.5
77	Pears	129	28.7
111	Open Water	234665	52188.2
121	Developed/Open Space	592579	131786.4
122	Developed/Low Intensity	730090	162368.1
123	Developed/Medium Intensity	607654	135139
124	Developed/High Intensity	242747	53985.6
131	Barren	6411	1425.8
141	Deciduous Forest	142064	31594.3

142	Evergreen Forest	3013886	670272.1
143	Mixed Forest	850605	189170
152	Shrubland	445984	99184.5
176	Grass/Pasture	1562063	347394.4
190	Woody Wetlands	165824	36878.4
195	Herbaceous Wetlands	169802	37763.1
205	Triticale	724	161
206	Carrots	5	1.1
208	Garlic	1167	259.5
214	Broccoli	829	184.4
219	Greens	931	207
220	Plums	188	41.8
221	Strawberries	1990	442.6
222	Squash	5533	1230.5
224	Vetch	1388	308.7
227	Lettuce	5	1.1
228	Dbl Crop Triticale/Corn	49	10.9
229	Pumpkins	1272	282.9
242	Blueberries	18108	4027.1
243	Cabbage	413	91.8
244	Cauliflower	3023	672.3
246	Radishes	4098	911.4
247	Turnips	903	200.8
250	Cranberries	1	0.2

CDL2022 CDL, Multnomah County, Oregon



Land Cover Categories

(by decreasing acreage)

AGRICULTURE*

- Grass/Pasture
- Sod/Grass Seed
- Corn
- Other Tree Crops
- Other Hay/Non Alfalfa
- Clover/Wildflowers
- Winter Wheat
- Potatoes
- Spring Wheat
- Fallow/Idle Cropland
- Sweet Corn
- Squash
- Dry Beans
- Alfalfa
- Hops
- Oats

NON-AGRICULTURE**

- Evergreen Forest
- Developed/Medium Intensity
- Developed/Low Intensity
- Developed/High Intensity
- Mixed Forest
- Open Water

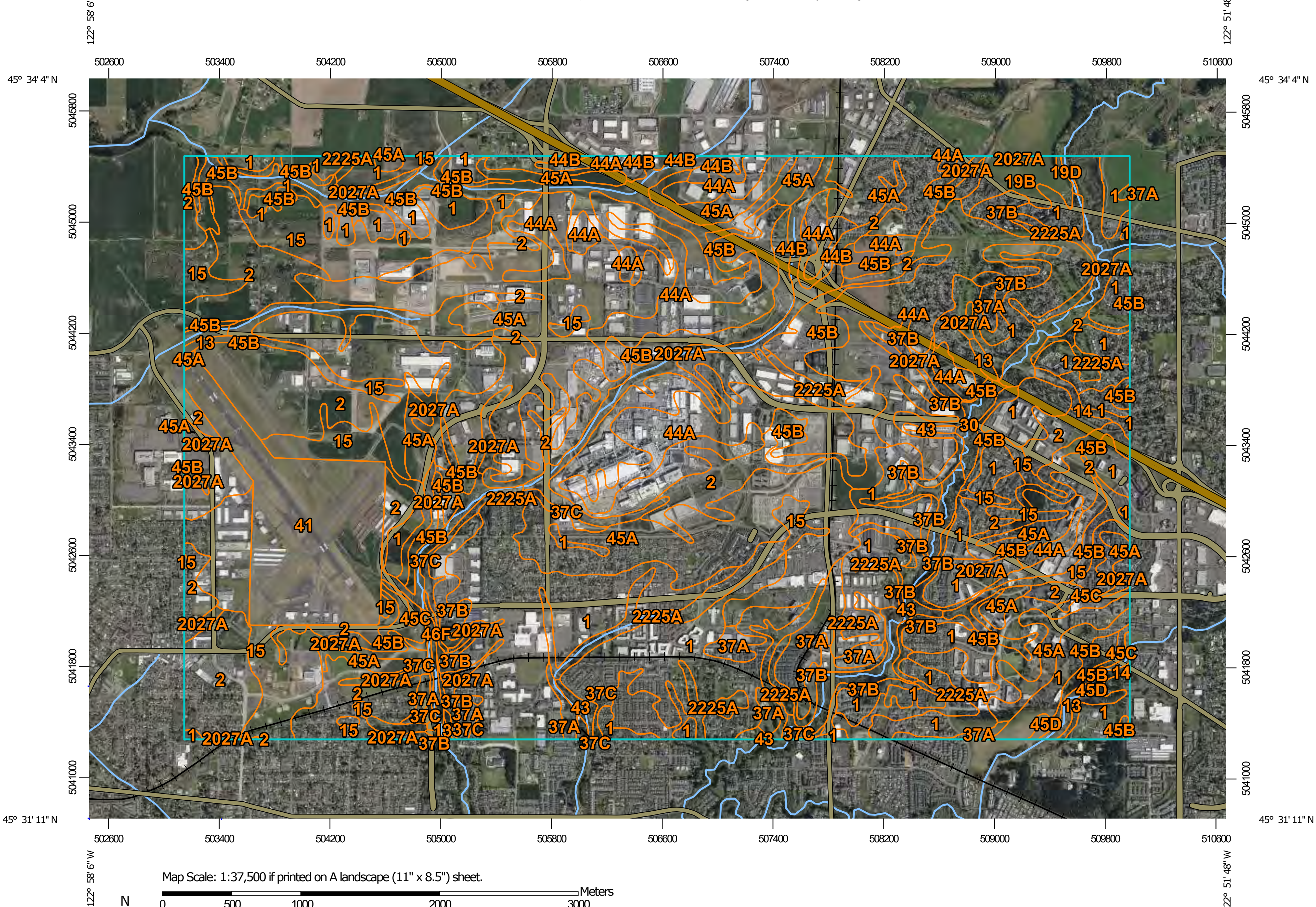
Produced by CropScape - http://nassgeodata.gmu.edu/CropScape

Top 16 agriculture categories / Top 6 non-agriculture categories listed

Multnomah County Commercial Crop Data

Value	Category	Count	Acreage
1	Corn	9875	2196.1
4	Sorghum	16	3.6
12	Sweet Corn	781	173.7
14	Mint	131	29.1
21	Barley	83	18.5
23	Spring Wheat	1157	257.3
24	Winter Wheat	1641	364.9
28	Oats	242	53.8
34	Rape Seed	5	1.1
36	Alfalfa	446	99.2
37	Other Hay/Non Alfalfa	2034	452.4
39	Buckwheat	4	0.9
41	Sugarbeets	90	20
42	Dry Beans	674	149.9
43	Potatoes	1299	288.9
44	Other Crops	224	49.8
47	Misc Vegs & Fruits	5	1.1
49	Onions	2	0.4
50	Cucumbers	94	20.9
53	Peas	159	35.4
56	Hops	374	83.2
57	Herbs	104	23.1
58	Clover/Wildflowers	2001	445
59	Sod/Grass Seed	13369	2973.2
61	Fallow/Idle Cropland	943	209.7
66	Cherries	79	17.6
67	Peaches	10	2.2
68	Apples	2	0.4
69	Grapes	196	43.6
70	Christmas Trees	57	12.7
71	Other Tree Crops	4376	973.2
76	Walnuts	15	3.3
77	Pears	14	3.1
111	Open Water	87600	19481.8
121	Developed/Open Space	57737	12840.4
122	Developed/Low Intensity	125231	27850.7
123	Developed/Medium Intensity	175992	39139.7
124	Developed/High Intensity	94747	21071.2
131	Barren	940	209.1
141	Deciduous Forest	13630	3031.2
142	Evergreen Forest	459848	102267.7
143	Mixed Forest	89109	19817.4
152	Shrubland	28677	6377.6
176	Grass/Pasture	113900	25330.8
190	Woody Wetlands	18360	4083.2
195	Herbaceous Wetlands	31615	7031
205	Triticale	7	1.6
206	Carrots	5	1.1
208	Garlic	22	4.9
214	Broccoli	80	17.8
219	Greens	15	3.3
220	Plums	1	0.2
221	Strawberries	148	32.9
222	Squash	711	158.1
224	Vetch	60	13.3
228	Dbl Crop Triticale/Corn	3	0.7

229	Pumpkins	101	22.5
242	Blueberries	149	33.1
243	Cabbage	105	23.4
244	Cauliflower	122	27.1
246	Radishes	151	33.6
247	Turnips	71	15.8



Map Scale: 1:37,500 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0, 500, 1000, 2000, 3000

Feet: 0, 1500, 3000, 6000, 9000

Map projection: Web Mercator   Corner coordinates: WGS84   Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Washington County, Oregon
Survey Area Data: Version 22, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

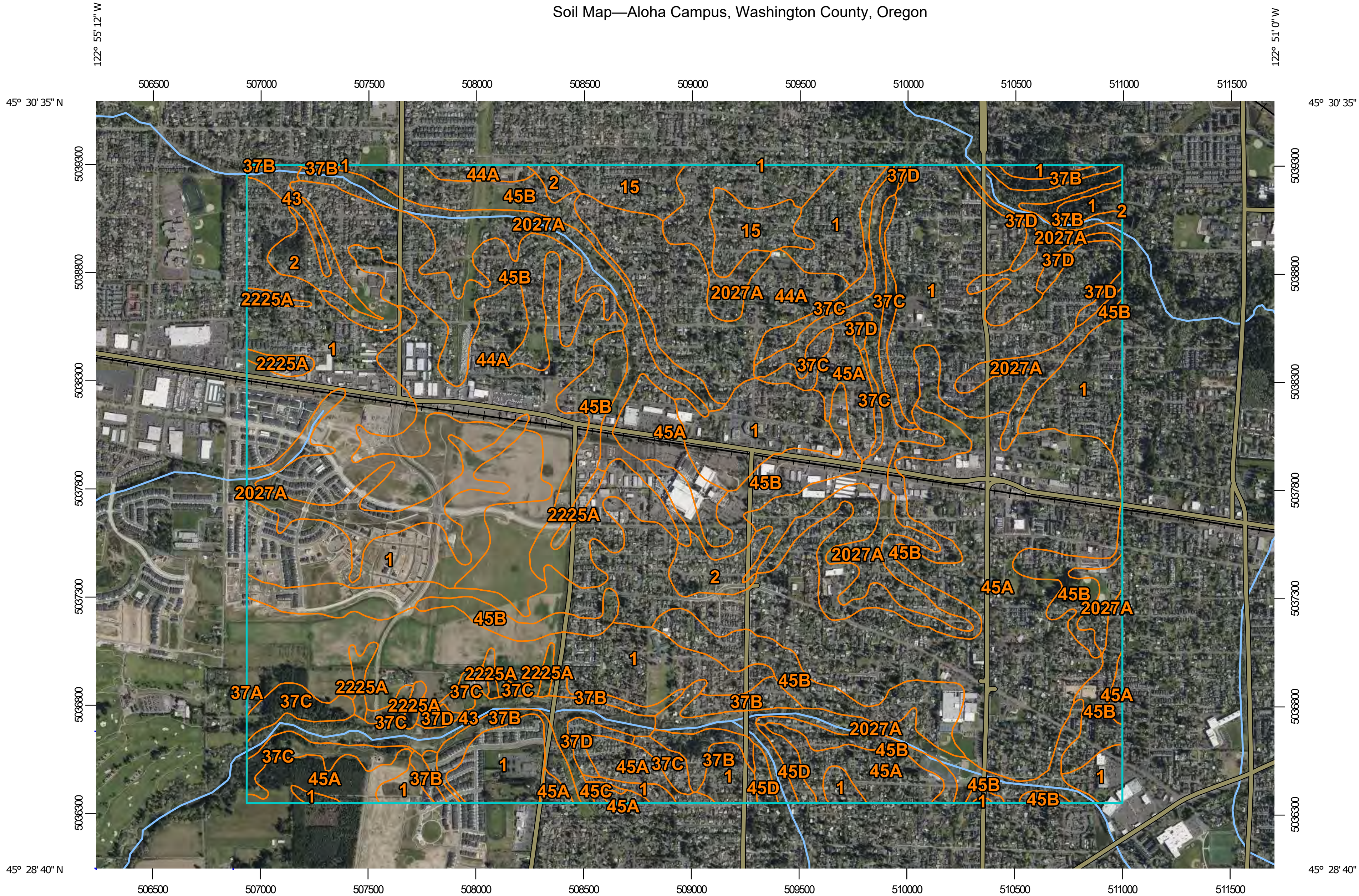
Date(s) aerial images were photographed: Apr 16, 2021—Apr 18, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Aloha silt loam	1,353.7	19.0%
2	Amity silt loam	937.6	13.2%
13	Cove silty clay loam	61.9	0.9%
14	Cove clay	16.5	0.2%
15	Dayton silt loam	540.3	7.6%
19B	Helvetia silt loam, 2 to 7 percent slopes	47.1	0.7%
19D	Helvetia silt loam, 12 to 20 percent slopes	2.5	0.0%
30	McBee silty clay loam	21.4	0.3%
37A	Quatama loam, 0 to 3 percent slopes	126.4	1.8%
37B	Quatama loam, 3 to 7 percent slopes	232.7	3.3%
37C	Quatama loam, 7 to 12 percent slopes	38.6	0.5%
37D	Quatama loam, 12 to 20 percent slopes	6.4	0.1%
41	Urban land	325.1	4.6%
43	Wapato silty clay loam	96.9	1.4%
44A	Willamette silt loam, 0 to 3 percent slopes	626.2	8.8%
44B	Willamette silt loam, 3 to 7 percent slopes	63.3	0.9%
45A	Woodburn silt loam, 0 to 3 percent slopes	1,012.5	14.2%
45B	Woodburn silt loam, 3 to 7 percent slopes	821.0	11.5%
45C	Woodburn silt loam, 7 to 12 percent slopes	34.2	0.5%
45D	Woodburn silt loam, 12 to 20 percent slopes	15.4	0.2%
46F	Xerochrepts and Haploxerolls, very steep	10.7	0.2%
2027A	Verboort silty clay loam, 0 to 3 percent slopes	466.8	6.6%
2225A	Huberly silt loam, 0 to 3 percent slopes	254.5	3.6%
Totals for Area of Interest		**7,113.0**	**100.0%**

Soil Map—Aloha Campus, Washington County, Oregon



Map Scale: 1:25,000 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0, 350, 700, 1400, 2100

Feet: 0, 1000, 2000, 4000, 6000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Washington County, Oregon
Survey Area Data: Version 22, Sep 14, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 16, 2021—Apr 18, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Aloha silt loam	831.1	27.9%
2	Amity silt loam	44.0	1.5%
15	Dayton silt loam	51.7	1.7%
37A	Quatama loam, 0 to 3 percent slopes	0.0	0.0%
37B	Quatama loam, 3 to 7 percent slopes	69.0	2.3%
37C	Quatama loam, 7 to 12 percent slopes	93.5	3.1%
37D	Quatama loam, 12 to 20 percent slopes	30.0	1.0%
43	Wapato silty clay loam	60.6	2.0%
44A	Willamette silt loam, 0 to 3 percent slopes	277.1	9.3%
45A	Woodburn silt loam, 0 to 3 percent slopes	591.8	19.9%
45B	Woodburn silt loam, 3 to 7 percent slopes	483.0	16.2%
45C	Woodburn silt loam, 7 to 12 percent slopes	2.2	0.1%
45D	Woodburn silt loam, 12 to 20 percent slopes	11.7	0.4%
2027A	Verboort silty clay loam, 0 to 3 percent slopes	396.9	13.3%
2225A	Huberly silt loam, 0 to 3 percent slopes	31.4	1.1%
Totals for Area of Interest		**2,974.0**	**100.0%**