AS-BUILT AIR DISPERSION MODELING REPORT

Integrated Aluminum Rolling Mill / Bay Minette, AL

Novelis

Not just aluminum, Novelis Aluminum.™

Novelis Corporation

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1. INTRODUCTION

Novelis Corporation, in association with our air quality contractor, Trinity Consultants (Trinity), is pleased to submit this updated dispersion modeling report (considered as Volume 2) for the air quality analysis that was conducted as part of the Prevention of Significant Deterioration (PSD) application for the as-built reconciliation (i.e., Volume 1). Novelis is currently in the process of constructing the facility at the South Alabama Mega Site (herein referred to as the Bay Minette site) located at 49700 Alabama Highway 287 Bay Minette, AL 36507. This as-built modeling report is consistent with guidance provided by both the Alabama Department of Environmental Management (ADEM) and at the Federal level for modeling for PSD projects, and is generally consistent with previous as-permitted modeling report submitted in November 2022. Specifically, ADEM provided feedback between mid-December 2025 and mid-January 2026 indicating that a new PSD air quality analysis addressing the relatively limited as-built changes would not be required and Novelis could instead pursue a "footprint" modeling approach.

Under this mutually agreeable modeling approach, Novelis evaluated all of the as-built changes in the application affecting the modeling inputs within the basic modeling infrastructure in place at the time of submitting the final version of the as-permitted modeling report in November 2022. No new modeling protocol is required based on carrying forward the substantive elements of all prior modeling methodologies. Also, Novelis was directed by ADEM to use all of the prior input data that is not related to Novelis' modeled facility inputs such as meteorological data, regional inventory data, background concentrations, and terrain data. In this manner of largely re-evaluating the as-built changes in the prior, as-permitted modeling infrastructure, this report also adheres to the procedures and modeling options outlined in the revised dispersion modeling protocol submitted to ADEM on July 21, 2022 and approved by email from ADEM on July 27, 2022. The modeling analysis submitted herein is also based on the AERMOD modeling suite (v22112) in effect at the time of the initial PSD permit issuance.

This report describes the modeling objectives, selected models, and options to meet the air quality modeling objectives, meteorological data resources and use, a high level overview of the new and modified sources at the site, modeling results, and other modeling related information.

1.1 Background

Novelis plans to complete construction and to begin operating one of the first fully integrated greenfield aluminum production facilities built in the U.S. in nearly four decades. The Bay Minette site is located near Alabama Highway 287 and I-65 in Baldwin County and is approximately 32 miles from the Port of Mobile, with access to five (5) class-1 railways, Interstate I-65, and Interstate I-10. Novelis is investing an estimated $5 billion to construct the new low-carbon aluminum recycling facility and aluminum rolling mill (i.e., an integrated aluminum rolling mill). This new facility will apply low-carbon strategies/methods/technologies to serve the strong North American demand for flat-rolled, low-carbon aluminum sheet for beverage can makers and will support the automotive industry in meeting their long-term sustainability targets. The Bay Minette project is expected to create approximately 1,000 high-paying skilled labor, advanced manufacturing, and administration jobs during the operational phase.

Based on an analysis of the potential emissions from the project's equipment scope contained within the August 2022 initial application and subsequent application updates leading up to the February 2023 final permit issuance, the project will require a Prevention of Significant Deterioration (PSD) permit as a new PSD major source. Project-related emissions increases are anticipated to exceed the PSD significant emission rate (SER) thresholds for nitrogen oxides (NO_x), carbon monoxide (CO), Volatile Organic Compounds

(VOCs), Particulate Matter (PM), Particulate Matter less than 10 microns in size (PM_{10}), Particulate Matter less than 2.5 microns in size ($PM_{2.5}$), and greenhouse gases (GHG) in terms of carbon dioxide equivalents (CO_2e).[1]

In addition, the emissions increases of NO_X and VOC exceed 100 tpy, and thus, an ozone ambient impact analysis is required. An air quality analysis is not performed for GHGs because there are no ambient concentration based thresholds for which a compliance demonstration is needed and the United States Environmental Protection Agency (EPA) does not have a regulatory model designed to simulate GHG pollutant dispersion. No modeling was performed for sulfur dioxide (SO_2) or lead as the project emissions increases for these pollutants are less than the applicable SERs.

This report primarily relates to the requirements for Class II air quality areas. The area immediately surrounding the Novelis facility and within the general ambient air quality airsheds in which nearfield modeling is conducted (within 50 km) are all designated as Class II areas. With regard to Class II impacts, this report describes the modeling performed for each PSD triggering pollutant. This greenfield facility will be located in Baldwin County, which has been designated by EPA as an unclassified/attainment area for all criteria pollutants.[2] Therefore, with respect to the federal New Source Review permitting program, only PSD requirements could potentially apply to the source.

With respect to potential air quality impacts on Class I areas, the Breton Wilderness is the closest Class I area to the greenfield facility and is located about 146 km southwest of the site. The appropriate Federal Land Manager (FLM) has been notified regarding the scope of the project.

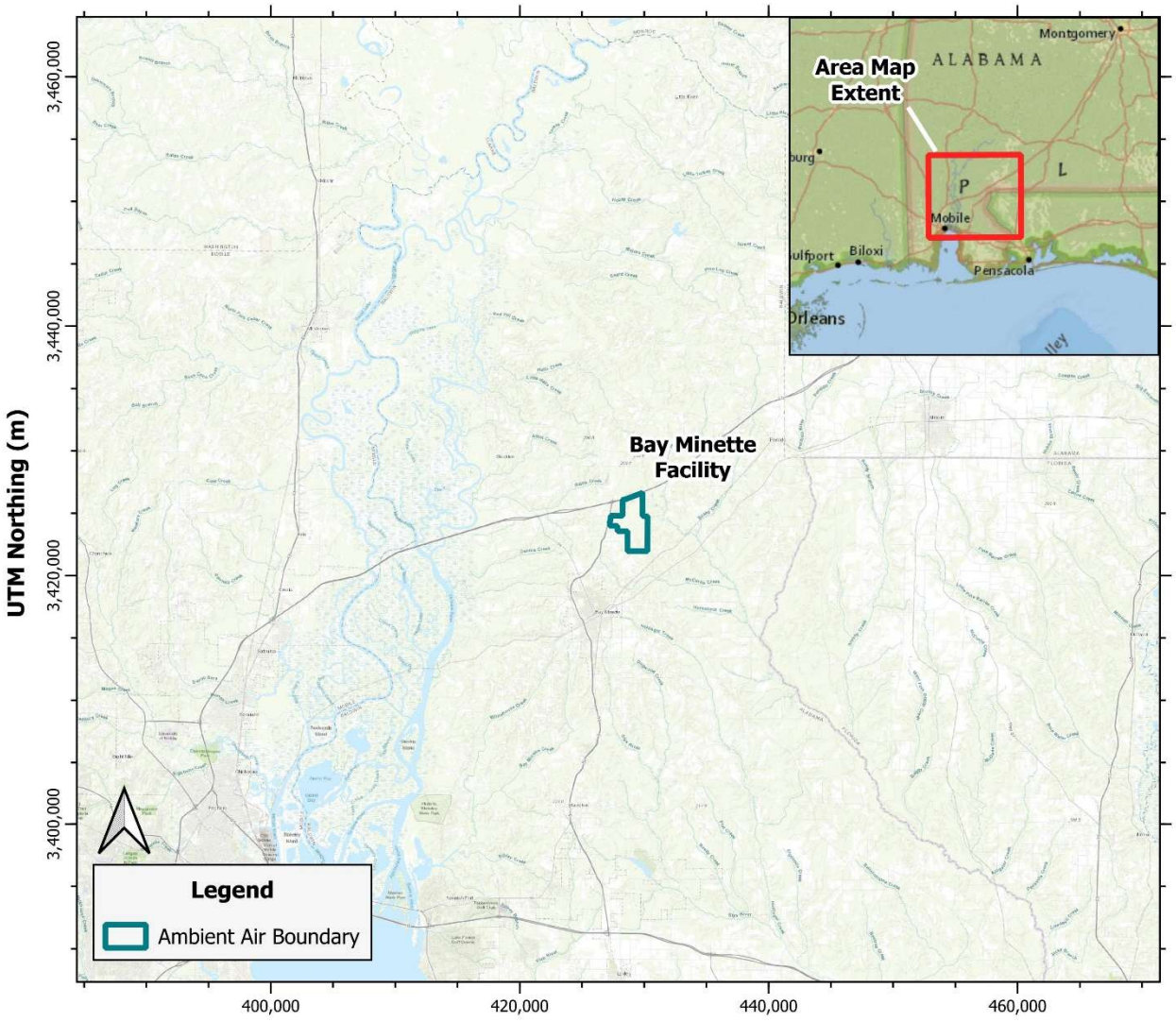
Figure 1-1 provides a map of the area surrounding the project location, located on what has been referred to as the "South Alabama Megasite". The approximate central Universal Transverse Mercator (UTM) coordinates of the facility (centered around the emissions sources) are 429.114 kilometers (km) East and 3,424.283 km North in Zone 16 (NAD 83). The area surrounding the facility is predominantly rural.

The property boundary area (ambient air boundary) of the facility is planned to be completely fenced and access to the entirety of the property owned by Novels will be controlled by Novelis. Therefore, any operations within the property boundary will not be considered ambient air by Novelis. The facility property boundary (approximately 2,000 acres in total area) and fenceline is shown in **Figure 1-2**. A rendering of the facility layout is shown in **Figure 1-2**, where the blue shaded objects correspond to the buildings.

[1] For the aluminum rolling mill project, CO_2e denotes carbon dioxide equivalents and is calculated as the sum of the four well-mixed GHGs (CO_2, CH_4, N_2O, and SF_6) with applicable global warming potentials per 40 CFR 98 applied.

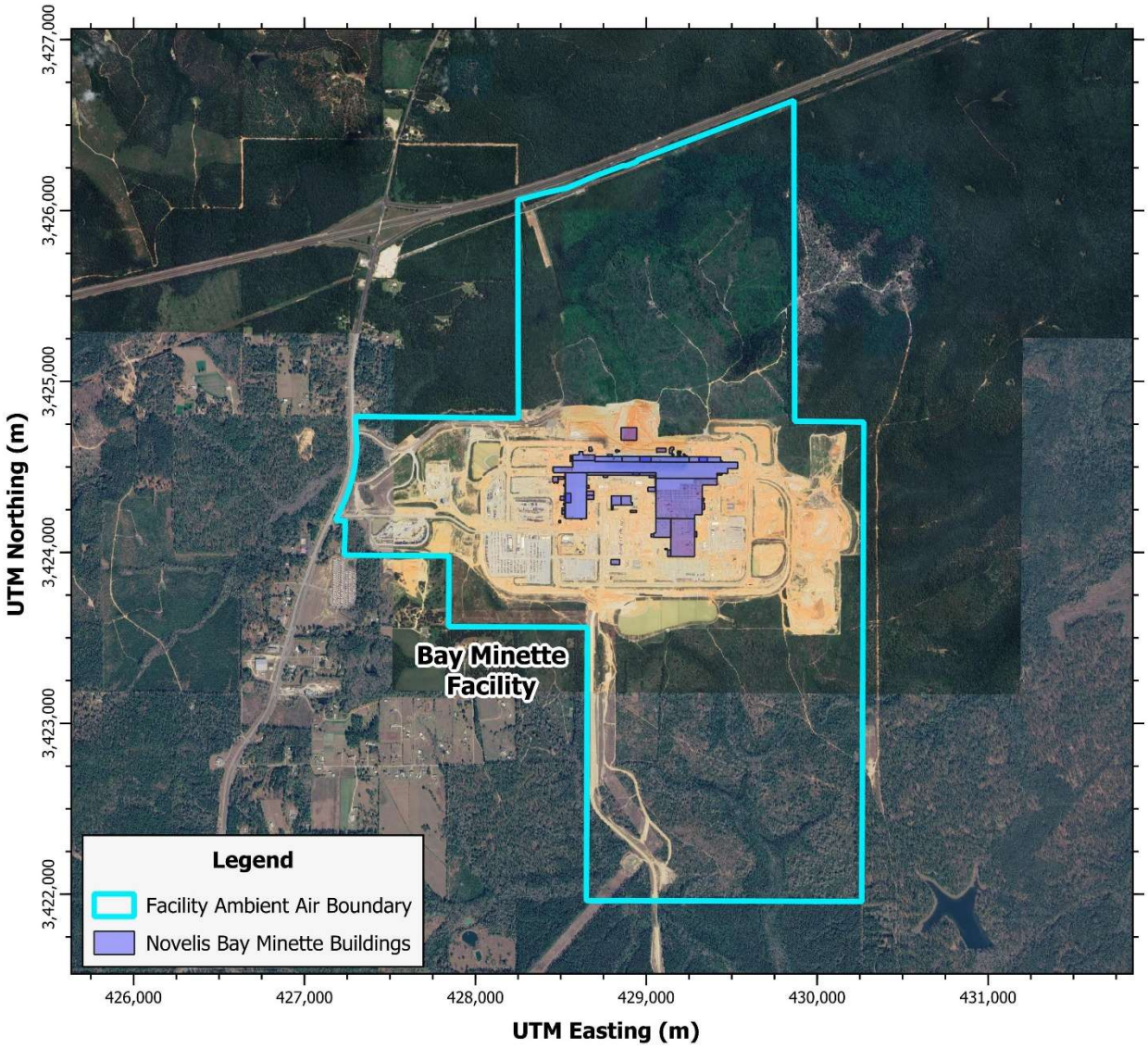
[2] 40 CFR 81.301

Figure 1-1. Area Map Showing The Project Site Location



All coordinates shown in UTM Coordinates,
UTM Zone 16, NAD 83 Datum

Figure 1-2. Facility Ambient Air Boundary and General Site Layout



All coordinates shown in UTM Coordinates,
UTM Zone 16, NAD 83 Datum

2. CLASS II DISPERSION MODELING REQUIREMENTS

Because sources and emissions in the project are subject to the ambient air quality assessment requirements of the PSD program, modeling is required to meet specific objectives. Modeling is used to demonstrate that emissions of NO_X, PM_{10}, $PM_{2.5}$, and CO pollutants after the project is completed will not:

1. Cause or significantly contribute to a violation of the NAAQS,
2. Cause or significantly contribute to ambient concentrations that are greater than allowable PSD Increments, or
3. Cause any other additional adverse impacts to the surrounding area (i.e., impairment to visibility, soils and vegetation and air quality impacts from general commercial, residential, industrial, and other growth associated with the facility expansion).

To facilitate this analysis (and allow it to be commensurate with the requirements to which ADEM adheres), dispersion modeling methodologies are followed that are consistent with EPA procedures specified in the *Guideline on Air Quality Models*. The purpose of this report is to provide an overview of the techniques and models used and review the modeling objectives for each required element of the PSD air quality analysis and to provide the results of the modeling analysis.

Novelis completed all dispersion modeling and air impact assessments required under the regulations for PSD. This included all Class II area modeling analyses as required. The Class I area modeling analysis demonstrates that a more detailed regional scale modeling will not be needed. Class I area screening techniques include the use of the so-called Q/D analysis for the Air Quality Related Value (AQRV) demonstrations.

For the Class II analysis, the various stages of modeling that is performed is dependent on compliance at each step. To allow ADEM to evaluate the various levels of the modeling methodologies, this report also outlines each stage of modeling used. The modeling steps include the following:

- Step 1 - Determine if ambient air quality impacts of the new sources are greater than or equal to or less than the Significant Impact Levels (SIL) on a per pollutant and per averaging time basis. **Table 2-1** shows the applicable SILs and other important criteria pollutant thresholds for NO_2, PM_{10}, $PM_{2.5}$, CO, and Ozone (as applies to the MERPs analysis). The Significance Analysis includes all new facility emission sources, as appropriate.

Table 2-1. Significant Impact Levels, NAAQS, PSD Class II Increments, and Significant Monitoring Concentrations for Applicable Criteria Air Pollutants (Effective November 2022)

Pollutant	Averaging Period	PSD Class II SIL (µg/m³)	Primary and Secondary NAAQS (µg/m³)	Class II PSD Increment (µg/m³)	Significant Monitoring Concentration (µg/m³)
NO_2	1-hr	7.5	188 (1)	N/A	--
	Annual	1	100 (2)	25	14
CO	1-hr	2,000	40,000	N/A	--
	8-hr	500	10,000	N/A	575
PM_{10}	24-hr	5	150(3)	30	10
	Annual	1	--	17	--
$PM_{2.5}$	24-hr	1.2(4)	35(5)	9(7)	--(4)
	Annual	0.2(4)	12(6)	4(7)	--
Ozone (3)	8-hr	1 ppb	70 ppb	N/A	--

(1) The 5-year average of the 98th percentile of the daily maximum 1-hr average (highest eighth high modeled output) for modeling.

(2) Annual arithmetic average (highest first high modeled output).

(3) Not to be exceeded more than three times in 3 consecutive years (highest sixth high modeled output).

(4) EPA promulgated $PM_{2.5}$ SILs, Significant Monitoring Concentrations (SMCs), and PSD Increments on October 20, 2010 [75 FR 64864, PSD for Particulate Matter Less Than 2.5 Micrometers Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC); Final Rule]. The SILs and SMCs became effective on December 20, 2010 (i.e., 60 days after the rule was published in the Federal Register), but the U.S. Court of Appeals decision on January 22, 2013 vacated the SMC and remanded the SIL values back to EPA for reconsideration. EPA has provided guidance (August 2016) and a finalized memo (April 2018) which recommended use of a 24-hr $PM_{2.5}$ SIL of 1.2 µg/m³, and an annual SIL of 0.2 µg/m³. EPA responded to the vacatur of the SMCs by indicating that existing background monitors should be sufficient to fulfill the ambient monitoring requirements for $PM_{2.5}$.

(5) The 5-year average of the 98th percentile 24-hour average concentration (highest eighth high modeled output) for modeling.

(6) The 5-year average of the annual arithmetic average concentration (highest first high modeled output) for modeling.

(7) The above mentioned court decision did not impact the promulgated increment thresholds for $PM_{2.5}$.

(8) Ozone addressed through evaluation of the MERPs, as discussed in **Section 7.**

- Step 2 - Perform NAAQS dispersion modeling for air modeling impacts that are greater than or equal to the SILs (in Step 1) to estimate the NAAQS impacts of the new project sources, and regional inventory sources on a combined basis. The screening distance for assessing nearby regional inventory sources is based on the distances to project's maximum concentrations and the expected decrease in concentrations as a function of distance (what EPA terms the gradient of impact). Background concentrations from nearby representative ambient monitors are added to the total impacts of all sources.

- Step 3 - Perform PSD increment modeling if air modeling impacts are greater than or equal to the SILs (in Step 1) to estimate the PSD increment impacts of the new project sources as well as any increment affecting emissions from Novelis sources and regional inventory sources. The screening distance for assessing regional PSD increment consuming or expanding sources are also based on

the distances to Novelis' maximum concentrations and the expected area with the highest concentration gradient from Novelis' modeled sources.

- Step 4 – Prepare an "additional air impacts" analysis. This analysis uses the results of the Significance Analysis modeling in Step 1 to compare ambient impacts to critical levels applicable to impacts on soils and vegetation.[3] Incremental air quality impacts due to growth in the local infrastructure that may result from added employees and attendant industries are qualitatively evaluated. No Class II visibility impacts are anticipated for this project.

- Step 5 – Address the ozone and secondary $PM_{2.5}$ ambient impact analysis requirements by conducting a quantitative assessment of potential ozone impacts from the project. The quantitative assessment relies solely on the approach outlined in EPA's *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool*, published April 2019.

The remainder of this report provides the tools and methods that are employed to conduct the Class II dispersion modeling, a short overview of the Class I area considerations, and the modeling results.

2.1 Model Selection

For Class II area modeling, a number of modeling guidelines are available to facilitate and provide detail on the methodologies required for conducting dispersion modeling for the Novelis facility, including guidance published directly by ADEM. In general, the air dispersion modeling analyses conducted are in accordance with applicable EPA guidance documents, including the following:

- EPA's *Guideline on Air Quality Models,* 40 CFR Part 51, Appendix W (Published, January 17, 2017)[4]
- EPA 's AERMOD Implementation Guide (June 2022)[5]
- EPA's User's Guide for the AMS/EPA Regulatory Model – AERMOD (June 2022)[6]
- EPA's New Source Review Workshop Manual (Draft, October 1990)[7]
- ADEM's PSD Air Quality Analysis Modeling Guidelines (Draft, June 2022)

Given these guidance documents and typical modeling practices, Novelis used the EPA-recommended AERMOD Model in its Version 22112 released in June 2022 (i.e., AERMOD version in effect at the time of issuance of the initial PSD permit). AERMOD is a refined, steady-state (both emissions and meteorology over a one hour time step), multiple source, dispersion model and was promulgated by EPA in December 2005 as the preferred model to use for industrial sources in this type of air quality analysis.[8] AERMOD is used to model each stack, horizontal vent, and any other type of source at the Novelis facility. Novelis applied AERMOD using the regulatory default options in all cases.

[3] Novelis has primarily assessed the impacts to soils and vegetation based on an evaluation of compliance with the secondary NAAQS.

[4] 40 CFR 51, Appendix W, Guideline on Air Quality Models

[5] EPA, *AERMOD* Implementation *Guide*, June 2022.

[6] *User's Guide for the AMS*/EPA *Regulatory Model (AERMOD)*, EPA-454/B-22-007, EPA, OAQPS, Research Triangle Park, NC, June 2022.

[7] EPA, *New Source Review Workshop Manual*, Draft October 1990, available at https://www.epa.gov/nsr/nsr-workshop-manual-draft-october-1990

[8] 40 CFR 51, Appendix W–*Guideline on Air Quality Models*, Appendix A.1– AMS/EPA Regulatory Model (AERMOD).

2.2 Tiered NO_2 Dispersion Modeling Methodology

In the "Models for Nitrogen Dioxide" section of the *Guideline* (Section 4.2.3.4), U.S. EPA recommends a tiered screening approach for estimating NO_2 impacts from point sources in PSD modeling analyses. Use of the tiered approach to NO_2 modeling for the 1-hour and annual NO_2 standard (SIL, NAAQS, and PSD Increment) were considered. The approach used in each of the three tiers is described briefly below.

1. Under the initial and most conservative Tier 1 screening level, all NO_X emitted is modeled as NO_2 which assumes total conversion of NO (main chemical form of NO_X) to NO_2.

2. For the Tier 2 screening level, U.S. EPA recommends multiplying the Tier 1 results by the Ambient Ratio Method 2 (ARM2), which provides estimates of representative equilibrium ratios of NO_2/NO_X based on ambient levels of NO_2 and NO_X derived from national data from the EPA's Air Quality System (AQS). The ARM2 function, which is a default option within AERMOD, was used to complete this multiplication. The default minimum ambient NO_2/NO_X ratio of 0.5 and maximum ambient ratio of 0.9 was used for this methodology.

3. Since the impact of an individual NO_X source on ambient NO_2 depends on the chemical environment into which the source's plume is emitted, modeling techniques that account for this atmospheric chemistry such as the Ozone Limiting Method (OLM) or the Plume Volume Molar Ratio Method (PVMRM) can be considered under the most accurate and refined Tier 3 approach identified by U.S. EPA. Additional model inputs required for the use of OLM or PVMRM could include source-specific in-stack NO_2/NO_X ratios, ambient equilibrium NO_2/NO_X ratios, and background ozone concentrations.

The ARM2 methodology, with regulatory default settings, is sufficient to demonstrate compliance with NO_2 standards. ARM2 was used (with regulatory default settings) for all NO_2 modeling for the project.

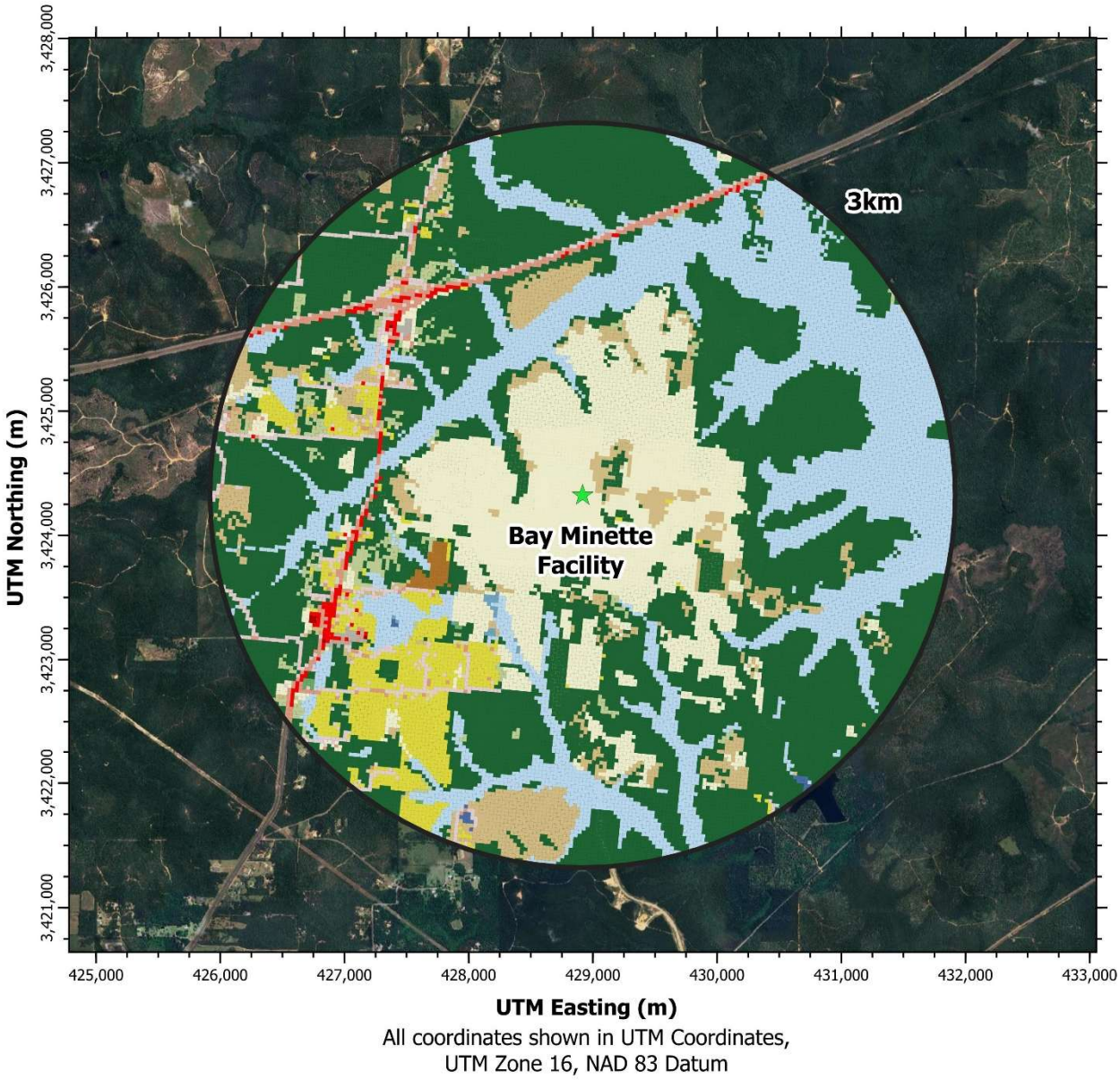
2.3 Rural/Urban Option Selection in AERMOD

For any dispersion modeling exercise, the "urban" or "rural" determination of the area surrounding the subject source is important in determining the applicable atmospheric boundary layer characteristics that affect a model's calculation of ambient concentrations. Thus, a determination was made of whether the area around the facility was urban or rural.

The first method discussed in Section 5.1 of the *AERMOD Implementation Guide* (also referring therein to Section 7.2.3c of the Guideline on Air Quality Models, Appendix W) is called the "land use" technique because it examines the various land use within 3 km of a source and quantifies the percentage of area in various land use categories. If greater than 50% of the land use in the prescribed area is considered urban, then the urban option should be used in AERMOD.

The following **Figure 2-1** shows the land use surrounding the facility. The yellow line below in the aerial photograph signifies the fence line/property boundary of the facility, while the green line indicates a 3 km radius circle centered on the primary plant coordinate (429.114 km East, 3,424,283 km North Zone 16 NAD83).

Figure 2-1. Auer Land Use Analysis Figure



As can be seen in **Figure 2-1**, the area surrounding the facility is predominantly rural, with large areas of undeveloped land to the north, east, and south of the project site. There are some small areas of development to the northwest and southwest of the project site, but these areas are primarily single family residences (termed R1 under the Auer land use types) and not considered urban. Per Table A-1 and Appendix A of the ADEM PSD Air Quality Analysis Modeling Guidelines (September 2022), as land use types I1, I2, C1, R2, and R3 account for far less than 50 percent or more land use within 3 km of the source, the area should be considered rural under the Auer land use classification scheme.

As a secondary evaluation method using the Auer method, the 2016 National Land Cover Data (NLCD) was imported into AERSURFACE and processed to determine the percentage of urban land use. The NLCD does

not have a specific category identified as urban. Instead, the NCD land use classifications were cross referenced against the land use classifications presented in *The Guideline* as indicated in **Table 2-2**. After processing the land use classifications in the prescribed area, it was determined that the area surrounding the Novelis facility is approximately 0.6% urban, which is well below the threshold of 50% for urban consideration recommended in *The Guideline* (as shown in **Table 2-3**).

Therefore, the facility emission sources were not treated as urban sources in the AERMOD Model.

Table 2-2. Cross Reference of NLCD Classifications and Auer Classifications

2016 NLCD Land Cover Classification		Auer Land-Use Classification		Rural or Urban
11	Open Water	A5	Water Surfaces	Rural
12	Perennial Ice/Snow	A5	Water Surfaces	Rural
21	Developed, Open Space	A1	Metropolitan Natural	Rural
22	Developed, Low Intensity	R1	Common Residential	Rural
23	Developed, Medium Intensity	I1, I2, C1, R2, R3	Industrial/Commercial/Compact Residential	Urban
24	Developed, High Intensity	I1, I2, C1, R2, R3	Industrial/Commercial/Compact Residential	Urban
31	Barren Land	A3	Undeveloped (Grasses/Shrub)	Rural
41	Deciduous Forest	A4	Undeveloped (Wooded)	Rural
42	Evergreen Forest	A4	Undeveloped (Wooded)	Rural
43	Mixed Forest	A4	Undeveloped (Wooded)	Rural
52	Shrub/Scrub	A3	Undeveloped (Grasses/Shrub)	Rural
71	Grassland/Herbaceous	A3	Undeveloped (Grasses/Shrub)	Rural
81	Pasture/Hay	A2	Agricultural	Rural
82	Cultivated Crops	A2	Agricultural	Rural
90	Woody Wetlands	A4	Undeveloped (Wooded)	Rural
95	Emergent Herbaceous Wetlands	A3	Undeveloped (Grasses/Shrub)	Rural

Table 2-3. Percent Land Categorization Analysis for Bay Minette Facility

Category ID	Category Description	Number of Grid Cells	Percent	Dispersion Class
11	Open Water	80	0.3%	Rural
21	Developed, Open Space	580	1.8%	Rural
22	Developed, Low Intensity	406	1.3%	Rural
23	Developed, Medium Intensity	177	0.6%	Urban
24	Developed, High Intensity	7	0.0%	Urban
31	Barren Land	40	0.1%	Rural
41	Deciduous Forest	16	0.1%	Rural
42	Evergreen Forest	13,465	42.9%	Rural
43	Mixed Forest	458	1.5%	Rural
52	Shrub/Scrub	1,863	5.9%	Rural
71	Grassland/Herbaceous	5,241	16.7%	Rural
81	Pasture/Hay	1,408	4.5%	Rural
82	Cultivated Crops	81	0.3%	Rural
90	Woody Wetlands	7,563	24.1%	Rural
95	Emergent Herbaceous Wetlands	25	0.1%	Rural
	Total	31,410	100%	
	Urban		0.6%	
	Rural		99.4%	

2.4 Building Downwash

The *Guideline* requires the evaluation of the potential for physical structures to affect the dispersion of emissions from stack sources. The exhaust from stacks that are located within specified distances of buildings may be subject to "aerodynamic building downwash" under certain meteorological conditions. This determination is made by comparing actual stack height to the Good Engineering Practice (GEP) stack height. The modeled emission units at the facility are evaluated in terms of their proximity to nearby structures.

An emission point is assumed to be subject to the effects of downwash at all release heights even if the stack height is above the U.S. EPA formula height, which is defined by the following formula:

$$H_{GEP} = H + 1.5L, \text{ where:}$$

where,

H_{GEP} = GEP stack height,
H = structure height, and
L = lesser dimension of the structure (height or maximum projected width).

This equation is limited to stacks located within 5L of a structure. Stacks located at a distance greater than 5L are not subject to the wake effects of the structure.

Direction-specific equivalent building dimensions used as input to the AERMOD model to simulate the impacts of downwash are calculated using the U.S. EPA-sanctioned Building Profile Input Program (BPIP-

PRIME), version 04274 and used in the AERMOD Model[9]. BPIP-PRIME is designed to incorporate the concepts and procedures expressed in the GEP Technical Support document, the Building Downwash Guidance document, and other related documents and has been adapted to incorporate the PRIME downwash algorithms.[10]

A GEP analysis of all modeled point sources at the facility in relation to each building is performed to evaluate which building has the greatest influence on the dispersion of each stack's emissions. The GEP height for each stack calculated using the dominant structure's height and maximum projected width were also determined. According to U.S. EPA dispersion modeling guidance, stacks with actual heights greater than either 65 meters or the calculated GEP height, whichever is greater, generally cannot take credit for their full stack height in a PSD modeling analysis. All modeled source stacks at the facility are less than 65 meters tall and therefore meet the requirements of GEP and credit for the entire actual height of each stack is used in this modeling analysis.

2.5 Elevated Terrain

Terrain elevations are considered in the modeling analysis. The elevations of receptors, buildings, and sources refine the modeling impacts between the sources at one elevation and receptor locations at various other elevations at the fence line and beyond. This is accomplished through the use of the AERMOD terrain preprocessor called AERMAP (version 18081), which generates base elevations above mean sea level of sources, buildings, and/or receptors as specified by the user. For this analysis, AERMAP is not used for the vast majority of source and building base elevations as the facility property was undeveloped prior to start of construction, and common base elevations equivalent to the Novelis final grade levels are used. For all receptors, AERMAP was used to determine the base elevation of each and an effective hill height scale that determines the magnitude of each source plume-elevated terrain feature interaction. AERMOD uses both of these receptor-related values to calculate the effect of terrain on each plume. Base elevations for terrain elevations for receptors input to the model are read and interpolated from 1/3 arc second (approximately 10 meter resolution) National Elevation Dataset (NED) data obtained from the U.S. Geological Survey (USGS).[11]

2.6 Meteorological Data

For performing the Class II modeling in AERMOD, meteorological data must be preprocessed to put it into a format that AERMOD can use. This is accomplished using the AERMET processor (Version 22112) along with nearby sets of National Weather Service (NWS) data from surface and upper air stations.

The project site is in Baldwin County and ADEM recommends using meteorological data based on surface observations from Mobile, AL and upper air observations from Slidell, LA. ADEM provided 2017-2021 data from those locations and that dataset was used in the PSD modeling analyses. Meteorological data provided by ADEM was processed with AERMET (v22112) and utilized the ADJ_U* option. [12] Preliminary model impacts indicated significant influence from low wind and/or stable meteorological conditions and as such, the regulatory ADJ_U* option is appropriate.

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[9] Earth Tech, Inc., Addendum to the ISC3 User's Guide, The PRIME Plume Rise and Building Downwash Model, November 1997.

[10] U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Guidelines for Determination of Good Engineering Practice Stack Height (Technical Support Document for the Stack Height Regulations) (Revised), Research Triangle Park, North Carolina, EPA 450/4-80-023R, June 1985.

[11] U.S. Geological Survey, USGS 3D Elevation Program (3DEP) at https://apps.nationalmap.gov/downloader/#/

[12] Meteorological data provided by Mr. Jim Owen of ADEM via e-mail on 6/29/22.

A minimum threshold wind speed of 0.5 m/s (the lowest wind speed that will be allowed in the generated meteorological data set) is implemented in AERMET, as suggested in Section 4.6.2.2 of the *AERMET User's Guide*.[13] All hours with wind speeds below this value are treated as "calm" in AERMOD.

2.7 Coordinate System

In all modeling analyses conducted by Novelis, the location of emission sources, structures, and receptors are represented in the Universal Transverse Mercator (UTM) coordinate system. The UTM grid divides the world into coordinates that are measured in north meters (measured from the equator) and east meters (measured from the central 500 km meridian of each UTM zone, where the world is divided into 36 north-south zones). The datum for the Novelis modeling analysis is based on North American Datum 1983 (NAD 83). UTM coordinates for this analysis all reside within UTM Zone 16 which serves as the reference point for all Novelis data as well as all regional receptors and sources.

2.8 Receptor Grids

Modeled concentrations were calculated at ground-level receptors placed along the facility ambient air boundary and on a variable Cartesian receptor grid. Fenceline receptors were spaced no further than 50 meters apart. Beyond the fenceline, receptors were spaced 100 meters apart on a Cartesian grid extending out to a distance sufficient to resolve the maximum concentration, but at least extending outward to 5 km in all directions. The receptor grids utilized were sufficient to capture all significant impacts for the SIA analysis.

In general, the receptors covered a region extending from all edges of the facility ambient boundary to the point where impacts from the project are no longer expected to be significant. The entire ambient air boundary will be fenced.

The specific receptor grids used for each significance analysis were as follows:[14]

1. For PM_{10} (24-hr and Annual), CO (1-hr and 8-hr) and NO_2 (Annual) – a 10 km (radius) cartesian receptor grid (circular in shape[15]) with 100 meter spacing from the facility out to 3 km (radius), 250 meter spacing from 3 km to 6 km (radius), and 500 meter spacing from 6 km to 10 km (radius) from the site.
2. For $PM_{2.5}$ (24-hr and Annual) – a 30 km (radius) cartesian receptor grid (circular in shape), with spacing identical to item 1 above out to 10 km (radius), 750 meter spacing from 10 km to 20 km (radius), and 1,000 meter spacing from 20 km to 30 km (radius) from the site.
3. For NO_2 (1-hr) – a 50 km (radius) cartesian receptor grid (circular in shape), with spacing identical to Item 2 above out to 20 km (radius), and 1,000 meter spacing from 20 km to 50 km (radius) from the site.

Please note that per EPA guidance, a reduced receptor grid with only the receptors at which maximum modeled concentrations are greater than or equal to the SIL is required to be used for NAAQS and Increment modeling. Novelis utilized this approach. Secondary $PM_{2.5}$ impacts, through use of the MERPs,

[13] EPA, User's Guide for the AERMOD Meteorological Preprocessor (AERMET), EPA-454/B-21-004, U.S. Environmental Protection Agency, Research Triangle Park, NC, April 2021.

[14] Per email approval from Jenniffer Youngpeter of ADEM on January 12, 2026 for proposed as-built receptor spacing.

[15] A circular cartesian grid, as opposed to a rectangular cartesian grid, is chosen in order to cut down on additional and extraneous receptors at greater than the desired distance from the facility.

was considered towards predicted modeled impacts compared to the $PM_{2.5}$ SILs, and for the refined $PM_{2.5}$ analyses.

Receptor elevations and hill heights required by AERMOD were determined using the AERMAP terrain preprocessor (v18081). Terrain elevations from the USGS 1/3-arc second NED were used for AERMAP processing.

In all modeling analysis data files, the location of emission sources, structures, and receptors were represented in the UTM coordinate system, Zone 16, NAD83.

2.9 Source Emission and Release Inventories

Dispersion modeling for the Significance Analysis is conducted for all new applicable sources using hourly or annual potential CO, PM_{10}, $PM_{2.5}$, and NO_X emission rates, where applicable, based on the averaging period of the underlying NAAQS or PSD Increment standard (refer to the Novelis Bay Minette Model ID Index, Source Location Map, and Source Data in **Appendix A** representing the as-built configuration of the facility). For PSD increment and NAAQS modeling analyses, existing emission units are also included using the applicable potential emission rates. As per PSD modeling requirements, for any off-site air concentration impact calculated that is greater than or equal to the SIL for a given pollutant, the radius of the significant impact area (SIA) is determined based on the extent to where the farthest receptor is located at which predicted concentrations are equal to or greater than the SIL. Thus, the SIA encompasses a circle centered on Novelis with a radius extending out to either (1) the farthest location where the emissions increase of a pollutant from the project causes a significant ambient [i.e., modeled impact equal to or above the SIL on a high-first-high (HFH) basis] or (2) a maximum distance of 50 km, whichever is less.[16] For this project, all impact area distances for all pollutants, were less than 50 km.

Novelis provided SIA distance information for PM_{10}, $PM_{2.5}$, and NO_2 to ADEM, for them to develop the necessary modeling inventory information.[17] ADEM provided the requested inventory documentation via e-mail in June 2022.[18] Source inventory documentation provided by ADEM was included in the required NAAQS and PSD Increment evaluations.[19]

The significant impact areas for this project do extend slightly into western Florida (Escambia County). The Florida DEP was contacted to request potential modeling inventory documentation for western Florida. Documentation was received from the Florida DEP in June 2022. [20] Documentation provided by the Florida DEP included a large amount of unsorted source data, for sources in both Escambia and Santa Rosa County.

[16] This is the maximum extent of the applicability of the AERMOD Model as per the *Guideline on Air Quality Models*.

[17] E-mail from Trinity Consultants to ADEM, dated 5/10/22. CO predicted modeled impacts are less than the applicable CO SILs.

[18] E-mail from Jackson Rogers of ADEM to Trinity, dated 6/3/22.

[19] All source information provided by ADEM was conservatively included in the facility NAAQS analyses. For Increment evaluations, baseline sources were treated with a zero emission rate, while increment consumers were modeled with a positive emission rate and increment expanders modeled with a negative emission rate (except for NO_2, where only increment consumers were conservatively modeled for the NO_2 annual Increment evaluation). Additionally, ADEM provided a building downwash input block for Florida Gas Transmission Co - Mt Vernon Station 11 (Facility ID 503-3028) via e-mail from Geoff Healan on 7/13/22. This source block information was included in all refined NO_2 modeling evaluations.

[20] E-mail from Heather Walsh of FL DEP to Trinity, dated 6/9/22.

Of the data provided by FL DEP, only 2 facilities are within 50 km of the project location. The vast majority of the source data provided by FL DEP was for relatively small sources at a greater than 50 km distance.

Following consultation with ADEM regarding the data received from FL DEP, only the International Paper site in Pensacola was included in the modeling inventory for NO_2.[21]

Source data provided by ADEM, was modeled according to the source type (e.g. vertical point source, horizontal point source, etc.) specified. Regional source data provided by ADEM and the Florida DEP, and used in the refined modeling analyses, can be found in **Appendix C**.

2.10 Background Concentrations

When completing a cumulative NAAQS analysis, modeled impacts from the facility are combined with background concentrations, which represent the air quality concentrations due to sources that are not explicitly modeled (e.g., mobile sources, small but local stationary sources, non-regulated fugitive sources, and large but distant sources). A cumulative analysis was performed for any pollutant that meets or exceeds its SIL, and since the project triggered PSD review for numerous pollutants, ambient background data was obtained from ADEM for the following pollutants:

1. NO_2 (1-hr and annual avg.)
2. PM_{10} (24-hr)
3. $PM_{2.5}$ (24-hr and annual avg.)
4. Ozone (for MERPs analysis)
5. CO (1-hr and 8-hr avg.)

ADEM provided appropriate background data to utilize for this project via e-mail on June 1, 2022. The data provided is as follows in **Table 2-4**.

Table 2-4. Background Values Provided by ADEM

Pollutant	Averaging Period	Background Concentration ($\mu g/m^3$)	Years	Monitor
NO_2	1-hr	31	2013-2015	Yorkville, GA
NO_2	Annual	7.5	State-Wide	
CO	1-hr	100	State-Wide	
CO	8-hr	100	State-Wide	
$PM_{2.5}$	24-hr	16	2019-2021	Chickasaw
$PM_{2.5}$	Annual	8	2019-2021	Chickasaw
PM_{10}	24-hr	30	2012-2014	Mobile
Ozone	8-hr	56	2019-2021	Chickasaw

Specific background monitoring data from Alabama, obtained from Ms. Gina Curvin of ADEM, can be found in **Appendix E**.

[21] E-mail from Jim Owen of ADEM to Trinity, dated 7/20/22.

3. CLASS II MODELING RESULTS

This section summarizes the results of the Class II dispersion modeling analyses. As discussed in **Section 2**, the Class II modeling analyses are conducted in three principle steps: the SIL analysis, the NAAQS Analysis, and the PSD Increment Analysis. The following subsections present dispersion modeling results from modeling NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions for the SIL analysis and NO_X, PM_{10}, and $PM_{2.5}$ emissions for the NAAQS and PSD increment analysis. These analyses demonstrate that the project does not cause or contribute to any exceedances of the NAAQS or PSD Increment.

3.1 SIL Analysis

As shown in **Table 3-1** below, the project causes impacts above the NO_2 SIL for both the 1-hour and annual averaging periods. The radius of the SIA for NO_2 was determined to be 49.98 km and 2.83 km for the 1-hour and annual averaging periods, respectively. Because these impacts are greater than the SILs, further NAAQS and PSD increment modeling is required.

Table 3-1. NO_2 SIL Modeling Analysis Results

Averaging Period	Year for Met. Data	SIL ($\mu g/m^3$)	Significant Monitoring Concentration ($\mu g/m^3$)	Maximum 1st High Impact ($\mu g/m^3$)	UTM East[1] (m)	UTM North[1] (m)
1-hr				108.1	428,655	3,423,562
	Max. 5-yr Avg.	**7.5**	**NA**	**108.1**	**428,655**	**3,423,562**
Annual	2017			2.6	428,655	3,423,562
	2018			2.8	428,655	3,423,562
	2019			2.6	428,655	3,423,562
	2020			2.9	428,655	3,423,562
	2021			2.6	428,655	3,423,562
	Max. of 5 Years	**1**	**14**	**2.9**	**428,655**	**3,423,562**

[1] UTM coordinates are in NAD83 Zone 16.

As shown in **Table 3-2**, the project causes impacts above the PM_{10} SIL for both the 24-hour and annual averaging periods. The radius of the SIA for PM_{10} was determined to be 3.09 km and 1.3 km for the 24-hour and annual averaging periods, respectively. Because these impacts are greater than the SILs, further NAAQS and PSD increment modeling is required.

Table 3-2. PM_{10} SIL Modeling Analysis Results

Averaging Period	Year for Met. Data	SIL ($\mu g/m^3$)	Significant Monitoring Concentration ($\mu g/m^3$)	Maximum 1st High Impact ($\mu g/m^3$)	UTM East[1] (m)	UTM North[1] (m)
24-hr	2017			10.4	428,655	3,423,491
	2018			10.7	428,655	3,423,562
	2019			9.9	428,626	3,423,562
	2020			9.8	428,626	3,423,562
	2021			8.9	429,866	3,425,519
	Max. of 5 Years	**5.0**	**10**	**10.7**	**428,655**	**3,423,562**
Annual	2017			1.47	428,655	3,423,562
	2018			1.51	428,655	3,423,562
	2019			1.48	428,655	3,423,562
	2020			1.58	428,655	3,423,562
	2021			1.45	428,655	3,423,562
	Max. of 5 Years	**1.0**	**NA**	**1.58**	**428,655**	**3,423,562**

[1] UTM coordinates are in NAD83 Zone 16.

As shown in **Table 3-3**, the project causes impacts above the $PM_{2.5}$ SIL for both the 24-hour and annual averaging periods. The radius of the SIA for $PM_{2.5}$ was determined to be 7.63 km and 4.85 km for the 24-hour and annual averaging periods, respectively. Because these impacts are greater than the SILs, further NAAQS and PSD increment modeling is required.

Table 3-3. $PM_{2.5}$ SIL Modeling Analysis Results

Averaging Period	Year for Met. Data	SIL ($\mu g/m^3$)	Significant Monitoring Concentration ($\mu g/m^3$)	Maximum Primary $PM_{2.5}$ Impact ($\mu g/m^3$)	Maximum Secondary $PM_{2.5}$ Impact ($\mu g/m^3$)	Maximum Cumulative $PM_{2.5}$ Impact ($\mu g/m^3$)	UTM East[1] (m)	UTM North[1] (m)
24-hr	**Max. 5-yr Avg**	**1.2**	**0**	**8.34**	**0.1079**	**8.45**	**428,655**	**3,423,562**
Annual	**Max. 5-yr Avg**	**0.20**	**NA**	**1.27**	**0.0028**	**1.27**	**428,655**	**3,423,562**

[1] UTM coordinates are in NAD83 Zone 16.

As shown in **Table 3-4**, the project does not cause impacts above the CO SIL for both the 1-hour and 8-hour averaging periods. Because these impacts are less than the SILs, further NAAQS modeling is not required.

Table 3-4. CO SIL Modeling Analysis Results

Averaging Period	Year for Met. Data	SIL ($\mu g/m^3$)	Significant Monitoring Concentration ($\mu g/m^3$)	Maximum 1st High Impact ($\mu g/m^3$)	UTM East[1] (m)	UTM North[1] (m)
1-hr	2017			321	428,251	3,424,910
	2018			295	427,641	3,423,981
	2019			207	428,126	3,424,787
	2020			169	428,076	3,424,787
	2021			260	427,817	3,425,723
	Max. of 5 Years	**2,000**	**NA**	**321**	**428,251**	**3,424,910**
8-hr	2017			75	430,272	3,424,519
	2018			75	430,271	3,424,369
	2019			68	426,817	3,425,823
	2020			69	430,271	3,424,369
	2021			75	430,272	3,424,519
	Max. of 5 Years	**500**	**575**	**75**	**430,271**	**3,424,369**

[1] UTM coordinates are in NAD83 Zone 16.

Results of the SIL analysis presented in **Table 3-1** through **Table 3-4** indicate that annual NO_2 and 8-hour CO impacts are less than the applicable SMCs (14 $\mu g/m^3$ for NO_2, and 575 $\mu g/m^3$ for CO). Data obtained from Ms. Gina Curvin of ADEM, addresses potential pre-construction monitoring for PM_{10} and $PM_{2.5}$.[22]

3.2 NAAQS Analysis

A NAAQS analysis for NO_2, PM_{10}, and $PM_{2.5}$ is conducted using the modeling techniques described in **Section 2**.

The modeling results presented in **Table 3-5** show that on an annual average basis, combined maximum air impacts due to NO_2 emissions from Novelis and regional sources with a background concentration added are less than the applicable NAAQS. However, modeling results for the 1-hr NO_2 NAAQS found three different areas where receptors indicated predicted modeled exceedances of the NAAQS. A culpability analysis was first performed for all receptors with predicted modeled exceedances. Predicted modeled exceedances were resolved out to the 94th High. Analysis of the MAXDCONT output files generated demonstrates that Novelis does not cause or contribute to any of the predicted modeled exceedances, with all source contributions from Novelis less than the 1-hr NO_2 SIL of 7.5 $\mu g/m^3$.

Then, as each of the three areas of interest identified for the 1-hr NO_2 NAAQS evaluation was outside of an area with 100 meter grid spacing, an array of receptors was placed around the maximum modeled impact receptor in each area, at 100 meter grid spacing. Predicted modeled exceedances for each area were resolved to within the 200th High. Analysis of the MAXDCONT output files generated demonstrates that Novelis does not cause or contribute to any of the predicted modeled exceedances, with all source contributions from Novelis less than the 1-hr NO_2 SIL of 7.5 $\mu g/m^3$.

[22] See **Appendix E** for documentation obtained from MS. Gina Curvin of ADEM. ADEM has a pre-existing ambient monitoring network data for PM_{10} and $PM_{2.5}$ sufficiently representative of the project area.

Concentration plots for the NAAQS modeling analysis for the 1-hr NO_2 modeling are presented in **Appendix D**. These figures show the general areas where maximum impacts occur and the gradient of concentrations across the modeling domain due to all sources. These figures do not include illustrations of the areas evaluated and resolved to 100-meter grid spacing for the 1-hr NO_2 NAAQS modeling. Modeling files, including the MAXDCONT file outputs which demonstrate that Novelis does not cause or contribute to any of the predicted modeled violations, can be found in **Appendix B**.

The modeling results presented in **Table 3-6** show that on a 24-hour average basis combined maximum air impacts due to PM_{10} emissions from Novelis and regional sources with a background concentration added are less than the applicable NAAQS.

Similarly, the modeling results presented in **Table 3-7** show that on both a 24-hour and annual average basis combined maximum air impacts due to $PM_{2.5}$ emissions from Novelis and regional sources with a background concentration added are less than the applicable NAAQS. Concentration plots for the NAAQS modeling analysis for the 24-hr $PM_{2.5}$ modeling are also presented in **Appendix D** for reference.

Table 3-5. NO_2 NAAQS Analysis Results

Averaging Period	Year for Met. Data	NAAQS ($\mu g/m^3$)	Maximum Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Combined Maximum Impact ($\mu g/m^3$)	UTM East[4] (m)	UTM North[4] (m)	Exceeds NAAQS?	Novelis Causes or Contributes?
1-hr[1]	**Max. 5-yr Avg.**	**188**	**2,458.0**	**31**	**2,489.0**	**399,917**	**3,399,923**	**Yes**	**No**
	2017		5.10	7.5	12.60	428,655	3,423,562		
	2018		5.07	7.5	12.57	428,655	3,423,562		
	2019		4.76	7.5	12.26	428,655	3,423,562		
	2020		4.82	7.5	12.32	428,655	3,423,562		
	2021		4.90	7.5	12.40	428,655	3,423,562		
Annual[2]	**Max. of 5 Years**	**100**	**5.10**	**7.5**	**12.60**	**428,655**	**3,423,562**	**No**	**N/A**

[1] Evaluated the five-year average 8th highest daily maximum 1-hour output for comparison against the NAAQS.

[2] Evaluated maximum modeled annual arithmetic mean impact from among the five years modeled for comparison against the NAAQS.

[3] UTM coordinates are in NAD83 Zone 16.

Table 3-6. PM_{10} NAAQS Analysis Results

Averaging Period	Year for Met. Data	NAAQS ($\mu g/m^3$)	Maximum Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Combined Maximum Impact ($\mu g/m^3$)	UTM East[2] (m)	UTM North[2] (m)	Exceeds NAAQS?
24-hr[1]	**Max 5-yr H6H**	**150**	**10.7**	**30.0**	**40.7**	**429,867**	**3,425,269**	**No**

[1] Evaluated the five-year maximum 6th highest 24-hour output for comparison against the NAAQS.

[2] UTM coordinates are in NAD83 Zone 16.

Table 3-7. $PM_{2.5}$ NAAQS Analysis Results

Averaging Period	Year for Met. Data	NAAQS ($\mu g/m^3$)	Primary $PM_{2.5}$ Impact ($\mu g/m^3$)	Secondary $PM_{2.5}$ Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Combined Maximum Impact ($\mu g/m^3$)	UTM East[3] (m)	UTM North[3] (m)	Exceeds NAAQS?
24-hr[1]	**Max. 5-yr Avg.**	**35**	**6.65**	**0.1079**	**16.00**	**22.76**	**428,655**	**3,423,562**	**No**
Annual[2]	**Avg. of 5 Years**	**12**	**1.59**	**0.0028**	**8.00**	**9.59**	**428,655**	**3,423,562**	**No**

[1] Evaluated the five-year average 8th highest maximum 24-hour output for comparison against the NAAQS.

[2] Evaluated average modeled annual arithmetic mean impact over the five years modeled for comparison against the NAAQS.

[3] UTM coordinates are in NAD83 Zone 16.

3.3 PSD Increment Analysis

The PSD Increment Analysis for NO_2, PM_{10}, and $PM_{2.5}$ is conducted using the modeling techniques in **Section 2**. The modeling results presented in **Table 3-8**, **Table 3-9,** and **Table 3-10** demonstrate that the project does not cause or contribute to an exceedance of the PSD increment standards for NO_2, PM_{10}, and $PM_{2.5}$. A visual representation of the $PM_{2.5}$ 24-hr increment evaluation can be found in the modeling results plot provided in **Appendix D**.

Table 3-8. NO_2 PSD Increment Analysis Results

Averaging Period	Year for Met. Data	Class II PSD Increment ($\mu g/m^3$)	Maximum Impact ($\mu g/m^3$)	UTM East[2] (m)	UTM North[2] (m)	Exceeds Increment?
Annual[1]	2017		3.24	428,655	3,423,562	
	2018		3.39	428,655	3,423,562	
	2019		3.18	428,655	3,423,562	
	2020		3.42	428,655	3,423,562	
	2021		3.20	428,655	3,423,562	
	Max. of 5 Years	**25**	**3.42**	**428,655**	**3,423,562**	**No**

[1] Evaluated highest impacts for each year modeled since annual NO_2 PSD Increment is not to be exceeded.
[2] UTM coordinates are in NAD83 Zone 16.

Table 3-9. PM_{10} PSD Increment Analysis Results

Averaging Period	Year for Met. Data	Class II PSD Increment ($\mu g/m^3$)	Maximum Impact ($\mu g/m^3$)	UTM East[2] (m)	UTM North[2] (m)	Exceeds Increment?
24-hour[1]	2017		9.22	428,626	3,423,562	
	2018		9.60	428,626	3,423,562	
	2019		9.26	428,655	3,423,562	
	2020		9.55	428,655	3,423,562	
	2021		8.10	428,476	3,423,563	
	Max. of 5 Years	**30**	**9.60**	**428,626**	**3,423,562**	**No**
Annual	2017		1.00	428,655	3,423,562	
	2018		1.16	428,655	3,423,562	
	2019		1.10	428,655	3,423,562	
	2020		1.30	428,655	3,423,562	
	2021		1.10	428,655	3,423,562	
	Max. of 5 Years	**17**	**1.30**	**428,655**	**3,423,562**	**No**

[1] Evaluated the 2nd highest 24-hour average modeled impact over the five years modeled for comparison against the PSD Increment.
[2] UTM coordinates are in NAD83 Zone 16.

Table 3-10. $PM_{2.5}$ PSD Increment Analysis Results

Averaging Period	Year for Met. Data	Class II PSD Increment (µg/m³)	Maximum Impact (µg/m³)	$PM_{2.5}$ MERP Contribution (µg/m3)	Combined Maximum Impact (µg/m3)	UTM East[3] (m)	UTM North[3] (m)	Exceeds Increment?
24-hour[1]	2017		7.83	0.10788	7.94	428,476	3,423,563	
	2018		8.23	0.10788	8.33	428,526	3,423,563	
	2019		7.72	0.10788	7.83	428,655	3,423,562	
	2020		8.12	0.10788	8.23	428,626	3,423,562	
	2021		7.31	0.10788	7.42	428,476	3,423,563	
	Max. of 5 Years	**9**			**8.33**	**428,526**	**3,423,563**	**No**
Annual[2]	2017		1.14	0.00278	1.14	428,655	3,423,562	
	2018		1.19	0.00278	1.19	428,655	3,423,562	
	2019		1.16	0.00278	1.16	428,655	3,423,562	
	2020		1.25	0.00278	1.25	428,655	3,423,562	
	2021		1.14	0.00278	1.14	428,655	3,423,562	
	Max. of 5 Years	**4**			**1.25**	**428,655**	**3,423,562**	**No**

[1] Evaulated the 2nd highest 24-hour average modeled impact over the five years modeled for comparison against the PSD Increment

[2] Evaulated highest modeled annual arithmetic mean impact over the five years modeled for comparison against the PSD Increment.

[3] UTM coordinates are in NAD83 Zone 16.

4. CLASS I AREA AQRV CONSIDERATIONS

Class I areas are federally protected areas for which more stringent air quality standards apply to protect unique natural, cultural, recreational, and/or historic values. The following Class I area is located near the facility (with the approximate distance to the facility listed):[23]

- Breton Wilderness – 146.3 km

The Federal Land Managers (FLM) have the authority to protect air quality related values (AQRVs), and to consider in consultation with the permitting authority whether a proposed major emitting facility will have an adverse impact on such values. AQRVs for which PSD modeling is typically conducted include visibility and deposition of sulfur and nitrogen.

The ratio of emissions to Class I distance (e.g., Q/D) for this project for the nearby Class I areas was considered in order to determine if the FLM will require a full AQRV analysis. The FLM's AQRV Work Group (FLAG) 2010 guidance states that a Q/D value of ten or less indicates that AQRV analyses should not be required.[24] A notification has been submitted (via e-mail) to the appropriate FLM for the nearby Class I area identified for concurrence with a finding regarding the requirement for any AQRV analysis for this project.[25] The Q/D for the Class I Area of interest (Breton Wilderness) has been initially evaluated and demonstrated that impacts are less than 10. The current Q/D derivation for the Class I Area of interest is identified in **Table 4-1** and **Table 4-2**.

Table 4-1. Worst Case "Q" Emissions Derivation

Pollutant	Facility-Wide Maximum 24-hr Emissions (lb/hr)	FLAG 2010 Approach Annual Emissions[2] (tpy)
NO_X	195.15	854.75
Direct Particulate[1]	95.09	416.51
SO_2	0.60	2.63
H_2SO_4	---	---
Sum of Emissions (tpy)		1,273.9

1. Direct particulate includes all filterable and condensable PM_{10}.
2. FLAG 2010 Approach for maximum 24-hr avg. emissions.

[23] All distances approximately based on data obtained from the Class I Area distance tool as published by the FL DEP at https://floridadep.gov/air/air-business-planning/content/class-i-areas-map

[24] U.S. Forest Service, National Park Service, and U.S. Fish and Wildlife Service. 2010. Federal land managers' air quality related values work group (FLAG): phase I report, revised (2010). Natural Resource Report NPS/NRPC/NRR, 2010/232. National Park Service, Denver, Colorado.

[25] A copy of the referenced correspondence, can be found in **Appendix F**. ADEM will be copied on all correspondence as provided to the appropriate FLMs. If ADEM is not copied on any correspondence from the FLM providing concurrence that no AQRV analysis is required, a copy of that correspondence will be provided to ADEM.

Table 4-2. Q/D Values for Nearby Class I Areas

Class I Area	Responsible FLM	Minimum Distance from Site (km)	Sum of Annualized VAP Emissions - Q (tpy)	Flag 2010 Approach Q/D
Breton Wilderness	USFWS	146.3	1,273.9	8.71

5. ADDITIONAL IMPACTS ANALYSIS

Three additional impacts analyses was performed as part of the PSD permitting action. These are: 1) a growth analysis, 2) a soil and vegetation analysis, and 3) a visibility analysis.

5.1 Growth Analysis

The purpose of the growth analysis is to quantify project associated growth; that is, to predict how much new growth is likely to occur in order to support the source or modification under review, and then to estimate the air quality impacts from this growth. The facility is expected to increase full-time employment opportunities after the construction phase of the project is completed. However, the project is anticipated to have a limited growth impact on Baldwin County, Alabama. The construction workforce has varied throughout the on-site construction process with up to 5,000 contractors working on-site during the peak construction activities.[26] Up to 1,000 full-time employees are anticipated to be hired post-construction. Many of these workers will already reside and conduct business in the region surrounding the facility, and thus would not cause growth-related air quality impacts. While some workers are likely to currently reside outside the region and thus may commute or move to the area, any related potential air quality impacts from these out-of-town workers are too small to be reasonably quantifiable. Therefore, Novelis would not expect an employment change attributable to the project to cause quantifiable air quality impacts.

5.2 Visibility, Soils, and Vegetation Analysis

No Class II visibility assessment is required for this project, as no impact to visibility in the area around the site is anticipated for this project. All stack type sources in the project scope with the potential to generate a coherent plume will be equipped with control devices and other work practice standard based measures to ensure that significant opacity for visible emissions from the facility's stack discharges will not produce any nearby "plume blight." Novelis' efforts to demonstrate compliance with applicable federal National Emissions Standards for Hazardous Air Pollutants (NESHAP), federal New Source Performance Standards (NSPS), and Alabama State Implementation Plan (SIP) requirements for particulate matter (PM) (and opacity as a surrogate for PM emissions) will ensure that no Class II area visibility impacts will occur during normal, steady-state operation of the integrated aluminum rolling mill.

The EPA developed the secondary NAAQS to protect certain air quality related values (i.e., soil and vegetation) that may not be sufficiently protected by the primary NAAQS. The secondary NAAQS, shown in **Table 2-1** represent levels that provide protection for public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. As the secondary NAAQS were not exceeded for the project, no adverse impact to any soils or vegetation is expected.

[26] https://novelis.com/bay-minette-project-reaches-major-milestones-in-q2-2025/

6. OZONE AMBIENT IMPACT ANALYSIS

The revisions to the *Guideline* in effect at the time of the initial PSD permit issuance (published in the Federal Register on January 17, 2017) recommend the use of Model Emissions Rate for Precursors (MERPs) to evaluate a proposed project's impact on ozone levels in the surrounding airshed. The *Guideline* establishes a two-tiered demonstration approach for addressing single-source impacts on ozone. Tier 1 demonstrations involve use of technically credible relationships between emissions and ambient impacts based on existing modeling studies deemed sufficient for evaluating a project source's impacts. Tier 2 demonstrations involve case-specific application of chemical transport modeling (e.g., with an Eulerian grid or Lagrangian model). MERPs are a type of Tier 1 demonstration that represent a level of increased precursor emissions that is not expected to contribute to significant levels of ozone. In other words, project emissions are compared against MERP values to determine whether the project emissions would have a significant impact on ozone levels. To derive a MERP value, a model predicted relationship between precursor emissions from hypothetical sources and their downwind maximum impacts is combined with a critical air quality threshold using a predefined equation. For the facility MERPs analysis, Novelis is relying upon pre-established MERP values based on prior photochemical grid modeling as the primary indicator that the project does not cause or contribute to a violation of the ozone NAAQS.

A Tier 1 demonstration approach in the *Guideline* relies on the use of MERPs. The U.S. EPA discusses this approach in detail in the *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and $PM_{2.5}$ under the PSD Permitting Program* (hereafter referred to as *MERPs Guidance*).[27] The guidance is relevant for the PSD program and focuses on assessing the ambient impacts of precursors of ozone (and $PM_{2.5}$) for purposes of that program. MERPs can be viewed as a Tier 1 demonstration tool under the PSD permitting program that provides a straightforward and representative way to relate maximum source impacts with a critical air quality threshold (e.g., a significant impact level or SIL).[28] Specifically, the MERP framework may be used to describe an emission rate of an individual precursor (such as NO_x or VOC for ozone) that is expected to result in a change in the level of ambient ozone that would be less than a specific air quality threshold for ozone that a permitting authority adopts and chooses to use in determining whether a projected impact causes or contributes to a violation of the ozone NAAQS, such as the ozone SIL recommended by the U.S. EPA.[29] In short, MERPs are intended to be used with SILs as analytical tools for PSD air quality analyses, and if necessary, a cumulative impacts analysis including background air quality.

The Autauga County, Alabama (Autauga) hypothetical source from EPA's photochemical modeling study is chosen as the representative source for the ozone and $PM_{2.5}$ MERPs analysis. There is no hypothetical source within the EPA database documentation, within 200 km of the site project location. [30] The Autauga site is approximately 215 km northeast of the project location, northwest of the town of Montgomery. There are two coastal hypothetical sources, which include the Bay County, Florida site location (near Panama City Beach) located approximately 210 km southeast of the site, and the coastal Orleans Louisiana site approximately 225 km southwest of the site. However, the coastal hypothetical source site locations are close to the ocean and potentially influenced by coastal meteorology. The project site is located

[27] U.S. EPA, *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and $PM_{2.5}$ under the PSD Permitting Program*, EPA-454/R-19-003 (April 30, 2019). Office of Air Quality Planning and Standards, Research Triangle Park, NC.

[28] *MERPs Guidance*, pg. 5.

[29] *MERPs Guidance*, pg. 10.

[30] https://www.epa.gov/scram/merps-view-qlik

approximately 80 km from the Gulf of Mexico, and less likely to be influenced by coastal meteorology. Both the Autauga site and the project site are located in generally rural areas, in general proximity to urban/industrialized areas. The Autauga site is approximately 30 km northwest of the greater Montgomery area, where the project site is located approximately 40 km northwest of the greater Mobile area. Therefore, the Autauga hypothetical source is chosen as the representative source for the ozone and secondary $PM_{2.5}$ MERPs analysis.

As the facility has primarily tall stacks, and the majority of NOx emissions for the project will occur from stacks much greater than 10 m tall, the 90 m stack source category was chosen for selection of the appropriate MERP values for the Autauga hypothetical source. The tpy MERP value category (e.g. 500 tpy, 1000 tpy) was chosen based on the closest value to the annual emission estimates for the project. For example, NOx emissions are currently estimated as approximately 698 tpy, so the 500 tpy source category was used in lieu of the 1,000 tpy source category for NOx selections.

Table 6-1 shows the selected MERPs values for the Autauga County hypothetical source, the calculated ozone MERPs, project emissions increases of NO_X and VOC, and estimated ozone impact associated with the expansion project. In **Table 6-1** and **Table 6-2,** the calculated MERPs concentrations are added to the background ozone concentration provided by ADEM, which demonstrates compliance with the Ozone 8-hour NAAQS.

The ozone project impacts via the MERPs are calculated as follows;

(698.62 tpy NOx project emissions / 207 tpy MERP) + (664.73 tpy VOC project emissions / 9,362 tpy MERP) = 3.446

3.446 x 1.0 ppb (ozone SIL) = 3.446 ppb project impact

Cumulative impact = 3.446 ppb project impact + 56 ppb background ozone = 59.446 ppb ozone

Table 6-1. Ozone SIL Analysis

Averaging Period	Precursor	Critical Air Quality Threshold (ppb)	Ozone MERP (tpy)	Project Emissions (tpy)	% of Critical Air Quality Threshold	Ozone Project Impact (ppb)	SIL (ppb)
8-hour	NO_x	1.0	207	698.62	337.5%	3.37	
	VOC	1.0	9,362	664.73	7.1%	0.07	
					Total	**3.446**	**1.0**

Table 6-2. Ozone NAAQS Analysis

Averaging Period	Pollutant	Ozone Project Impact (ppb)	Ozone Background Conc. (ppb)	Cumulative Ozone Impact (ppb)	NAAQS (ppb)
8-hour	Ozone	3.446	56	**59.446**	**70**

7. SECONDARY $PM_{2.5}$ IMPACT ASSESSMENT

$PM_{2.5}$ precursor pollutants (e.g., NO_X, SO_2) can undergo photochemical reactions with ambient gases such as NH_3 or VOC resulting in the formation of secondary $PM_{2.5}$ downwind of a stationary industrial source. The creation of $PM_{2.5}$ by secondary mechanisms increases the total concentration by adding to the direct emissions of $PM_{2.5}$ from a facility. Two of the largest constituents of secondarily-formed $PM_{2.5}$ are sulfates (SO_4) and nitrates (NO_3), both of which are formed from their respective precursor pollutants (SO_2 for SO_4 and NO_X for NO_3).

The current guideline model for Class II Area air dispersion modeling, AERMOD, does not account for many of the complex atmospheric physical and chemical mechanisms that influence $PM_{2.5}$ formation. For example, when run in the regulatory default mode, AERMOD does not account for the size or mass of particulate emissions and, therefore, does not account for the difference in gravitational settling and deposition rates that occur for different particle sizes. No chemical transformation schemes are implemented in AERMOD which could predict secondary $PM_{2.5}$ formation from atmospheric processes.

Based on the MERP guidance offered by EPA, Novelis has prepared a site-specific secondary $PM_{2.5}$ impact assessment to comprehensively demonstrate that precursor emissions from the project does not cause or contribute to a violation of the $PM_{2.5}$ NAAQS or PSD increment standards.

The Autauga County, Alabama (Autauga) hypothetical source from EPA's photochemical modeling study is chosen as the representative source for the ozone and $PM_{2.5}$ MERPs analysis. There is no hypothetical source within the EPA database documentation, within 200 km of the site project location. [31] The Autauga site is approximately 215 km northeast of the project location, northwest of the town of Montgomery. There are two coastal hypothetical sources, which include the Bay County, Florida site location (near Panama City Beach) located approximately 210 km southeast of the site, and the coastal Orleans Louisiana site approximately 225 km southwest of the site. However, the coastal hypothetical source site locations are close to the ocean and potentially influenced by coastal meteorology. The project site is located approximately 80 km from the Gulf of Mexico, and less likely to be influenced by coastal meteorology. Both the Autauga site and the project site are located in generally rural areas, in general proximity to urban/industrialized areas. The Autauga site is approximately 30 km northwest of the greater Montgomery area, where the project site is located approximately 40 km northwest of the greater Mobile area. Therefore, the Autauga hypothetical source is chosen as the representative source for the ozone and secondary $PM_{2.5}$ MERPs analysis.

As the facility has primarily tall stacks, and the majority of NOx emissions for the project will occur from stacks much greater than 10 m tall, the 90 m stack source category was chosen for selection of the appropriate MERP values for the Autauga hypothetical source. The tpy MERP value category (e.g. 500 tpy, 1000 tpy) was chosen based on the closest value to the annual emission estimates for the project. For example, NOx emissions are currently estimated as approximately 698 tpy, so the 500 tpy source category was used in lieu of the 1,000 tpy source category for NOx selections.

Table 7-1 show the selected MERPs values for the Autauga County hypothetical source, the calculated $PM_{2.5}$ MERPs, project emissions increases of NO_X, and estimated secondary $PM_{2.5}$ impact associated with the expansion project.

[31] https://www.epa.gov/scram/merps-view-qlik

The $PM_{2.5}$ MERPs analysis calculations are as follows.

For 24-hr;

(698.62 tpy NOx project emissions / 7,875 tpy MERP)*(1.2 µg/m^3) + (2.63 tpy SO_2 project emissions / 2,224 tpy MERP) *(1.2 µg/m^3) = 0.10788 µg/m^3 24-hr secondary $PM_{2.5}$ impact

For Annual;

(698.62 tpy NOx project emissions / 50,999 tpy MERP)*(0.2 µg/m^3) + (2.63 tpy SO_2 project emissions / 14,816 tpy MERP) *(0.2 µg/m^3) = 0.00278 µg/m^3 24-hr secondary $PM_{2.5}$ impact

Table 7-1. $PM_{2.5}$ MERPs Analysis

Averaging Period	Precursor	Critical Air Quality Threshold (µg/m^3)	$PM_{2.5}$ MERP (tpy)	Project Emissions (tpy)	% of Critical Air Quality Threshold	Secondary $PM_{2.5}$ Impact (µg/m^3)
24-hr	NO_x	1.2	7,875	698.62	8.87%	0.10646
Annual	NO_x	0.2	50,999	698.62	1.37%	0.00274
24-hr	SO_2	1.2	2,224	2.63	0.12%	0.00142
Annual	SO_2	0.2	14,816	2.63	0.02%	0.00004
					24-hr Total	0.10788
					Annual Total	0.00278

APPENDIX A. MODEL ID INDEX, SOURCE LOCATION MAP, AND NOVELIS SOURCE DATA

- As -built changes to the Model ID Index and Novelis Source data are annotated in light green highlights and dark red text for each of identification and comparison to the original November 2022 as-permitting modeling inputs.

A-1. Modeled Source ID Index

Table A-1.1. Complete List of Modeled Novelis Bay Minette Site Sources

Model ID	Air Permit Source ID	Emission Unit Description	Emission Point Description
SPL1	SP-01	Scrap Processing Line #1 (Flex Line)	Cold Baghouse #1 Stack
SPL2	SP-02	Scrap Processing Line #2 (CBS Line - UBC)	Cold Baghouse #2 Stack
SPL3	SP-03	Scrap Processing Line #3 (CBS Line - Class 1 & 3)	Cold Baghouse #3 Stack
SRT1	SP-05	Scrap Sorting Line #1 (XRT/Surge Hopper for Flex Line)	**Cold Baghouse #4 Stack**
DSWHBH	MC-01, MC-02, MC-03, MC-04, MC-05, MC-06, MC-07, MC-21	**DCTR3, DCTR2, DCTR1, SW5, SW4, SW2, SW1, DRSH Decoater-Sidewell Hot Baghouse Combined Stack**	Hot Baghouse #1, Hot Baghouse #2, Hot Baghouse #3, Hot Baghouse #4, Hot Baghouse #5 Combined Stack
MHHBH	MC-08, MC-09, MC-10, MC-11, MC-12, MC-13, MC-14, MC-15, MC-16, MC-17, MC-18, MC-22, MC-23, MC-24, MC-25	**SW3, NDC1, RT2, RT1, HF4, HF3, HF2, HF1, ILD4, ILD2, ILD1 Melter-Holder Hot Baghouse Combined Stack**	Hot Baghouse #6, Hot Baghouse #7, Hot Baghouse #8, Hot Baghouse #9 Combined Stack
SWDRY2	MC-19	Sow Dryer #2 (Flex Line)	Sow Dryer #2 Stack
SWDRY1	MC-20	Sow Dryer #1 (CBS Line)	Sow Dryer #1 Stack
SCLP1	HR-02	Scalper #1	Scalper #1 Filtration Unit Stack
PCBQ1	HR-03	**Scalper Chip Handling System Pneumatic Conveyor for Briquetter**	Scalper Chip Handling System Pneumatic Conveyor for Briquetter Cyclone Stack
PF1	HR-07	Pusher Furnace #1	Pusher Furnace #1 Stack
PF2	HR-08	Pusher Furnace #2	Pusher Furnace #2 Stack
PF3	HR-09	Pusher Furnace #3	Pusher Furnace #3 Stack
HRM	HR-10	Hot Reversing Mill	Hot Reversing Mill Stack
HFM	HR-11	Hot Finishing Mill	Hot Finishing Mill Stack
TCM1	CR-01	Tandem Cold Mill #1	Tandem Cold Mill #1 Stack
ALKCLN1	CF-02	Alkaline Cleaning Line #1 (Can Coating Line)	Alkaline Cleaning Line #1 (Can Coating Line)
CL1	CF-03	Coating Line #1	Coating Line #1 RTO Stack
CT1C1	AS-04	Caster Cooling Tower #1	Caster Cooling Tower Cell 1 Stack
CT1C2	AS-04	Caster Cooling Tower #1	Caster Cooling Tower Cell 2 Stack
CT1C3	AS-04	Caster Cooling Tower #1	Caster Cooling Tower Cell 3 Stack
CT1C4	**AS-04**	**Caster Cooling Tower #1**	**Caster Cooling Tower Cell 4 Stack**
CT1C5	**AS-04**	**Caster Cooling Tower #1**	**Caster Cooling Tower Cell 5 Stack**
CT1C6	**AS-04**	**Caster Cooling Tower #1**	**Caster Cooling Tower Cell 6 Stack**
CT2C1	AS-05	**Hot Mill Cooling Tower**	**Hot Mill Cooling Tower Cell 1 Stack**
CT2C2	AS-05	**Hot Mill Cooling Tower**	**Hot Mill Cooling Tower Cell 2 Stack**
CT2C3	AS-05	**Hot Mill Cooling Tower**	**Hot Mill Cooling Tower Cell 3 Stack**
CT2C4	AS-05	**Hot Mill Cooling Tower**	**Hot Mill Cooling Tower Cell 4 Stack**
CT2C5	AS-05	**Hot Mill Cooling Tower**	**Hot Mill Cooling Tower Cell 5 Stack**
CT2C6	AS-05	**Hot Mill Cooling Tower**	**Hot Mill Cooling Tower Cell 6 Stack**
CT3C1	**AS-26**	**Cold Mill Cooling Tower**	**Cold Mill Cooling Tower Cell 1 Stack**
CT3C2	**AS-26**	**Cold Mill Cooling Tower**	**Cold Mill Cooling Tower Cell 2 Stack**
CT3C3	**AS-26**	**Cold Mill Cooling Tower**	**Cold Mill Cooling Tower Cell 3 Stack**
CT3C4	**AS-26**	**Cold Mill Cooling Tower**	**Cold Mill Cooling Tower Cell 4 Stack**
CT4C1	**AS-27**	**Finishing Cooling Tower**	**Finishing Cooling Tower Cell 1 Stack**
CT4C2	**AS-27**	**Finishing Cooling Tower**	**Finishing Cooling Tower Cell 2 Stack**
CT5C1	**AS-28**	**Round Tops/Pushers Cooling Tower**	**Round Tops Cooling Tower Cell 1 Stack**
CT5C2	**AS-28**	**Round Tops/Pushers Cooling Tower**	**Round Tops Cooling Tower Cell 2 Stack**
LMS1-LMS5	AS-20	**Hot Baghouses Lime Silos (5)**	Hot Baghouses Lime Silo Integral Filter Vents
DSS1	**AS-33**	**Cold Baghouse Dry Sorbent Silos (2)**	**Cold Baghouses Dry Sorbent Silo Integral Filter Vents**
DSS2	**AS-33**	**Cold Baghouse Dry Sorbent Silos (2)**	**Cold Baghouses Dry Sorbent Silo Integral Filter Vents**

A-1. Modeled Source ID Index

Table A-1.1. Complete List of Modeled Novelis Bay Minette Site Sources

Model ID	Air Permit Source ID	Emission Unit Description	Emission Point Description
RRG1	AS-38	Coil Finishing Roll Grinding Machine	Coil Finishing Roll Grinding Machine Filtration Unit Stack
ANOD	AS-34	Anodizing Test Unit	Anodizing Room Scrubber Stack
ETSB	CF-05	Edge Trimmer- Scrap Baller	Edge Trimmer- Scrap Baller Scrubber Stack
DBRV_01	Various	Fugitives - Dross Bldg and Prime Dryers	Fugitive Release
RSRV_01 - RSRV_04	Various	Fugitives - Recycling/Scrapping	Fugitive Release
RCRV_01 - RCRV_14	Various	Fugitives - Remelt/Casting	Fugitive Release
RMRV_01 - RMRV_36	Various	Fugitives - Hot Mill	Fugitive Release
CMRV_01 - CMRV_11	Various	Fugitives - Roll Shop/Cold Mill	Fugitive Release
FCRV_01 - FCRV_08	Various	Fugitives - Finishing/Coating	Fugitive Release
CMUH1 - 2	Various	Fugitives - Central Maintenance Area	Fugitive Release

A-2. Modeled Source Parameters - AERMOD Modeling

Table A-2.1a List of Point Source Stack Parameters for AERMOD Modeling (English Units)

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (ft)	Stack Orientation	Stack Height[3] (ft)	Stack Temp.[3] (°F)	Flow Rate[3] (acfm)	Exit Velocity[3] (ft/s)	Stack Diameter[3] (ft)
SPL1	Cold Baghouse #1 Stack	428,938.43	3,424,019.94	270.0	V	120.0	80.0	330,000	64.5	10.42
SPL2	Cold Baghouse #2 Stack	428,938.30	3,423,992.49	270.0	V	120.0	80.0	310,040	60.6	10.42
SPL3	Cold Baghouse #3 Stack	428,955.81	3,424,043.40	270.0	V	120.0	80.0	120,800	63.9	6.33
SRT1	Cold Baghouse #4 Stack	428,955.93	3,424,070.84	270.0	V	120.0	80.0	110,000	58.2	6.33
DSWHBH	DCTR3, DCTR2, DCTR1, SW5, SW4, SW2, SW1, DRSH Decoater-Sidewell Hot Baghouse Combined Stack	428,898.40	3,424,181.91	265.0	V	120.0	216.6	843,700	62.0	17.00
MHHBH	SW3, NDC1, RT2, RT1, HF4, HF3, HF2, HF1, ILD4, ILD2, ILD1 Melter-Holder Hot Baghouse Combined Stack	428,980.37	3,424,299.10	265.0	V	180.0	201.8	645,700	62.3	14.83
SWDRY2	Sow Dryer #2 Stack	429,094.79	3,424,107.27	270.0	V	72.0	800.0	13,683	18.1	4.00
SWDRY1	Sow Dryer #1 Stack	429,126.43	3,424,106.74	270.0	V	72.0	800.0	13,683	18.1	4.00
SCLP1	Scalper #1 Filtration Unit Stack	429,021.82	3,424,398.22	265.0	V	145.0	80.0	78,063	54.8	5.50
PCBQ1	Scalper Chip Handling System Pneumatic Conveyor for Briquetter Cyclone Stack	429,021.82	3,424,398.22	265.0	V	145.0	80.0	11,000	7.7	5.50
PF1	Pusher Furnace #1 Stack	429,405.74	3,424,493.78	265.0	V	98.0	482.0	74,378	14.3	10.50
PF2	Pusher Furnace #2 Stack	429,426.46	3,424,493.68	265.0	V	98.0	482.0	74,378	14.3	10.50
PF3	Pusher Furnace #3 Stack	429,447.13	3,424,493.70	265.0	V	98.0	482.0	74,378	14.3	10.50
HRM	Hot Reversing Mill Stack	429,353.87	3,424,603.88	265.0	V	150.0	130.0	217,500	32.1	12.00
HFM	Hot Finishing Mill Stack	429,028.20	3,424,609.17	265.0	V	150.0	130.0	435,000	31.9	17.00
TCM1	Tandem Cold Mill #1 Stack	428,591.51	3,424,612.36	265.0	V	120.0	74.7	142,000	27.3	10.50
ALKCLN1	Alkaline Cleaning Line #1 (Can Coating Line) Scrubber Stack	428,527.35	3,424,345.92	265.0	V	98.0	131.0	7,653	41.8	1.97
CL1	Coating Line #1 RTO Stack	428,520.64	3,424,417.27	265.0	V	95.1	428.0	62,676	30.9	6.56

A-2. Modeled Source Parameters - AERMOD Modeling

Table A-2.1a List of Point Source Stack Parameters for AERMOD Modeling (English Units)

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (ft)	Stack Orientation	Stack Height[3] (ft)	Stack Temp.[3] (°F)	Flow Rate[3] (acfm)	Exit Velocity[3] (ft/s)	Stack Diameter[3] (ft)
CT1C1	Caster Cooling Tower #1	429,481.21	3,424,303.75	265.0	V	27.1	-10.0	323,860	46.8	12.11
CT1C2	Caster Cooling Tower #1	429,485.55	3,424,303.77	265.0	V	27.1	-10.0	323,860	46.8	12.11
CT1C3	Caster Cooling Tower #1	429,492.19	3,424,303.68	265.0	V	27.1	-10.0	323,860	46.8	12.11
CT1C4	Caster Cooling Tower #1	429,496.53	3,424,303.70	265.0	V	27.1	-10.0	323,860	46.8	12.11
CT1C5	Caster Cooling Tower #1	429,503.24	3,424,303.67	265.0	V	27.1	-10.0	323,860	46.8	12.11
CT1C6	Caster Cooling Tower #1	429,507.62	3,424,303.65	265.0	V	27.1	-10.0	323,860	46.8	12.11
CT2C1	Hot Mill Cooling Tower	429,183.27	3,424,606.22	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT2C2	Hot Mill Cooling Tower	429,187.57	3,424,606.23	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT2C3	Hot Mill Cooling Tower	429,194.25	3,424,606.17	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT2C4	Hot Mill Cooling Tower	429,198.55	3,424,606.10	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT2C5	Hot Mill Cooling Tower	429,205.25	3,424,606.15	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT2C6	Hot Mill Cooling Tower	429,209.49	3,424,606.15	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT3C1	Cold Mill Cooling Tower	428,637.55	3,424,604.09	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT3C2	Cold Mill Cooling Tower	428,641.85	3,424,604.09	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT3C3	Cold Mill Cooling Tower	428,648.53	3,424,604.02	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT3C4	Cold Mill Cooling Tower	428,652.87	3,424,604.00	265.0	V	27.1	-10.0	380,020	55.0	12.11
CT4C1	Finishing Cooling Tower	428,496.30	3,424,195.09	265.0	V	10.3	-10.0	84,342	30.5	7.66
CT4C2	Finishing Cooling Tower	428,498.96	3,424,195.00	265.0	V	10.3	-10.0	84,342	30.5	7.66
CT5C1	Round Tops/Pushers Cooling Tower	429,516.50	3,424,356.53	265.0	V	11.9	-10.0	107,840	23.7	9.82
CT5C2	Round Tops/Pushers Cooling Tower	429,519.14	3,424,356.48	265.0	V	11.9	-10.0	107,840	23.7	9.82
LMS1	Hot Baghouses Lime Silos (5)- Silo #1 Vent	429,046.52	3,424,323.81	265.0	V	61.8	Amb.	1,000	84.9	0.50
LMS2	Hot Baghouses Lime Silos (5)- Silo #2 Vent	429,044.55	3,424,273.50	265.0	V	61.8	Amb.	1,000	84.9	0.50
LMS3	Hot Baghouses Lime Silos (5)- Silo #3 Vent	428,983.09	3,424,206.64	265.0	V	61.8	Amb.	1,000	84.9	0.50
LMS4	Hot Baghouses Lime Silos (5)- Silo #4 Vent	428,982.98	3,424,186.10	265.0	V	61.8	Amb.	1,000	84.9	0.50
LMS5	Hot Baghouses Lime Silos (5)- Silo #5 Vent	428,982.85	3,424,160.16	265.0	V	61.8	Amb.	1,000	84.9	0.50

A-2. Modeled Source Parameters - AERMOD Modeling

Table A-2.1a List of Point Source Stack Parameters for AERMOD Modeling (English Units)

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (ft)	Stack Orientation	Stack Height[3] (ft)	Stack Temp.[3] (°F)	Flow Rate[3] (acfm)	Exit Velocity[3] (ft/s)	Stack Diameter[3] (ft)
DSS1	Cold Baghouse Dry Sorbent Silos (2)	429,030.85	3,424,052.06	265.0	V	61.8	Amb.	1,000	84.9	0.50
DSS2	Cold Baghouse Dry Sorbent Silos (2)	429,030.68	3,424,014.76	265.0	V	61.8	Amb.	1,000	84.9	0.50
RRG1	Coil Finishing Roll Grinding Machine	428,522.79	3,424,204.31	265.0	V	13.0	70.0	1,800	55.0	0.83
ANOD	Anodizing Test Unit	428,938.48	3,424,495.82	265.0	V	89.5	110.0	6,000	45.8	1.67
ETSB	Edge Trimmer- Scrap Baller Scrubber Stack	428,619.50	3,424,402.47	265.0	V	88.0	Amb.	3,590	45.1	1.3

[1] Coordinates taken from a to-scale site plan projected in the UTM NAD83 Zone 16 coordinate system.

[2] Elevation of the plant grade.

[3] Stack parameters based on a combination of design information and operating data for similar equipment. A 0 deg. F temperature is used to flag an ambient release (based on inputting 0 K to AERMOD to trigger this option). A -10 deg. F temperature is assigned to represent a cooling tower release temperature that is 10 deg. F above ambient temperature.

A-2. Modeled Source Parameters - AERMOD Modeling

Table A-2.1b List of Point Source Stack Parameters for AERMOD Modeling (Standard Units)[4]

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (m)	Stack Orientation	Stack Height[3] (m)	Stack Temp.[3] (^oK)	Flow Rate[3] (m^3/hr)	Exit Velocity[3] (m/s)	Stack Diameter[3] (m)
SPL1	Cold Baghouse #1 Stack	428,938.43	3,424,019.94	82.30	V	36.58	299.82	560,674	19.67	3.18
SPL2	Cold Baghouse #2 Stack	428,938.30	3,423,992.49	82.30	V	36.58	299.82	526,761	18.48	3.18
SPL3	Cold Baghouse #3 Stack	428,955.81	3,424,043.40	82.30	V	36.58	299.82	205,241	19.48	1.93
SRT1	Cold Baghouse #4 Stack	428,955.93	3,424,070.84	82.30	V	36.58	299.82	186,891	17.74	1.93
DSWHBH	DCTR3, DCTR2, DCTR1, SW5, SW4, SW2, SW1, DRSH Decoater-Sidewell Hot Baghouse Combined Stack	428,898.40	3,424,181.91	80.77	V	36.58	375.69	1,433,455	18.88	5.18
MHHBH	SW3, NDC1, RT2, RT1, HF4, HF3, HF2, HF1, ILD4, ILD2, ILD1 Melter-Holder Hot Baghouse Combined Stack	428,980.37	3,424,299.10	80.77	V	54.86	367.46	1,097,051	18.98	4.52
SWDRY2	Sow Dryer #2 Stack	429,094.79	3,424,107.27	82.30	V	21.95	699.82	23,248	5.53	1.22
SWDRY1	Sow Dryer #1 Stack	429,126.43	3,424,106.74	82.30	V	21.95	699.82	23,248	5.53	1.22
SCLP1	Scalper #1 Filtration Unit Stack	429,021.82	3,424,398.22	80.77	V	44.20	299.82	132,630	16.69	1.68
PCBQ1	Scalper Chip Handling System Pneumatic Conveyor for Briquetter Cyclone Stack	429,021.82	3,424,398.22	80.77	V	44.20	299.82	18,689	2.35	1.68
PF1	Pusher Furnace #1 Stack	429,405.74	3,424,493.78	80.77	V	29.87	523.15	126,369	4.36	3.20
PF2	Pusher Furnace #2 Stack	429,426.46	3,424,493.68	80.77	V	29.87	523.15	126,369	4.36	3.20
PF3	Pusher Furnace #3 Stack	429,447.13	3,424,493.70	80.77	V	29.87	523.15	126,369	4.36	3.20
HRM	Hot Reversing Mill Stack	429,353.87	3,424,603.88	80.77	V	45.72	327.59	369,535	9.77	3.66
HFM	Hot Finishing Mill Stack	429,028.20	3,424,609.17	80.77	V	45.72	327.59	739,070	9.74	5.18
TCM1	Tandem Cold Mill #1 Stack	428,591.51	3,424,612.36	80.77	V	36.58	296.85	241,260	8.33	3.20
ALKCLN1	Alkaline Cleaning Line #1 (Can Coating Line) Scrubber Stack	428,527.35	3,424,345.92	80.77	V	29.87	328.15	13,002	12.75	0.60
CL1	Coating Line #1 RTO Stack	428,520.64	3,424,417.27	80.77	V	28.99	493.15	106,487	9.42	2.00

A-2. Modeled Source Parameters - AERMOD Modeling

Table A-2.1b List of Point Source Stack Parameters for AERMOD Modeling (Standard Units)[4]

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (m)	Stack Orientation	Stack Height[3] (m)	Stack Temp.[3] (^oK)	Flow Rate[3] (m^3/hr)	Exit Velocity[3] (m/s)	Stack Diameter[3] (m)
CT1C1	Caster Cooling Tower #1	429,481.21	3,424,303.75	80.77	V	8.26	-5.56	550,242	14.28	3.69
CT1C2	Caster Cooling Tower #1	429,485.55	3,424,303.77	80.77	V	8.26	-5.56	550,242	14.28	3.69
CT1C3	Caster Cooling Tower #1	429,492.19	3,424,303.68	80.77	V	8.26	-5.56	550,242	14.28	3.69
CT1C4	Caster Cooling Tower #1	429,496.53	3,424,303.70	80.77	V	8.26	-5.56	550,242	14.28	3.69
CT1C5	Caster Cooling Tower #1	429,503.24	3,424,303.67	80.77	V	8.26	-5.56	550,242	14.28	3.69
CT1C6	Caster Cooling Tower #1	429,507.62	3,424,303.65	80.77	V	8.26	-5.56	550,242	14.28	3.69
CT2C1	Hot Mill Cooling Tower	429,183.27	3,424,606.22	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT2C2	Hot Mill Cooling Tower	429,187.57	3,424,606.23	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT2C3	Hot Mill Cooling Tower	429,194.25	3,424,606.17	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT2C4	Hot Mill Cooling Tower	429,198.55	3,424,606.10	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT2C5	Hot Mill Cooling Tower	429,205.25	3,424,606.15	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT2C6	Hot Mill Cooling Tower	429,209.49	3,424,606.15	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT3C1	Cold Mill Cooling Tower	428,637.55	3,424,604.09	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT3C2	Cold Mill Cooling Tower	428,641.85	3,424,604.09	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT3C3	Cold Mill Cooling Tower	428,648.53	3,424,604.02	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT3C4	Cold Mill Cooling Tower	428,652.87	3,424,604.00	80.77	V	8.26	-5.56	645,658	16.75	3.69
CT4C1	Finishing Cooling Tower	428,496.30	3,424,195.09	80.77	V	3.12	-5.56	143,298	9.31	2.33
CT4C2	Finishing Cooling Tower	428,498.96	3,424,195.00	80.77	V	3.12	-5.56	143,298	9.31	2.33
CT5C1	Round Tops/Pushers Cooling Tower	429,516.50	3,424,356.53	80.77	V	3.64	-5.56	183,221	7.24	2.99
CT5C2	Round Tops/Pushers Cooling Tower	429,519.14	3,424,356.48	80.77	V	3.64	-5.56	183,221	7.24	2.99
LMS1	Hot Baghouses Lime Silos (5)- Silo #1 Vent	429,046.52	3,424,323.81	80.77	V	18.84	Amb.	1,699	25.87	0.15
LMS2	Hot Baghouses Lime Silos (5)- Silo #2 Vent	429,044.55	3,424,273.50	80.77	V	18.84	Amb.	1,699	25.87	0.15
LMS3	Hot Baghouses Lime Silos (5)- Silo #3 Vent	428,983.09	3,424,206.64	80.77	V	18.84	Amb.	1,699	25.87	0.15
LMS4	Hot Baghouses Lime Silos (5)- Silo #4 Vent	428,982.98	3,424,186.10	80.77	V	18.84	Amb.	1,699	25.87	0.15
LMS5	Hot Baghouses Lime Silos (5)- Silo #5 Vent	428,982.85	3,424,160.16	80.77	V	18.84	Amb.	1,699	25.87	0.15

A-2. Modeled Source Parameters - AERMOD Modeling

Table A-2.1b List of Point Source Stack Parameters for AERMOD Modeling (Standard Units)[4]

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (m)	Stack Orientation	Stack Height[3] (m)	Stack Temp.[3] (^oK)	Flow Rate[3] (m^3/hr)	Exit Velocity[3] (m/s)	Stack Diameter[3] (m)
DSS1	Cold Baghouse Dry Sorbent Silos (2)	429,030.85	3,424,052.06	80.77	V	18.84	Amb.	1,699	25.87	0.15
DSS2	Cold Baghouse Dry Sorbent Silos (2)	429,030.68	3,424,014.76	80.77	V	18.84	Amb.	1,699	25.87	0.15
RRG1	Coil Finishing Roll Grinding Machine	428,522.79	3,424,204.31	80.77	V	3.98	294.26	3,058	16.77	0.25
ANOD	Anodizing Test Unit	428,938.48	3,424,495.82	80.77	V	27.29	316.48	10,194	13.97	0.51
ETSB	Edge Trimmer- Scrap Baller Scrubber Stack	428,619.50	3,424,402.47	80.77	V	26.82	Amb.	6,100	13.74	0.40

[1] Coordinates taken from a to-scale site plan projected in the UTM NAD83 Zone 16 coordinate system.

[2] Elevation of the plant grade.

[3] Stack parameters based on a combination of design information and operating data for similar equipment. A 0 deg. K temperature is used to flag an ambient release (based on inputting 0 K to AERMOD to trigger this option). A -5.56 deg. K temperature is assigned to represent a cooling tower release temperature that is 5.56 deg. K above ambient temperature.

[4] Note that the As-Built annotations have not been included in this table.

A-3. Modeled Source Parameters - AERMOD Modeling

Table A-3.2a List of Area Source Parameters for AERMOD Modeling (English Units)

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (ft)	Area (ft^2)	Release Height[3] (ft)	Initial Vertical Dimension[3] (ft)
RSRV_01	Recycling/Scrapping Roof Vent Fugitives - Vent #1	429,204.40	3,424,001.09	270.0	305	79.5	0.0
RSRV_02	Recycling/Scrapping Roof Vent Fugitives - Vent #2	429,204.62	3,424,066.65	270.0	305	79.5	0.0
DBRV_01	Dross Bldg and Prime Dryers Roof Vent Fugitives - Vent #1	429,090.02	3,424,094.79	270.0	305	50.2	0.0
RSRV_03	Recycling/Scrapping Roof Vent Fugitives - Vent #3	429,222.42	3,424,130.40	270.0	305	79.5	0.0
RSRV_04	Recycling/Scrapping Roof Vent Fugitives - Vent #4	429,222.61	3,424,168.96	270.0	305	79.5	0.0
RCRV_01	Remelt/Casting Roof Vent Fugitives - Vent #1	429,204.50	3,424,212.99	270.0	305	99.8	0.0
RCRV_02	Remelt/Casting Roof Vent Fugitives - Vent #2	429,217.37	3,424,222.04	270.0	305	99.8	0.0
RCRV_03	Remelt/Casting Roof Vent Fugitives - Vent #3	429,236.48	3,424,258.86	270.0	305	99.8	0.0
RCRV_04	Remelt/Casting Roof Vent Fugitives - Vent #4	429,236.67	3,424,286.28	270.0	305	99.8	0.0
RCRV_05	Remelt/Casting Roof Vent Fugitives - Vent #5	429,227.34	3,424,316.83	270.0	305	99.8	0.0
RCRV_06	Remelt/Casting Roof Vent Fugitives - Vent #6	429,236.80	3,424,316.77	270.0	305	99.8	0.0
RCRV_07	Remelt/Casting Roof Vent Fugitives - Vent #7	429,236.88	3,424,337.79	270.0	305	99.8	0.0
RCRV_08	Remelt/Casting Roof Vent Fugitives - Vent #8	429,246.00	3,424,337.74	270.0	305	99.8	0.0
RCRV_09	Remelt/Casting Roof Vent Fugitives - Vent #9	429,201.90	3,424,376.52	270.0	305	99.8	0.0
RCRV_10	Remelt/Casting Roof Vent Fugitives - Vent #10	429,246.16	3,424,376.30	270.0	305	99.8	0.0
RCRV_11	Remelt/Casting Roof Vent Fugitives - Vent #11	429,270.94	3,424,376.19	270.0	305	99.8	0.0
RCRV_12	Remelt/Casting Roof Vent Fugitives - Vent #12	429,202.04	3,424,410.58	270.0	305	99.8	0.0
RCRV_13	Remelt/Casting Roof Vent Fugitives - Vent #13	429,246.33	3,424,410.35	270.0	305	99.8	0.0
RCRV_14	Remelt/Casting Roof Vent Fugitives - Vent #14	429,271.12	3,424,410.28	270.0	305	99.8	0.0
RMRV_01	Hot Mill Roof Vent Fugitives - Vent #1	429,417.82	3,424,503.41	265.0	305	83.5	0.0
RMRV_02	Hot Mill Roof Vent Fugitives - Vent #2	429,434.05	3,424,503.26	265.0	305	83.5	0.0
RMRV_03	Hot Mill Roof Vent Fugitives - Vent #3	429,418.04	3,424,541.49	265.0	305	52.9	0.0
RMRV_04	Hot Mill Roof Vent Fugitives - Vent #4	429,285.84	3,424,438.65	265.0	305	83.5	0.0
RMRV_05	Hot Mill Roof Vent Fugitives - Vent #5	429,359.00	3,424,438.46	265.0	305	83.5	0.0
RMRV_06	Hot Mill Roof Vent Fugitives - Vent #6	429,275.26	3,424,454.65	265.0	305	83.5	0.0
RMRV_07	Hot Mill Roof Vent Fugitives - Vent #7	429,286.09	3,424,475.85	265.0	305	83.5	0.0
RMRV_08	Hot Mill Roof Vent Fugitives - Vent #8	429,359.18	3,424,475.60	265.0	305	83.5	0.0
RMRV_09	Hot Mill Roof Vent Fugitives - Vent #9	429,310.89	3,424,497.23	265.0	305	83.5	0.0

RMRV_10	Hot Mill Roof Vent Fugitives - Vent #10	429,327.85	3,424,497.14	265.0	305	83.5	0.0
RMRV_11	Hot Mill Roof Vent Fugitives - Vent #11	429,343.84	3,424,497.11	265.0	305	83.5	0.0
RMRV_12	Hot Mill Roof Vent Fugitives - Vent #12	429,362.39	3,424,497.09	265.0	305	83.5	0.0
RMRV_13	Hot Mill Roof Vent Fugitives - Vent #13	429,289.42	3,424,542.29	265.0	305	52.9	0.0
RMRV_14	Hot Mill Roof Vent Fugitives - Vent #14	429,310.81	3,424,542.09	265.0	305	80.7	0.0
RMRV_15	Hot Mill Roof Vent Fugitives - Vent #15	429,328.06	3,424,542.03	265.0	305	80.7	0.0
RMRV_16	Hot Mill Roof Vent Fugitives - Vent #16	429,344.30	3,424,541.97	265.0	305	80.7	0.0
RMRV_17	Hot Mill Roof Vent Fugitives - Vent #17	429,364.61	3,424,542.05	265.0	305	52.9	0.0
RMRV_18	Hot Mill Roof Vent Fugitives - Vent #18	429,163.98	3,424,439.14	265.0	305	83.5	0.0
RMRV_19	Hot Mill Roof Vent Fugitives - Vent #19	429,237.19	3,424,438.81	265.0	305	83.5	0.0
RMRV_20	Hot Mill Roof Vent Fugitives - Vent #20	429,176.23	3,424,455.07	265.0	305	83.5	0.0
RMRV_21	Hot Mill Roof Vent Fugitives - Vent #21	429,225.05	3,424,454.85	265.0	305	83.5	0.0
RMRV_22	Hot Mill Roof Vent Fugitives - Vent #22	429,164.21	3,424,476.44	265.0	305	83.5	0.0
RMRV_23	Hot Mill Roof Vent Fugitives - Vent #23	429,237.31	3,424,476.13	265.0	305	83.5	0.0
RMRV_24	Hot Mill Roof Vent Fugitives - Vent #24	429,216.09	3,424,497.78	265.0	305	83.5	0.0
RMRV_25	Hot Mill Roof Vent Fugitives - Vent #25	429,152.25	3,424,539.74	265.0	305	52.9	0.0
RMRV_26	Hot Mill Roof Vent Fugitives - Vent #26	429,204.10	3,424,539.55	265.0	305	52.9	0.0
RMRV_27	Hot Mill Roof Vent Fugitives - Vent #27	429,033.25	3,424,501.83	265.0	305	83.5	0.0
RMRV_28	Hot Mill Roof Vent Fugitives - Vent #28	429,127.72	3,424,501.44	265.0	305	83.5	0.0
RMRV_29	Hot Mill Roof Vent Fugitives - Vent #29	429,039.48	3,424,540.15	265.0	305	52.9	0.0
RMRV_30	Hot Mill Roof Vent Fugitives - Vent #30	429,079.15	3,424,540.02	265.0	305	52.9	0.0
RMRV_31	Hot Mill Roof Vent Fugitives - Vent #31	429,115.67	3,424,539.83	265.0	305	52.9	0.0
RMRV_32	Hot Mill Roof Vent Fugitives - Vent #32	428,951.14	3,424,502.24	265.0	305	83.5	0.0
RMRV_33	Hot Mill Roof Vent Fugitives - Vent #33	428,945.36	3,424,540.54	265.0	305	52.9	0.0
RMRV_34	Hot Mill Roof Vent Fugitives - Vent #34	428,983.98	3,424,540.35	265.0	305	80.9	0.0
RMRV_35	Hot Mill Roof Vent Fugitives - Vent #35	428,998.80	3,424,540.27	265.0	305	80.9	0.0
RMRV_36	Hot Mill Roof Vent Fugitives - Vent #36	429,016.09	3,424,540.22	265.0	305	80.9	0.0

CMRV_01	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #1	428,835.85	3,424,506.10	265.0	305	83.5	0.0
CMRV_02	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #2	428,881.86	3,424,540.86	265.0	305	52.9	0.0
CMRV_03	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #3	428,713.93	3,424,506.64	265.0	305	83.5	0.0
CMRV_04	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #4	428,775.06	3,424,541.37	265.0	305	58.0	0.0
CMRV_05	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #5	428,584.87	3,424,504.15	265.0	305	83.5	0.0
CMRV_06	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #6	428,618.54	3,424,503.98	265.0	305	83.5	0.0
CMRV_07	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #7	428,645.83	3,424,503.87	265.0	305	83.5	0.0
CMRV_08	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #8	428,671.04	3,424,503.74	265.0	305	83.5	0.0
CMRV_09	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #9	428,586.56	3,424,550.52	265.0	305	53.4	0.0
CMRV_10	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #10	428,601.78	3,424,544.60	265.0	305	53.4	0.0
CMRV_11	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #11	428,667.95	3,424,556.49	265.0	305	53.4	0.0
FCRV_01	Finishing/Coating Roof Vent Fugitives - Vent #1	428,579.15	3,424,250.54	265.0	305	84.8	0.0
FCRV_02	Finishing/Coating Roof Vent Fugitives - Vent #2	428,594.37	3,424,250.43	265.0	305	84.8	0.0
FCRV_03	Finishing/Coating Roof Vent Fugitives - Vent #3	428,594.68	3,424,323.58	265.0	305	84.8	0.0
FCRV_04	Finishing/Coating Roof Vent Fugitives - Vent #4	428,579.54	3,424,336.06	265.0	305	84.8	0.0
FCRV_05	Finishing/Coating Roof Vent Fugitives - Vent #5	428,579.74	3,424,383.19	265.0	305	84.8	0.0
FCRV_06	Finishing/Coating Roof Vent Fugitives - Vent #6	428,595.05	3,424,383.11	265.0	305	84.8	0.0
FCRV_07	Finishing/Coating Roof Vent Fugitives - Vent #7	428,579.80	3,424,433.44	265.0	305	84.8	0.0
FCRV_08	Finishing/Coating Roof Vent Fugitives - Vent #8	428,595.14	3,424,433.34	265.0	305	84.8	0.0
CMUH1	Central Maintenance Area Heaters #1	428,852.10	3,424,331.04	265.0	36,450	50.1	0.0
CMUH2	Central Maintenance Area Heaters #2	428,852.10	3,424,331.04	265.0	35,968	29.2	0.0

[1] Coordinates taken from a to-scale site plan projected in the UTM NAD83 Zone 16 coordinate system.

[2] Elevation of the plant grade based on current site and plot plan drawings and associated Civil engineering plans.

[3] Released height set to building height based on expectation of fugitive discharges occurring predominantly at roof level.

A-3. Modeled Source Parameters - AERMOD Modeling

Table A-3.2b List of Area Source Parameters for AERMOD Modeling (Standard Units)[4]

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (m)	Area (m^2)	Release Height[3] (m)	Initial Vertical Dimension[3] (m)
RSRV_01	Recycling/Scrapping Roof Vent Fugitives - Vent #1	429,204.40	3,424,001.09	82.30	28.3	24.24	0.0
RSRV_02	Recycling/Scrapping Roof Vent Fugitives - Vent #2	429,204.62	3,424,066.65	82.30	28.3	24.24	0.0
DBRV_01	Dross Bldg and Prime Dryers Roof Vent Fugitives - Vent #1	429,090.02	3,424,094.79	82.30	28.3	15.31	0.0
RSRV_03	Recycling/Scrapping Roof Vent Fugitives - Vent #3	429,222.42	3,424,130.40	82.30	28.3	24.24	0.0
RSRV_04	Recycling/Scrapping Roof Vent Fugitives - Vent #4	429,222.61	3,424,168.96	82.30	28.3	24.24	0.0
RCRV_01	Remelt/Casting Roof Vent Fugitives - Vent #1	429,204.50	3,424,212.99	82.30	28.3	30.43	0.0
RCRV_02	Remelt/Casting Roof Vent Fugitives - Vent #2	429,217.37	3,424,222.04	82.30	28.3	30.43	0.0
RCRV_03	Remelt/Casting Roof Vent Fugitives - Vent #3	429,236.48	3,424,258.86	82.30	28.3	30.43	0.0
RCRV_04	Remelt/Casting Roof Vent Fugitives - Vent #4	429,236.67	3,424,286.28	82.30	28.3	30.43	0.0
RCRV_05	Remelt/Casting Roof Vent Fugitives - Vent #5	429,227.34	3,424,316.83	82.30	28.3	30.43	0.0
RCRV_06	Remelt/Casting Roof Vent Fugitives - Vent #6	429,236.80	3,424,316.77	82.30	28.3	30.43	0.0
RCRV_07	Remelt/Casting Roof Vent Fugitives - Vent #7	429,236.88	3,424,337.79	82.30	28.3	30.43	0.0
RCRV_08	Remelt/Casting Roof Vent Fugitives - Vent #8	429,246.00	3,424,337.74	82.30	28.3	30.43	0.0
RCRV_09	Remelt/Casting Roof Vent Fugitives - Vent #9	429,201.90	3,424,376.52	82.30	28.3	30.43	0.0
RCRV_10	Remelt/Casting Roof Vent Fugitives - Vent #10	429,246.16	3,424,376.30	82.30	28.3	30.43	0.0
RCRV_11	Remelt/Casting Roof Vent Fugitives - Vent #11	429,270.94	3,424,376.19	82.30	28.3	30.43	0.0
RCRV_12	Remelt/Casting Roof Vent Fugitives - Vent #12	429,202.04	3,424,410.58	82.30	28.3	30.43	0.0
RCRV_13	Remelt/Casting Roof Vent Fugitives - Vent #13	429,246.33	3,424,410.35	82.30	28.3	30.43	0.0
RCRV_14	Remelt/Casting Roof Vent Fugitives - Vent #14	429,271.12	3,424,410.28	82.30	28.3	30.43	0.0
RMRV_01	Hot Mill Roof Vent Fugitives - Vent #1	429,417.82	3,424,503.41	80.77	28.3	25.47	0.0
RMRV_02	Hot Mill Roof Vent Fugitives - Vent #2	429,434.05	3,424,503.26	80.77	28.3	25.47	0.0
RMRV_03	Hot Mill Roof Vent Fugitives - Vent #3	429,418.04	3,424,541.49	80.77	28.3	16.11	0.0
RMRV_04	Hot Mill Roof Vent Fugitives - Vent #4	429,285.84	3,424,438.65	80.77	28.3	25.47	0.0
RMRV_05	Hot Mill Roof Vent Fugitives - Vent #5	429,359.00	3,424,438.46	80.77	28.3	25.47	0.0
RMRV_06	Hot Mill Roof Vent Fugitives - Vent #6	429,275.26	3,424,454.65	80.77	28.3	25.47	0.0
RMRV_07	Hot Mill Roof Vent Fugitives - Vent #7	429,286.09	3,424,475.85	80.77	28.3	25.47	0.0
RMRV_08	Hot Mill Roof Vent Fugitives - Vent #8	429,359.18	3,424,475.60	80.77	28.3	25.47	0.0
RMRV_09	Hot Mill Roof Vent Fugitives - Vent #9	429,310.89	3,424,497.23	80.77	28.3	25.47	0.0

A-3. Modeled Source Parameters - AERMOD Modeling

Table A-3.2b List of Area Source Parameters for AERMOD Modeling (Standard Units)[4]

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (m)	Area (m^2)	Release Height[3] (m)	Initial Vertical Dimension[3] (m)
RMRV_10	Hot Mill Roof Vent Fugitives - Vent #10	429,327.85	3,424,497.14	80.77	28.3	25.47	0.0
RMRV_11	Hot Mill Roof Vent Fugitives - Vent #11	429,343.84	3,424,497.11	80.77	28.3	25.47	0.0
RMRV_12	Hot Mill Roof Vent Fugitives - Vent #12	429,362.39	3,424,497.09	80.77	28.3	25.47	0.0
RMRV_13	Hot Mill Roof Vent Fugitives - Vent #13	429,289.42	3,424,542.29	80.77	28.3	16.11	0.0
RMRV_14	Hot Mill Roof Vent Fugitives - Vent #14	429,310.81	3,424,542.09	80.77	28.3	24.60	0.0
RMRV_15	Hot Mill Roof Vent Fugitives - Vent #15	429,328.06	3,424,542.03	80.77	28.3	24.60	0.0
RMRV_16	Hot Mill Roof Vent Fugitives - Vent #16	429,344.30	3,424,541.97	80.77	28.3	24.60	0.0
RMRV_17	Hot Mill Roof Vent Fugitives - Vent #17	429,364.61	3,424,542.05	80.77	28.3	16.11	0.0
RMRV_18	Hot Mill Roof Vent Fugitives - Vent #18	429,163.98	3,424,439.14	80.77	28.3	25.47	0.0
RMRV_19	Hot Mill Roof Vent Fugitives - Vent #19	429,237.19	3,424,438.81	80.77	28.3	25.47	0.0
RMRV_20	Hot Mill Roof Vent Fugitives - Vent #20	429,176.23	3,424,455.07	80.77	28.3	25.47	0.0
RMRV_21	Hot Mill Roof Vent Fugitives - Vent #21	429,225.05	3,424,454.85	80.77	28.3	25.47	0.0
RMRV_22	Hot Mill Roof Vent Fugitives - Vent #22	429,164.21	3,424,476.44	80.77	28.3	25.47	0.0
RMRV_23	Hot Mill Roof Vent Fugitives - Vent #23	429,237.31	3,424,476.13	80.77	28.3	25.47	0.0
RMRV_24	Hot Mill Roof Vent Fugitives - Vent #24	429,216.09	3,424,497.78	80.77	28.3	25.47	0.0
RMRV_25	Hot Mill Roof Vent Fugitives - Vent #25	429,152.25	3,424,539.74	80.77	28.3	16.11	0.0
RMRV_26	Hot Mill Roof Vent Fugitives - Vent #26	429,204.10	3,424,539.55	80.77	28.3	16.11	0.0
RMRV_27	Hot Mill Roof Vent Fugitives - Vent #27	429,033.25	3,424,501.83	80.77	28.3	25.47	0.0
RMRV_28	Hot Mill Roof Vent Fugitives - Vent #28	429,127.72	3,424,501.44	80.77	28.3	25.47	0.0
RMRV_29	Hot Mill Roof Vent Fugitives - Vent #29	429,039.48	3,424,540.15	80.77	28.3	16.11	0.0
RMRV_30	Hot Mill Roof Vent Fugitives - Vent #30	429,079.15	3,424,540.02	80.77	28.3	16.11	0.0
RMRV_31	Hot Mill Roof Vent Fugitives - Vent #31	429,115.67	3,424,539.83	80.77	28.3	16.11	0.0
RMRV_32	Hot Mill Roof Vent Fugitives - Vent #32	428,951.14	3,424,502.24	80.77	28.3	25.47	0.0
RMRV_33	Hot Mill Roof Vent Fugitives - Vent #33	428,945.36	3,424,540.54	80.77	28.3	16.11	0.0
RMRV_34	Hot Mill Roof Vent Fugitives - Vent #34	428,983.98	3,424,540.35	80.77	28.3	24.64	0.0
RMRV_35	Hot Mill Roof Vent Fugitives - Vent #35	428,998.80	3,424,540.27	80.77	28.3	24.64	0.0
RMRV_36	Hot Mill Roof Vent Fugitives - Vent #36	429,016.09	3,424,540.22	80.77	28.3	24.64	0.0

A-3. Modeled Source Parameters - AERMOD Modeling

Table A-3.2b List of Area Source Parameters for AERMOD Modeling (Standard Units)[4]

Model ID	Emission Point Description	UTM East[1] (m)	UTM North[1] (m)	Elevation[2] (m)	Area (m^2)	Release Height[3] (m)	Initial Vertical Dimension[3] (m)
CMRV_01	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #1	428,835.85	3,424,506.10	80.77	28.3	25.47	0.0
CMRV_02	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #2	428,881.86	3,424,540.86	80.77	28.3	16.11	0.0
CMRV_03	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #3	428,713.93	3,424,506.64	80.77	28.3	25.47	0.0
CMRV_04	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #4	428,775.06	3,424,541.37	80.77	28.3	17.69	0.0
CMRV_05	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #5	428,584.87	3,424,504.15	80.77	28.3	25.47	0.0
CMRV_06	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #6	428,618.54	3,424,503.98	80.77	28.3	25.47	0.0
CMRV_07	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #7	428,645.83	3,424,503.87	80.77	28.3	25.47	0.0
CMRV_08	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #8	428,671.04	3,424,503.74	80.77	28.3	25.47	0.0
CMRV_09	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #9	428,586.56	3,424,550.52	80.77	28.3	16.28	0.0
CMRV_10	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #10	428,601.78	3,424,544.60	80.77	28.3	16.28	0.0
CMRV_11	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #11	428,667.95	3,424,556.49	80.77	28.3	16.28	0.0
FCRV_01	Finishing/Coating Roof Vent Fugitives - Vent #1	428,579.15	3,424,250.54	80.77	28.3	25.86	0.0
FCRV_02	Finishing/Coating Roof Vent Fugitives - Vent #2	428,594.37	3,424,250.43	80.77	28.3	25.86	0.0
FCRV_03	Finishing/Coating Roof Vent Fugitives - Vent #3	428,594.68	3,424,323.58	80.77	28.3	25.86	0.0
FCRV_04	Finishing/Coating Roof Vent Fugitives - Vent #4	428,579.54	3,424,336.06	80.77	28.3	25.86	0.0
FCRV_05	Finishing/Coating Roof Vent Fugitives - Vent #5	428,579.74	3,424,383.19	80.77	28.3	25.86	0.0
FCRV_06	Finishing/Coating Roof Vent Fugitives - Vent #6	428,595.05	3,424,383.11	80.77	28.3	25.86	0.0
FCRV_07	Finishing/Coating Roof Vent Fugitives - Vent #7	428,579.80	3,424,433.44	80.77	28.3	25.86	0.0
FCRV_08	Finishing/Coating Roof Vent Fugitives - Vent #8	428,595.14	3,424,433.34	80.77	28.3	25.86	0.0
CMUH1	Central Maintenance Area Heaters #1	428,852.10	3,424,331.04	80.77	3,386	15.28	0.0
CMUH2	Central Maintenance Area Heaters #2	428,852.10	3,424,331.04	80.77	3,342	8.90	0.0

[1] Coordinates taken from a to-scale site plan projected in the UTM NAD83 Zone 16 coordinate system.

[2] Elevation of the plant grade based on current site and plot plan drawings and associated Civil engineering plans.

[3] Released height set to building height based on expectation of fugitive discharges occurring predominantly at roof level.

[4] Note that the As-Built annotations have not been included in this table.

A-4. Summary of Modeled Emission Rates - AERMOD Modeling

Table A-4.1a Modeled Emission Rates for AERMOD Modeling - Point Sources (English Units) [1]

Model ID	Emission Point Description	NOX (lb/hr)		CO (lb/hr)		PM10 (lb/hr)		PM2.5 (lb/hr)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
SPL1	Cold Baghouse #1 Stack	--	--	--	--	2.885	2.885	0.849	0.849
SPL2	Cold Baghouse #2 Stack	--	--	--	--	2.711	2.711	0.797	0.797
SPL3	Cold Baghouse #3 Stack	--	--	--	--	1.056	1.056	0.311	0.311
SRT1	Cold Baghouse #4 Stack	--	--	--	--	0.962	0.962	0.283	0.283
DSWHBH	DCTR3, DCTR2, DCTR1, SW5, SW4, SW2, SW1, DRSH Decoater-Sidewell Hot Baghouse Combined Stack	60.285	60.285	55.947	55.947	32.554	32.554	30.198	30.198
MHHBH	SW3, NDC1, RT2, RT1, HF4, HF3, HF2, HF1, ILD4, ILD2, ILD1 Melter-Holder Hot Baghouse Combined Stack	58.313	58.313	46.024	46.024	23.568	22.794	20.986	20.698
SWDRY2	Sow Dryer #2 Stack	3.276	2.184	2.190	2.190	0.104	0.069	0.104	0.069
SWDRY1	Sow Dryer #1 Stack	3.276	2.184	2.190	2.190	0.104	0.069	0.104	0.069
SCLP1	Scalper #1 Filtration Unit Stack	--	--	--	--	0.654	0.253	0.654	0.253
PCBQ1	Scalper Chip Handling System Pneumatic Conveyor for Briquetter Cyclone Stack	--	--	--	--	0.095	0.037	0.095	0.037
PF1	Pusher Furnace #1 Stack	14.329	6.661	6.977	6.977	0.481	0.339	0.481	0.339
PF2	Pusher Furnace #2 Stack	14.329	6.661	6.977	6.977	0.481	0.339	0.481	0.339
PF3	Pusher Furnace #3 Stack	14.329	6.661	6.977	6.977	0.481	0.339	0.481	0.339
HRM	Hot Reversing Mill Stack	--	--	--	--	7.069	4.981	6.499	4.579
HFM	Hot Finishing Mill Stack	--	--	--	--	14.437	10.172	13.033	9.183
TCM1	Tandem Cold Mill #1 Stack	--	--	--	--	2.219	1.763	1.984	1.576
ALKCLN1	Alkaline Cleaning Line #1 (Can Coating	--	--	--	--	0.143	0.143	0.143	0.143
CL1	Coating Line #1 RTO Stack	6.614	6.614	13.228	13.228	2.640	2.640	2.217	2.217
CT1C1	Caster Cooling Tower #1	--	--	--	--	4.10E-03	4.10E-03	2.06E-05	2.06E-05
CT1C2	Caster Cooling Tower #1	--	--	--	--	4.10E-03	4.10E-03	2.06E-05	2.06E-05
CT1C3	Caster Cooling Tower #1	--	--	--	--	4.10E-03	4.10E-03	2.06E-05	2.06E-05
CT1C4	Caster Cooling Tower #1	--	--	--	--	4.10E-03	4.10E-03	2.06E-05	2.06E-05
CT1C5	Caster Cooling Tower #1	--	--	--	--	4.10E-03	4.10E-03	2.06E-05	2.06E-05
CT1C6	Caster Cooling Tower #1	--	--	--	--	4.10E-03	4.10E-03	2.06E-05	2.06E-05
CT2C1	Hot Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT2C2	Hot Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT2C3	Hot Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT2C4	Hot Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT2C5	Hot Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT2C6	Hot Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT3C1	Cold Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT3C2	Cold Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT3C3	Cold Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT3C4	Cold Mill Cooling Tower	--	--	--	--	6.98E-03	6.98E-03	3.51E-05	3.51E-05
CT4C1	Finishing Cooling Tower	--	--	--	--	1.14E-03	1.14E-03	5.73E-06	5.73E-06
CT4C2	Finishing Cooling Tower	--	--	--	--	1.14E-03	1.14E-03	5.73E-06	5.73E-06
CT5C1	Round Tops/Pushers Cooling Tower	--	--	--	--	1.63E-03	1.63E-03	8.18E-06	8.18E-06
CT5C2	Round Tops/Pushers Cooling Tower	--	--	--	--	1.63E-03	1.63E-03	8.18E-06	8.18E-06

Table A-4.1a Modeled Emission Rates for AERMOD Modeling - Point Sources (English Units) [1]

Model ID	Emission Point Description	NOX (lb/hr)		CO (lb/hr)		PM10 (lb/hr)		PM2.5 (lb/hr)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
LMS1	Hot Baghouses Lime Silos (5)- Silo #1 Vent	--	--	--	--	6.38E-04	6.38E-04	6.38E-04	6.38E-04
LMS2	Hot Baghouses Lime Silos (5)- Silo #2 Vent	--	--	--	--	6.38E-04	6.38E-04	6.38E-04	6.38E-04
LMS3	Hot Baghouses Lime Silos (5)- Silo #3 Vent	--	--	--	--	6.38E-04	6.38E-04	6.38E-04	6.38E-04
LMS4	Hot Baghouses Lime Silos (5)- Silo #4 Vent	--	--	--	--	6.38E-04	6.38E-04	6.38E-04	6.38E-04
LMS5	Hot Baghouses Lime Silos (5)- Silo #5 Vent	--	--	--	--	6.38E-04	6.38E-04	6.38E-04	6.38E-04
DSS1	Cold Baghouse Dry Sorbent Silos (2)	--	--	--	--	4.39E-06	4.39E-06	4.39E-06	4.39E-06
DSS2	Cold Baghouse Dry Sorbent Silos (2)	--	--	--	--	4.39E-06	4.39E-06	4.39E-06	4.39E-06
RRG1	Coil Finishing Roll Grinding Machine	--	--	--	--	0.154	0.154	0.154	0.154
ANOD	Anodizing Test Unit	--	--	--	--	1.22E-04	1.22E-04	1.22E-04	1.22E-04
ETSB	Edge Trimmer- Scrap Baller	--	--	--	--	0.269	0.269	0.269	0.269

[1] Modeled emission rates are based on maximum hourly or annual potential emissions. The rows in gray highlighting represent Melting & Casting area sources equipped with Hot Baghouses that are routed to the "Decoater-Sidewell Hot Baghouse" (DSWHBH) combined stack and the "Melting and Holding Furnace Hot Baghouse" (MHHBH) combined stack, where emission rates for individual emission units are provide to demonstrate the relative contribution to the combined stack, modeled emission rate.

A-4. Summary of Modeled Emission Rates - AERMOD Modeling

Table A-4.1b Modeled Emission Rates for AERMOD Modeling - Point Sources (Standard Units) [1,2]

Model ID	Emission Point Description	NOX (g/s)		CO (g/s)		PM10 (g/s)		PM2.5 (g/s)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
SPL1	Cold Baghouse #1 Stack	--	--	--	--	3.64E-01	3.64E-01	1.07E-01	1.07E-01
SPL2	Cold Baghouse #2 Stack	--	--	--	--	3.42E-01	3.42E-01	1.00E-01	1.00E-01
SPL3	Cold Baghouse #3 Stack	--	--	--	--	1.33E-01	1.33E-01	3.91E-02	3.91E-02
SRT1	Cold Baghouse #4 Stack	--	--	--	--	1.21E-01	1.21E-01	3.56E-02	3.56E-02
DSWHBH	DCTR3, DCTR2, DCTR1, SW5, SW4, SW2, SW1, DRSH Decoater-Sidewell Hot Baghouse Combined Stack	7.596	7.596	7.049	7.049	4.102	4.102	3.805	3.805
MHHBH	SW3, NDC1, RT2, RT1, HF4, HF3, HF2, HF1, ILD4, ILD2, ILD1 Melter-Holder Hot Baghouse Combined Stack	7.347	7.347	5.799	5.799	2.970	2.872	2.644	2.608
SWDRY2	Sow Dryer #2 Stack	0.413	0.275	0.276	0.276	1.31E-02	8.75E-03	1.31E-02	8.75E-03
SWDRY1	Sow Dryer #1 Stack	0.413	0.275	0.276	0.276	1.31E-02	8.75E-03	1.31E-02	8.75E-03
SCLP1	Scalper #1 Filtration Unit Stack	--	--	--	--	8.24E-02	3.19E-02	8.24E-02	3.19E-02
PCBQ1	Scalper Chip Handling System Pneumatic Conveyor for Briquetter Cyclone Stack	--	--	--	--	1.20E-02	4.65E-03	1.20E-02	4.65E-03
PF1	Pusher Furnace #1 Stack	1.805	0.839	0.879	0.879	6.06E-02	4.27E-02	6.06E-02	4.27E-02
PF2	Pusher Furnace #2 Stack	1.805	0.839	0.879	0.879	6.06E-02	4.27E-02	6.06E-02	4.27E-02
PF3	Pusher Furnace #3 Stack	1.805	0.839	0.879	0.879	6.06E-02	4.27E-02	6.06E-02	4.27E-02
HRM	Hot Reversing Mill Stack	--	--	--	--	8.91E-01	6.28E-01	8.19E-01	5.77E-01
HFM	Hot Finishing Mill Stack	--	--	--	--	1.82E+00	1.28E+00	1.64E+00	1.16E+00
TCM1	Tandem Cold Mill #1 Stack	--	--	--	--	2.80E-01	2.22E-01	2.50E-01	1.99E-01
ALKCLN1	Alkaline Cleaning Line #1 (Can Coating	--	--	--	--	1.81E-02	1.81E-02	1.81E-02	1.81E-02
CL1	Coating Line #1 RTO Stack	0.833	0.833	1.667	1.667	3.33E-01	3.33E-01	2.79E-01	2.79E-01
CT1C1	Caster Cooling Tower #1	--	--	--	--	5.17E-04	5.17E-04	2.60E-06	2.60E-06
CT1C2	Caster Cooling Tower #1	--	--	--	--	5.17E-04	5.17E-04	2.60E-06	2.60E-06
CT1C3	Caster Cooling Tower #1	--	--	--	--	5.17E-04	5.17E-04	2.60E-06	2.60E-06
CT1C4	Caster Cooling Tower #1	--	--	--	--	5.17E-04	5.17E-04	2.60E-06	2.60E-06
CT1C5	Caster Cooling Tower #1	--	--	--	--	5.17E-04	5.17E-04	2.60E-06	2.60E-06
CT1C6	Caster Cooling Tower #1	--	--	--	--	5.17E-04	5.17E-04	2.60E-06	2.60E-06
CT2C1	Hot Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT2C2	Hot Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT2C3	Hot Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT2C4	Hot Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT2C5	Hot Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT2C6	Hot Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT3C1	Cold Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT3C2	Cold Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT3C3	Cold Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT3C4	Cold Mill Cooling Tower	--	--	--	--	8.80E-04	8.80E-04	4.42E-06	4.42E-06
CT4C1	Finishing Cooling Tower	--	--	--	--	1.44E-04	1.44E-04	7.22E-07	7.22E-07
CT4C2	Finishing Cooling Tower	--	--	--	--	1.44E-04	1.44E-04	7.22E-07	7.22E-07
CT5C1	Round Tops/Pushers Cooling Tower	--	--	--	--	2.05E-04	2.05E-04	1.03E-06	1.03E-06
CT5C2	Round Tops/Pushers Cooling Tower	--	--	--	--	2.05E-04	2.05E-04	1.03E-06	1.03E-06

Table A-4.1b Modeled Emission Rates for AERMOD Modeling - Point Sources (Standard Units) [1,2]

Model ID	Emission Point Description	NOX (g/s)		CO (g/s)		PM10 (g/s)		PM2.5 (g/s)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
LMS1	Hot Baghouses Lime Silos (5)- Silo #1 Vent	--	--	--	--	8.04E-05	8.04E-05	8.04E-05	8.04E-05
LMS2	Hot Baghouses Lime Silos (5)- Silo #2 Vent	--	--	--	--	8.04E-05	8.04E-05	8.04E-05	8.04E-05
LMS3	Hot Baghouses Lime Silos (5)- Silo #3 Vent	--	--	--	--	8.04E-05	8.04E-05	8.04E-05	8.04E-05
LMS4	Hot Baghouses Lime Silos (5)- Silo #4 Vent	--	--	--	--	8.04E-05	8.04E-05	8.04E-05	8.04E-05
LMS5	Hot Baghouses Lime Silos (5)- Silo #5 Vent	--	--	--	--	8.04E-05	8.04E-05	8.04E-05	8.04E-05
DSS1	Cold Baghouse Dry Sorbent Silos (2)	--	--	--	--	5.53E-07	5.53E-07	5.53E-07	5.53E-07
DSS2	Cold Baghouse Dry Sorbent Silos (2)	--	--	--	--	5.53E-07	5.53E-07	5.53E-07	5.53E-07
RRG1	Coil Finishing Roll Grinding Machine	--	--	--	--	1.94E-02	1.94E-02	1.94E-02	1.94E-02
ANOD	Anodizing Test Unit	--	--	--	--	1.54E-05	1.54E-05	1.54E-05	1.54E-05
ETSB	Edge Trimmer- Scrap Baller	--	--	--	--	3.39E-02	3.39E-02	3.39E-02	3.39E-02

[1] Modeled emission rates are based on maximum hourly or annual potential emissions. The rows in gray highlighting represent Melting & Casting area sources equipped with Hot Baghouses that are routed to the "Decoater-Sidewell Hot Baghouse" (DSWHBH) combined stack and the "Melting and Holding Furnace Hot Baghouse" (MHHBH) combined stack, where emission rates for individual emission units are provide to demonstrate the relative contribution to the combined stack, modeled emission rate.

[2] Note that the As-Built annotations have not been included in this table.

A-4. Summary of Modeled Emission Rates - AERMOD Modeling

Table A-4.2.a Modeled Emission Rates for AERMOD Modeling - Area Sources (English Units) [1]

Model ID	Emission Point Description	NOX (lb/hr)		CO (lb/hr)		PM10 (lb/hr)		PM2.5 (lb/hr)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
RSRV_01	Recycling/Scrapping Roof Vent Fugitives - Vent #1	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
RSRV_02	Recycling/Scrapping Roof Vent Fugitives - Vent #2	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
DBRV_01	Dross Bldg and Prime Dryers Roof Vent Fugitives - Vent #1	0.699	0.246	1.449	1.449	0.024	0.009	0.024	0.009
RSRV_03	Recycling/Scrapping Roof Vent Fugitives - Vent #3	0.247	0.082	0.485	0.485	0.009	0.003	0.009	0.003
RSRV_04	Recycling/Scrapping Roof Vent Fugitives - Vent #4	0.247	0.082	0.485	0.485	0.009	0.003	0.009	0.003
RCRV_01	Remelt/Casting Roof Vent Fugitives - Vent #1	0.503	0.338	0.736	0.736	0.042	0.036	0.038	0.032
RCRV_02	Remelt/Casting Roof Vent Fugitives - Vent #2	0.503	0.338	0.736	0.736	0.042	0.036	0.038	0.032
RCRV_03	Remelt/Casting Roof Vent Fugitives - Vent #3	0.503	0.338	0.736	0.736	0.042	0.036	0.038	0.032
RCRV_04	Remelt/Casting Roof Vent Fugitives - Vent #4	0.503	0.338	0.736	0.736	0.042	0.036	0.038	0.032
RCRV_05	Remelt/Casting Roof Vent Fugitives - Vent #5	0.503	0.338	0.736	0.736	0.042	0.036	0.038	0.032
RCRV_06	Remelt/Casting Roof Vent Fugitives - Vent #6	0.503	0.338	0.736	0.736	0.042	0.036	0.038	0.032
RCRV_07	Remelt/Casting Roof Vent Fugitives - Vent #7	0.503	0.338	0.736	0.736	0.042	0.036	0.038	0.032
RCRV_08	Remelt/Casting Roof Vent Fugitives - Vent #8	0.503	0.338	0.736	0.736	0.042	0.036	0.038	0.032
RCRV_09	Remelt/Casting Roof Vent Fugitives - Vent #9	0.421	0.311	0.574	0.574	0.039	0.035	0.035	0.031
RCRV_10	Remelt/Casting Roof Vent Fugitives - Vent #10	0.421	0.311	0.574	0.574	0.039	0.035	0.035	0.031
RCRV_11	Remelt/Casting Roof Vent Fugitives - Vent #11	0.421	0.311	0.574	0.574	0.039	0.035	0.035	0.031
RCRV_12	Remelt/Casting Roof Vent Fugitives - Vent #12	0.421	0.311	0.574	0.574	0.039	0.035	0.035	0.031
RCRV_13	Remelt/Casting Roof Vent Fugitives - Vent #13	0.421	0.311	0.574	0.574	0.039	0.035	0.035	0.031
RCRV_14	Remelt/Casting Roof Vent Fugitives - Vent #14	0.421	0.311	0.574	0.574	0.039	0.035	0.035	0.031
RMRV_01	Hot Mill Roof Vent Fugitives - Vent #1	0.660	0.219	1.294	1.294	0.030	0.013	0.029	0.012
RMRV_02	Hot Mill Roof Vent Fugitives - Vent #2	0.660	0.219	1.294	1.294	0.030	0.013	0.029	0.012
RMRV_03	Hot Mill Roof Vent Fugitives - Vent #3	0.660	0.219	1.294	1.294	0.030	0.013	0.029	0.012
RMRV_04	Hot Mill Roof Vent Fugitives - Vent #4	-	-	-	-	0.007	0.005	0.006	0.004
RMRV_05	Hot Mill Roof Vent Fugitives - Vent #5	-	-	-	-	0.007	0.005	0.006	0.004
RMRV_06	Hot Mill Roof Vent Fugitives - Vent #6	-	-	-	-	0.007	0.005	0.006	0.004
RMRV_07	Hot Mill Roof Vent Fugitives - Vent #7	-	-	-	-	0.007	0.005	0.006	0.004
RMRV_08	Hot Mill Roof Vent Fugitives - Vent #8	-	-	-	-	0.007	0.005	0.006	0.004

RMRV_09	Hot Mill Roof Vent Fugitives - Vent #9	-	-	-	-	0.007	0.005	0.006	0.004
RMRV_10	Hot Mill Roof Vent Fugitives - Vent #10	-	-	-	-	0.007	0.005	0.006	0.004
RMRV_11	Hot Mill Roof Vent Fugitives - Vent #11	-	-	-	-	0.007	0.005	0.006	0.004
RMRV_12	Hot Mill Roof Vent Fugitives - Vent #12	-	-	-	-	0.007	0.005	0.006	0.004
RMRV_13	Hot Mill Roof Vent Fugitives - Vent #13	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_14	Hot Mill Roof Vent Fugitives - Vent #14	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_15	Hot Mill Roof Vent Fugitives - Vent #15	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_16	Hot Mill Roof Vent Fugitives - Vent #16	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_17	Hot Mill Roof Vent Fugitives - Vent #17	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_18	Hot Mill Roof Vent Fugitives - Vent #18	0.110	0.037	0.216	0.216	0.011	0.006	0.010	0.006
RMRV_19	Hot Mill Roof Vent Fugitives - Vent #19	0.110	0.037	0.216	0.216	0.011	0.006	0.010	0.006
RMRV_20	Hot Mill Roof Vent Fugitives - Vent #20	0.110	0.037	0.216	0.216	0.011	0.006	0.010	0.006
RMRV_21	Hot Mill Roof Vent Fugitives - Vent #21	0.110	0.037	0.216	0.216	0.011	0.006	0.010	0.006
RMRV_22	Hot Mill Roof Vent Fugitives - Vent #22	0.110	0.037	0.216	0.216	0.011	0.006	0.010	0.006
RMRV_23	Hot Mill Roof Vent Fugitives - Vent #23	0.110	0.037	0.216	0.216	0.011	0.006	0.010	0.006
RMRV_24	Hot Mill Roof Vent Fugitives - Vent #24	0.110	0.037	0.216	0.216	0.011	0.006	0.010	0.006
RMRV_25	Hot Mill Roof Vent Fugitives - Vent #25	0.110	0.037	0.216	0.216	0.011	0.006	0.010	0.006
RMRV_26	Hot Mill Roof Vent Fugitives - Vent #26	0.110	0.037	0.216	0.216	0.011	0.006	0.010	0.006
RMRV_27	Hot Mill Roof Vent Fugitives - Vent #27	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_28	Hot Mill Roof Vent Fugitives - Vent #28	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_29	Hot Mill Roof Vent Fugitives - Vent #29	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_30	Hot Mill Roof Vent Fugitives - Vent #30	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_31	Hot Mill Roof Vent Fugitives - Vent #31	0.099	0.033	0.194	0.194	0.010	0.006	0.009	0.005
RMRV_32	Hot Mill Roof Vent Fugitives - Vent #32	0.297	0.099	0.582	0.582	0.017	0.008	0.016	0.008
RMRV_33	Hot Mill Roof Vent Fugitives - Vent #33	0.297	0.099	0.582	0.582	0.017	0.008	0.016	0.008
RMRV_34	Hot Mill Roof Vent Fugitives - Vent #34	0.297	0.099	0.582	0.582	0.017	0.008	0.016	0.008

RMRV_35	Hot Mill Roof Vent Fugitives - Vent #35	0.297	0.099	0.582	0.582	0.017	0.008	0.016	0.008
RMRV_36	Hot Mill Roof Vent Fugitives - Vent #36	0.297	0.099	0.582	0.582	0.017	0.008	0.016	0.008
CMRV_01	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #1	0.470	0.162	0.958	0.958	0.021	0.009	0.017	0.006
CMRV_02	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #2	0.470	0.162	0.958	0.958	0.021	0.009	0.017	0.006
CMRV_03	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #3	0.569	0.191	1.128	1.128	0.024	0.010	0.021	0.007
CMRV_04	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #4	0.569	0.191	1.128	1.128	0.024	0.010	0.021	0.007
CMRV_05	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #5	0.124	0.041	0.243	0.243	0.009	0.005	0.005	0.002
CMRV_06	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #6	0.124	0.041	0.243	0.243	0.009	0.005	0.005	0.002
CMRV_07	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #7	0.124	0.041	0.243	0.243	0.009	0.005	0.005	0.002
CMRV_08	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #8	0.124	0.041	0.243	0.243	0.009	0.005	0.005	0.002
CMRV_09	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #9	0.264	0.090	0.533	0.533	0.013	0.007	0.010	0.004
CMRV_10	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #10	0.264	0.090	0.533	0.533	0.013	0.007	0.010	0.004
CMRV_11	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #11	0.264	0.090	0.533	0.533	0.013	0.007	0.010	0.004
FCRV_01	Finishing/Coating Roof Vent Fugitives - Vent #1	0.247	0.082	0.485	0.485	0.080	0.074	0.080	0.074
FCRV_02	Finishing/Coating Roof Vent Fugitives - Vent #2	0.247	0.082	0.485	0.485	0.080	0.074	0.080	0.074
FCRV_03	Finishing/Coating Roof Vent Fugitives - Vent #3	0.495	0.164	0.970	0.970	0.088	0.077	0.088	0.077
FCRV_04	Finishing/Coating Roof Vent Fugitives - Vent #4	0.495	0.164	0.970	0.970	0.088	0.077	0.088	0.077
FCRV_05	Finishing/Coating Roof Vent Fugitives - Vent #5	0.247	0.082	0.485	0.485	0.080	0.074	0.080	0.074
FCRV_06	Finishing/Coating Roof Vent Fugitives - Vent #6	0.247	0.082	0.485	0.485	0.080	0.074	0.080	0.074
FCRV_07	Finishing/Coating Roof Vent Fugitives - Vent #7	0.247	0.082	0.485	0.485	0.080	0.074	0.080	0.074
FCRV_08	Finishing/Coating Roof Vent Fugitives - Vent #8	0.247	0.082	0.485	0.485	0.080	0.074	0.080	0.074
CMUH1	Central Maintenance Area Heaters #1	0.193	0.027	0.162	0.162	0.007	0.001	0.007	0.001
CMUH2	Central Maintenance Area Heaters #2	0.190	0.027	0.160	0.160	0.007	0.001	0.007	0.001

1 Modeled emission rates based on maximum hourly or annual potential emissions. Total Building Heating System emissions are pro-rated by the ratio of the area of each source modeled to the total area of sources where building heating systems emissions are vented (i.e., MCF, MBBHS, and BHS1-BHS4). The Melting & Casting Building Fugitives (MCF) includes all of the sources generating modeled pollutants listed with the "Melting & Casting Building Fugitives" label of the EU Index in Appendix A of Volume 1 to this PSD application. The Mill Building Roof Vent Fugitives (MBRV1-MBRV12) includes contributions from the Hot Rolling Ingot Saw (4) (EU ID - HR-01) interior venting Filtration Units #2/#3 and uncaptured emissions from the fume exhaust systems associated with the Hot Reversing Mill (EU ID HR-10), Hot Finishing Mill (EU ID HR-11), and Tandem Cold Mill #1 (EU ID CR-01).

A-4. Summary of Modeled Emission Rates - AERMOD Modeling

Table A-4.2b. Modeled Emission Rates for AERMOD Modeling - Area Sources (Standard Units) [1,2]

Model ID	Emission Point Description	NOX (g/s)		CO (g/s)		PM10 (g/s)		PM2.5 (g/s)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
RSRV_01	Recycling/Scrapping Roof Vent Fugitives - Vent #1	6.23E-02	2.07E-02	1.22E-01	1.22E-01	2.16E-03	7.20E-04	2.16E-03	7.20E-04
RSRV_02	Recycling/Scrapping Roof Vent Fugitives - Vent #2	6.23E-02	2.07E-02	1.22E-01	1.22E-01	2.16E-03	7.20E-04	2.16E-03	7.20E-04
DBRV_01	Dross Bldg and Prime Dryers Roof Vent Fugitives - Vent #1	8.81E-02	3.10E-02	1.83E-01	1.83E-01	3.06E-03	1.07E-03	3.06E-03	1.07E-03
RSRV_03	Recycling/Scrapping Roof Vent Fugitives - Vent #3	3.12E-02	1.04E-02	6.11E-02	6.11E-02	1.08E-03	3.60E-04	1.08E-03	3.60E-04
RSRV_04	Recycling/Scrapping Roof Vent Fugitives - Vent #4	3.12E-02	1.04E-02	6.11E-02	6.11E-02	1.08E-03	3.60E-04	1.08E-03	3.60E-04
RCRV_01	Remelt/Casting Roof Vent Fugitives - Vent #1	6.34E-02	4.26E-02	9.28E-02	9.28E-02	5.31E-03	4.50E-03	4.83E-03	4.02E-03
RCRV_02	Remelt/Casting Roof Vent Fugitives - Vent #2	6.34E-02	4.26E-02	9.28E-02	9.28E-02	5.31E-03	4.50E-03	4.83E-03	4.02E-03
RCRV_03	Remelt/Casting Roof Vent Fugitives - Vent #3	6.34E-02	4.26E-02	9.28E-02	9.28E-02	5.31E-03	4.50E-03	4.83E-03	4.02E-03
RCRV_04	Remelt/Casting Roof Vent Fugitives - Vent #4	6.34E-02	4.26E-02	9.28E-02	9.28E-02	5.31E-03	4.50E-03	4.83E-03	4.02E-03
RCRV_05	Remelt/Casting Roof Vent Fugitives - Vent #5	6.34E-02	4.26E-02	9.28E-02	9.28E-02	5.31E-03	4.50E-03	4.83E-03	4.02E-03
RCRV_06	Remelt/Casting Roof Vent Fugitives - Vent #6	6.34E-02	4.26E-02	9.28E-02	9.28E-02	5.31E-03	4.50E-03	4.83E-03	4.02E-03
RCRV_07	Remelt/Casting Roof Vent Fugitives - Vent #7	6.34E-02	4.26E-02	9.28E-02	9.28E-02	5.31E-03	4.50E-03	4.83E-03	4.02E-03
RCRV_08	Remelt/Casting Roof Vent Fugitives - Vent #8	6.34E-02	4.26E-02	9.28E-02	9.28E-02	5.31E-03	4.50E-03	4.83E-03	4.02E-03
RCRV_09	Remelt/Casting Roof Vent Fugitives - Vent #9	5.30E-02	3.92E-02	7.24E-02	7.24E-02	4.95E-03	4.38E-03	4.47E-03	3.90E-03
RCRV_10	Remelt/Casting Roof Vent Fugitives - Vent #10	5.30E-02	3.92E-02	7.24E-02	7.24E-02	4.95E-03	4.38E-03	4.47E-03	3.90E-03
RCRV_11	Remelt/Casting Roof Vent Fugitives - Vent #11	5.30E-02	3.92E-02	7.24E-02	7.24E-02	4.95E-03	4.38E-03	4.47E-03	3.90E-03
RCRV_12	Remelt/Casting Roof Vent Fugitives - Vent #12	5.30E-02	3.92E-02	7.24E-02	7.24E-02	4.95E-03	4.38E-03	4.47E-03	3.90E-03
RCRV_13	Remelt/Casting Roof Vent Fugitives - Vent #13	5.30E-02	3.92E-02	7.24E-02	7.24E-02	4.95E-03	4.38E-03	4.47E-03	3.90E-03
RCRV_14	Remelt/Casting Roof Vent Fugitives - Vent #14	5.30E-02	3.92E-02	7.24E-02	7.24E-02	4.95E-03	4.38E-03	4.47E-03	3.90E-03
RMRV_01	Hot Mill Roof Vent Fugitives - Vent #1	8.31E-02	2.76E-02	1.63E-01	1.63E-01	3.77E-03	1.59E-03	3.64E-03	1.49E-03
RMRV_02	Hot Mill Roof Vent Fugitives - Vent #2	8.31E-02	2.76E-02	1.63E-01	1.63E-01	3.77E-03	1.59E-03	3.64E-03	1.49E-03
RMRV_03	Hot Mill Roof Vent Fugitives - Vent #3	8.31E-02	2.76E-02	1.63E-01	1.63E-01	3.77E-03	1.59E-03	3.64E-03	1.49E-03
RMRV_04	Hot Mill Roof Vent Fugitives - Vent #4	-	-	-	-	8.89E-04	6.26E-04	7.57E-04	5.33E-04
RMRV_05	Hot Mill Roof Vent Fugitives - Vent #5	-	-	-	-	8.89E-04	6.26E-04	7.57E-04	5.33E-04
RMRV_06	Hot Mill Roof Vent Fugitives - Vent #6	-	-	-	-	8.89E-04	6.26E-04	7.57E-04	5.33E-04
RMRV_07	Hot Mill Roof Vent Fugitives - Vent #7	-	-	-	-	8.89E-04	6.26E-04	7.57E-04	5.33E-04
RMRV_08	Hot Mill Roof Vent Fugitives - Vent #8	-	-	-	-	8.89E-04	6.26E-04	7.57E-04	5.33E-04

A-4. Summary of Modeled Emission Rates - AERMOD Modeling

Table A-4.2b. Modeled Emission Rates for AERMOD Modeling - Area Sources (Standard Units) [1,2]

Model ID	Emission Point Description	NOX (g/s)		CO (g/s)		PM10 (g/s)		PM2.5 (g/s)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
RMRV_09	Hot Mill Roof Vent Fugitives - Vent #9	-	-	-	-	8.89E-04	6.26E-04	7.57E-04	5.33E-04
RMRV_10	Hot Mill Roof Vent Fugitives - Vent #10	-	-	-	-	8.89E-04	6.26E-04	7.57E-04	5.33E-04
RMRV_11	Hot Mill Roof Vent Fugitives - Vent #11	-	-	-	-	8.89E-04	6.26E-04	7.57E-04	5.33E-04
RMRV_12	Hot Mill Roof Vent Fugitives - Vent #12	-	-	-	-	8.89E-04	6.26E-04	7.57E-04	5.33E-04
RMRV_13	Hot Mill Roof Vent Fugitives - Vent #13	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_14	Hot Mill Roof Vent Fugitives - Vent #14	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_15	Hot Mill Roof Vent Fugitives - Vent #15	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_16	Hot Mill Roof Vent Fugitives - Vent #16	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_17	Hot Mill Roof Vent Fugitives - Vent #17	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_18	Hot Mill Roof Vent Fugitives - Vent #18	1.39E-02	4.61E-03	2.72E-02	2.72E-02	1.37E-03	7.86E-04	1.24E-03	6.93E-04
RMRV_19	Hot Mill Roof Vent Fugitives - Vent #19	1.39E-02	4.61E-03	2.72E-02	2.72E-02	1.37E-03	7.86E-04	1.24E-03	6.93E-04
RMRV_20	Hot Mill Roof Vent Fugitives - Vent #20	1.39E-02	4.61E-03	2.72E-02	2.72E-02	1.37E-03	7.86E-04	1.24E-03	6.93E-04
RMRV_21	Hot Mill Roof Vent Fugitives - Vent #21	1.39E-02	4.61E-03	2.72E-02	2.72E-02	1.37E-03	7.86E-04	1.24E-03	6.93E-04
RMRV_22	Hot Mill Roof Vent Fugitives - Vent #22	1.39E-02	4.61E-03	2.72E-02	2.72E-02	1.37E-03	7.86E-04	1.24E-03	6.93E-04
RMRV_23	Hot Mill Roof Vent Fugitives - Vent #23	1.39E-02	4.61E-03	2.72E-02	2.72E-02	1.37E-03	7.86E-04	1.24E-03	6.93E-04
RMRV_24	Hot Mill Roof Vent Fugitives - Vent #24	1.39E-02	4.61E-03	2.72E-02	2.72E-02	1.37E-03	7.86E-04	1.24E-03	6.93E-04
RMRV_25	Hot Mill Roof Vent Fugitives - Vent #25	1.39E-02	4.61E-03	2.72E-02	2.72E-02	1.37E-03	7.86E-04	1.24E-03	6.93E-04
RMRV_26	Hot Mill Roof Vent Fugitives - Vent #26	1.39E-02	4.61E-03	2.72E-02	2.72E-02	1.37E-03	7.86E-04	1.24E-03	6.93E-04
RMRV_27	Hot Mill Roof Vent Fugitives - Vent #27	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_28	Hot Mill Roof Vent Fugitives - Vent #28	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_29	Hot Mill Roof Vent Fugitives - Vent #29	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_30	Hot Mill Roof Vent Fugitives - Vent #30	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_31	Hot Mill Roof Vent Fugitives - Vent #31	1.25E-02	4.15E-03	2.44E-02	2.44E-02	1.32E-03	7.70E-04	1.19E-03	6.77E-04
RMRV_32	Hot Mill Roof Vent Fugitives - Vent #32	3.74E-02	1.24E-02	7.33E-02	7.33E-02	2.19E-03	1.06E-03	2.06E-03	9.65E-04
RMRV_33	Hot Mill Roof Vent Fugitives - Vent #33	3.74E-02	1.24E-02	7.33E-02	7.33E-02	2.19E-03	1.06E-03	2.06E-03	9.65E-04
RMRV_34	Hot Mill Roof Vent Fugitives - Vent #34	3.74E-02	1.24E-02	7.33E-02	7.33E-02	2.19E-03	1.06E-03	2.06E-03	9.65E-04
RMRV_35	Hot Mill Roof Vent Fugitives - Vent #35	3.74E-02	1.24E-02	7.33E-02	7.33E-02	2.19E-03	1.06E-03	2.06E-03	9.65E-04

A-4. Summary of Modeled Emission Rates - AERMOD Modeling

Table A-4.2b. Modeled Emission Rates for AERMOD Modeling - Area Sources (Standard Units) [1,2]

Model ID	Emission Point Description	NOX (g/s)		CO (g/s)		PM10 (g/s)		PM2.5 (g/s)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
RMRV_36	Hot Mill Roof Vent Fugitives - Vent #36	3.74E-02	1.24E-02	7.33E-02	7.33E-02	2.19E-03	1.06E-03	2.06E-03	9.65E-04
CMRV_01	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #1	5.92E-02	2.05E-02	1.21E-01	1.21E-01	2.59E-03	1.14E-03	2.19E-03	8.16E-04
CMRV_02	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #2	5.92E-02	2.05E-02	1.21E-01	1.21E-01	2.59E-03	1.14E-03	2.19E-03	8.16E-04
CMRV_03	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #3	7.17E-02	2.41E-02	1.42E-01	1.42E-01	3.03E-03	1.26E-03	2.62E-03	9.42E-04
CMRV_04	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #4	7.17E-02	2.41E-02	1.42E-01	1.42E-01	3.03E-03	1.26E-03	2.62E-03	9.42E-04
CMRV_05	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #5	1.56E-02	5.18E-03	3.06E-02	3.06E-02	1.08E-03	6.07E-04	6.74E-04	2.86E-04
CMRV_06	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #6	1.56E-02	5.18E-03	3.06E-02	3.06E-02	1.08E-03	6.07E-04	6.74E-04	2.86E-04
CMRV_07	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #7	1.56E-02	5.18E-03	3.06E-02	3.06E-02	1.08E-03	6.07E-04	6.74E-04	2.86E-04
CMRV_08	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #8	1.56E-02	5.18E-03	3.06E-02	3.06E-02	1.08E-03	6.07E-04	6.74E-04	2.86E-04
CMRV_09	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #9	3.32E-02	1.14E-02	6.72E-02	6.72E-02	1.69E-03	8.22E-04	1.29E-03	5.01E-04
CMRV_10	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #10	3.32E-02	1.14E-02	6.72E-02	6.72E-02	1.69E-03	8.22E-04	1.29E-03	5.01E-04
CMRV_11	Roll Shop/Cold Mill Roof Vent Fugitives - Vent #11	3.32E-02	1.14E-02	6.72E-02	6.72E-02	1.69E-03	8.22E-04	1.29E-03	5.01E-04
FCRV_01	Finishing/Coating Roof Vent Fugitives - Vent #1	3.12E-02	1.04E-02	6.11E-02	6.11E-02	1.00E-02	9.31E-03	1.00E-02	9.31E-03
FCRV_02	Finishing/Coating Roof Vent Fugitives - Vent #2	3.12E-02	1.04E-02	6.11E-02	6.11E-02	1.00E-02	9.31E-03	1.00E-02	9.31E-03
FCRV_03	Finishing/Coating Roof Vent Fugitives - Vent #3	6.23E-02	2.07E-02	1.22E-01	1.22E-01	1.11E-02	9.67E-03	1.11E-02	9.67E-03
FCRV_04	Finishing/Coating Roof Vent Fugitives - Vent #4	6.23E-02	2.07E-02	1.22E-01	1.22E-01	1.11E-02	9.67E-03	1.11E-02	9.67E-03
FCRV_05	Finishing/Coating Roof Vent Fugitives - Vent #5	3.12E-02	1.04E-02	6.11E-02	6.11E-02	1.00E-02	9.31E-03	1.00E-02	9.31E-03
FCRV_06	Finishing/Coating Roof Vent Fugitives - Vent #6	3.12E-02	1.04E-02	6.11E-02	6.11E-02	1.00E-02	9.31E-03	1.00E-02	9.31E-03
FCRV_07	Finishing/Coating Roof Vent Fugitives - Vent #7	3.12E-02	1.04E-02	6.11E-02	6.11E-02	1.00E-02	9.31E-03	1.00E-02	9.31E-03
FCRV_08	Finishing/Coating Roof Vent Fugitives - Vent #8	3.12E-02	1.04E-02	6.11E-02	6.11E-02	1.00E-02	9.31E-03	1.00E-02	9.31E-03
CMUH1	Central Maintenance Area Heaters #1	2.43E-02	3.46E-03	2.04E-02	2.04E-02	8.44E-04	1.20E-04	8.44E-04	1.20E-04
CMUH2	Central Maintenance Area Heaters #2	2.40E-02	3.42E-03	2.02E-02	2.02E-02	8.33E-04	1.19E-04	8.33E-04	1.19E-04

1 Modeled emission rates based on maximum hourly or annual potential emissions. Total Building Heating System emissions are pro-rated by the ratio of the area of each source modeled to the total area of sources where building heating systems emissions are vented (i.e., MCF, MBBHS, and BHS1-BHS4). The Melting & Casting Building Fugitives (MCF) includes all of the sources generating modeled pollutants listed with the "Melting & Casting Building Fugitives" label of the EU Index in Appendix A of Volume 1 to this PSD application. The Mill Building Roof Vent Fugitives (MBRV1-MBRV12) includes contributions from the Hot Rolling Ingot Saw (4) (EU ID - HR-01) interior venting Filtration Units #2/#3 and uncaptured emissions from the fume exhaust systems associated with the Hot Reversing Mill (EU ID HR-10), Hot Finishing Mill (EU ID HR-11), and Tandem Cold Mill #1 (EU ID CR-01).

2 Note that the As-Built annotations have not been included in this table.

A-4. Summary of Modeled Emission Rates - AERMOD Modeling

Table A-4.3. Roof Vent Source Allocations [1]

Model ID	Process Location	Make-Up Air Units Associated with Modeled Roof Vent	Building Fugitive Emission Sources Associated with Modeled Roof Vent
RSRV_01	Recycling/Scrapping	MAU 001	--
RSRV_02	Recycling/Scrapping	MAU 003	--
DBRV_01	Dross Bldg and Prime Dryers	MAU 025, MAU 026, MAU 027	--
RSRV_03	Recycling/Scrapping	MAU 005	--
RSRV_04	Recycling/Scrapping	MAU 005	--
RCRV_01	Remelt/Casting	MAU 048	DP1, DP3, MCF
RCRV_02	Remelt/Casting	MAU 048	DP1, DP3, MCF
RCRV_03	Remelt/Casting	MAU 050	DP1, DP3, MCF
RCRV_04	Remelt/Casting	MAU 050	DP1, DP3, MCF
RCRV_05	Remelt/Casting	MAU 043, MAU 046	DP1, DP3, MCF
RCRV_06	Remelt/Casting	MAU 043, MAU 046	DP1, DP3, MCF
RCRV_07	Remelt/Casting	MAU 043, MAU 046	DP1, DP3, MCF
RCRV_08	Remelt/Casting	MAU 043, MAU 046	DP1, DP3, MCF
RCRV_09	Remelt/Casting	MAU 041, MAU 044	DP1, DP3, MCF
RCRV_10	Remelt/Casting	MAU 041, MAU 044	DP1, DP3, MCF
RCRV_11	Remelt/Casting	MAU 041, MAU 044	DP1, DP3, MCF
RCRV_12	Remelt/Casting	MAU 041, MAU 044	DP1, DP3, MCF
RCRV_13	Remelt/Casting	MAU 041, MAU 044	DP1, DP3, MCF
RCRV_14	Remelt/Casting	MAU 041, MAU 044	DP1, DP3, MCF
RMRV_01	Hot Mill	MAU 060A, MAU 060B, MAU 062A, MAU 063A	HRMRV, HFMRV
RMRV_02	Hot Mill	MAU 060A, MAU 060B, MAU 062A, MAU 063A	HRMRV, HFMRV
RMRV_03	Hot Mill	MAU 060A, MAU 060B, MAU 062A, MAU 063A	HRMRV, HFMRV
RMRV_04	Hot Mill	--	HRMRV, HFMRV
RMRV_05	Hot Mill	--	HRMRV, HFMRV
RMRV_06	Hot Mill	--	HRMRV, HFMRV
RMRV_07	Hot Mill	--	HRMRV, HFMRV
RMRV_08	Hot Mill	--	HRMRV, HFMRV
RMRV_09	Hot Mill	--	HRMRV, HFMRV
RMRV_10	Hot Mill	--	HRMRV, HFMRV
RMRV_11	Hot Mill	--	HRMRV, HFMRV
RMRV_12	Hot Mill	--	HRMRV, HFMRV
RMRV_13	Hot Mill	MAU 063B	HRMRV, HFMRV
RMRV_14	Hot Mill	MAU 063B	HRMRV, HFMRV
RMRV_15	Hot Mill	MAU 063B	HRMRV, HFMRV
RMRV_16	Hot Mill	MAU 063B	HRMRV, HFMRV
RMRV_17	Hot Mill	MAU 063B	HRMRV, HFMRV
RMRV_18	Hot Mill	MAU 069, MAU 071	HRMRV, HFMRV
RMRV_19	Hot Mill	MAU 069, MAU 071	HRMRV, HFMRV
RMRV_20	Hot Mill	MAU 069, MAU 071	HRMRV, HFMRV
RMRV_21	Hot Mill	MAU 069, MAU 071	HRMRV, HFMRV
RMRV_22	Hot Mill	MAU 069, MAU 071	HRMRV, HFMRV
RMRV_23	Hot Mill	MAU 069, MAU 071	HRMRV, HFMRV
RMRV_24	Hot Mill	MAU 069, MAU 071	HRMRV, HFMRV
RMRV_25	Hot Mill	MAU 069, MAU 071	HRMRV, HFMRV
RMRV_26	Hot Mill	MAU 069, MAU 071	HRMRV, HFMRV

Table A-4.3. Roof Vent Source Allocations [1]

Model ID	Process Location	Make-Up Air Units Associated with Modeled Roof Vent	Building Fugitive Emission Sources Associated with Modeled Roof Vent
RMRV_27	Hot Mill	MAU 064A	HRMRV, HFMRV
RMRV_28	Hot Mill	MAU 064A	HRMRV, HFMRV
RMRV_29	Hot Mill	MAU 064A	HRMRV, HFMRV
RMRV_30	Hot Mill	MAU 064A	HRMRV, HFMRV
RMRV_31	Hot Mill	MAU 064A	HRMRV, HFMRV
RMRV_32	Hot Mill	MAU 064B, MAU 065A, MAU 065B	HRMRV, HFMRV
RMRV_33	Hot Mill	MAU 064B, MAU 065A, MAU 065B	HRMRV, HFMRV
RMRV_34	Hot Mill	MAU 064B, MAU 065A, MAU 065B	HRMRV, HFMRV
RMRV_35	Hot Mill	MAU 064B, MAU 065A, MAU 065B	HRMRV, HFMRV
RMRV_36	Hot Mill	MAU 064B, MAU 065A, MAU 065B	HRMRV, HFMRV
CMRV_01	Roll Shop/Cold Mill	MAU 121, MAU 120A, MAU 066	TCM1RV, TCMF
CMRV_02	Roll Shop/Cold Mill	MAU 121, MAU 120A, MAU 066	TCM1RV, TCMF
CMRV_03	Roll Shop/Cold Mill	MAU 120B, MAU 068, MAU 067	TCM1RV, TCMF
CMRV_04	Roll Shop/Cold Mill	MAU 120B, MAU 068, MAU 067	TCM1RV, TCMF
CMRV_05	Roll Shop/Cold Mill	MAU 070	TCM1RV, TCMF
CMRV_06	Roll Shop/Cold Mill	MAU 070	TCM1RV, TCMF
CMRV_07	Roll Shop/Cold Mill	MAU 070	TCM1RV, TCMF
CMRV_08	Roll Shop/Cold Mill	MAU 070	TCM1RV, TCMF
CMRV_09	Roll Shop/Cold Mill	MAU 081, MAU 082	TCM1RV, TCMF
CMRV_10	Roll Shop/Cold Mill	MAU 081, MAU 082	TCM1RV, TCMF
CMRV_11	Roll Shop/Cold Mill	MAU 081, MAU 082	TCM1RV, TCMF
FCRV_01	Finishing/Coating	MAU 115	ETES
FCRV_02	Finishing/Coating	MAU 115	ETES
FCRV_03	Finishing/Coating	MAU 112, MAU 113	ETES
FCRV_04	Finishing/Coating	MAU 112, MAU 113	ETES
FCRV_05	Finishing/Coating	MAU 111, MAU 114	ETES
FCRV_06	Finishing/Coating	MAU 111, MAU 114	ETES
FCRV_07	Finishing/Coating	MAU 111, MAU 114	ETES
FCRV_08	Finishing/Coating	MAU 111, MAU 114	ETES
CMUH1	Central Maintenance Area Heaters	--	CMUH
CMUH2	Central Maintenance Area Heaters	--	CMUH

1 The Make-Up Air Unit (MAU) and building fugitive source lists represent all emission sources associated with each modeled roof-vent identifier. Each unit appearing in the lookup row corresponds to a discrete source of pollutant emissions that contribute to the total emissions from that specific Model ID roof vent. In cases where an individual emission source is exhausted through multiple vents (e.g., exhaust from MAU 005 is distributed across two roof vents; RSRV_03 & RSRV_04), its pollutant load is proportionally apportioned across all corresponding Model ID roof vents where it is listed as a source. The resulting area source emission rates shown in Table A-4.2a. and Table A-4.2b. provide a consolidated representation of all emissions contributed to each modeled release point.

A-4. Summary of Modeled Emission Rates - AERMOD Modeling

Table A-4.4. Roof Vent Component Source Emission Rates [1]

Associated MAU / Building Fugitives	Emission Source Description	NOX (lb/hr)		CO (lb/hr)		PM10 (lb/hr)		PM2.5 (lb/hr)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
MAU 001	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 003	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 005	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 025	Building Heating Systems (7.5 MMBtu/hr Each)	0.297	0.107	0.630	0.630	0.010	0.004	0.010	0.004
MAU 026	Building Heating Systems (7.5 MMBtu/hr Each)	0.297	0.107	0.630	0.630	0.010	0.004	0.010	0.004
MAU 027	Building Heating Systems (2.25 MMBtu/hr Each)	0.106	0.032	0.189	0.189	0.004	0.001	0.004	0.001
MAU 041	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 043	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 044	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 046	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 048	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 050	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 060A	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 060B	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 062A	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 063A	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 063B	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 064A	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 064B	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 065A	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 065B	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 066	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 067	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 068	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 069	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 070	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 071	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006

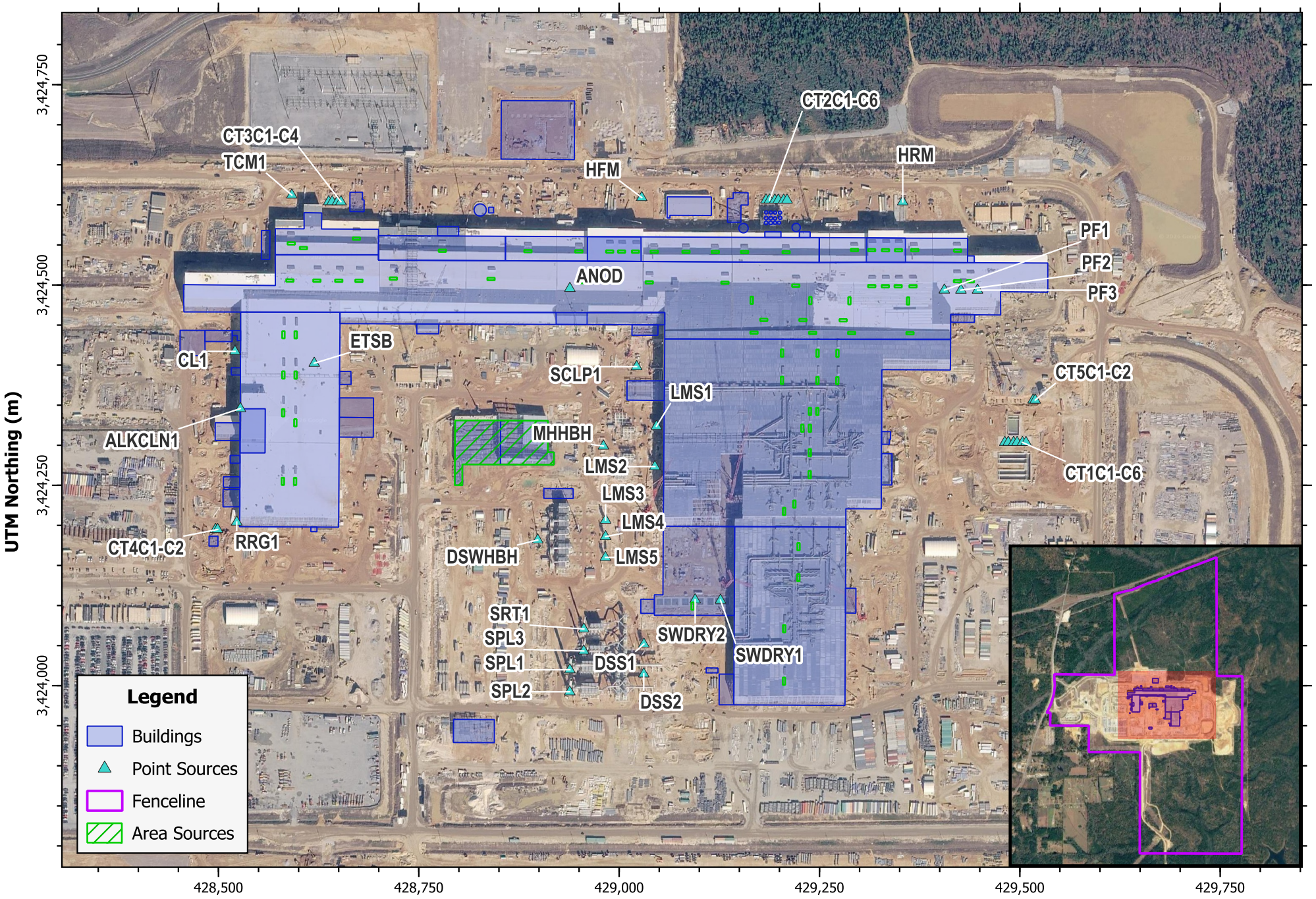
A-4. Summary of Modeled Emission Rates - AERMOD Modeling

Table A-4.4. Roof Vent Component Source Emission Rates [1]

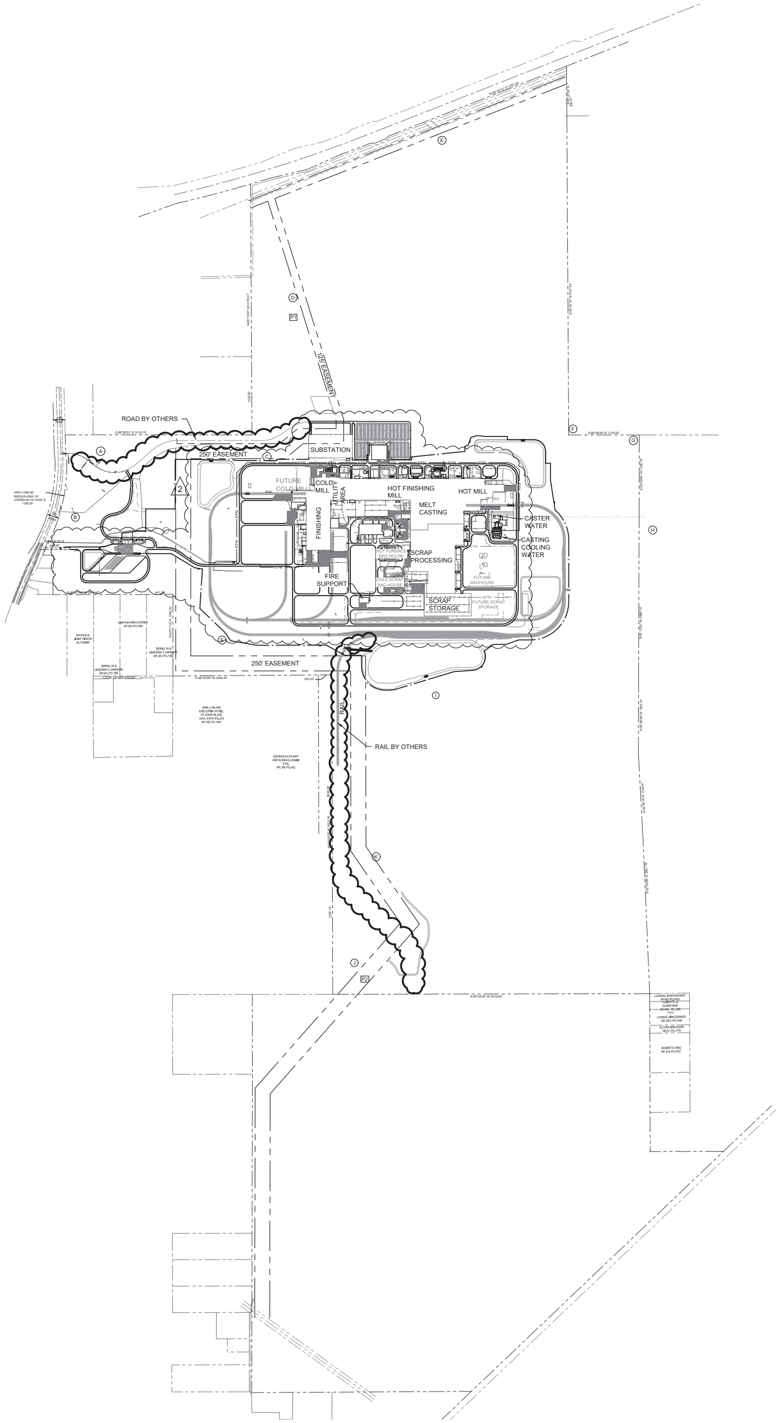
Associated MAU / Building Fugitives	Emission Source Description	NOX (lb/hr)		CO (lb/hr)		PM10 (lb/hr)		PM2.5 (lb/hr)	
		[1-hr]	[Ann.]	[1-hr]	[8-hr]	[24-hr]	[Ann.]	[24-hr]	[Ann.]
MAU 081	Building Heating Systems (7.5 MMBtu/hr Each)	0.297	0.107	0.630	0.630	0.010	0.004	0.010	0.004
MAU 082	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 111	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 112	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 113	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 114	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 115	Building Heating Systems (11.55 MMBtu/hr Each)	0.495	0.164	0.970	0.970	0.017	0.006	0.017	0.006
MAU 120A	Building Heating Systems (3.75 MMBtu/hr Each)	0.148	0.053	0.315	0.315	0.005	0.002	0.005	0.002
MAU 120B	Building Heating Systems (3.75 MMBtu/hr Each)	0.148	0.053	0.315	0.315	0.005	0.002	0.005	0.002
MAU 121	Building Heating Systems (7.5 MMBtu/hr Each)	0.297	0.107	0.630	0.630	0.010	0.004	0.010	0.004
CMUH	Central Maintenance Area Heaters	0.384	0.055	0.322	0.322	0.013	0.002	0.013	0.002
DP1	Dross Press #2 (Flex Line)	-	-	-	-	0.157	0.157	0.130	0.130
DP3	Dross Press #1 (CBS Line)	-	-	-	-	0.157	0.157	0.130	0.130
MCF	CFF DBF System for DC1-DC4;	3.584	3.584	3.515	3.515	0.156	0.146	0.156	0.146
HRMRV	Hot Reversing Mill	-	-	-	-	0.125	0.088	0.104	0.073
HFMRV	Hot Finishing Mill	-	-	-	-	0.129	0.091	0.113	0.079
TCM1RV	Tandem Cold Mill #1	-	-	-	-	0.047	0.037	0.012	0.009
TCMF	Filtering Aid Material Handling	-	-	-	-	0.000	0.000	0.000	0.000
ETES	Edge Trimmer- Electrostatic Oiler	-	-	-	-	0.568	0.568	0.568	0.568

1. This table presents the pollutant-specific emission rates for each emission source that is apportioned to the vent-level emission points. Each row corresponds to an individual source of air emissions (e.g., MAU's or building fugitives), and the listed emission rates are based on maximum short-term or annual potential emissions. By maintaining a consistent source-level representation of emissions, this table provides a reference of aggregated emissions on a per-pollutant basis as represented in Table A-4.2a. and Table A-4.2b.

Figure A-1. Modeled Sources Area Map



All coordinates shown in UTM Coordinates,
UTM Zone 16, NAD 83 Datum



N

0 800' 1600' 2400'
SCALE: 1"=800'-0"

CWP
M-2401-0110-39-F-CG
M-2402-0210-39-F-CG
M-2403-0310-39-F-CG

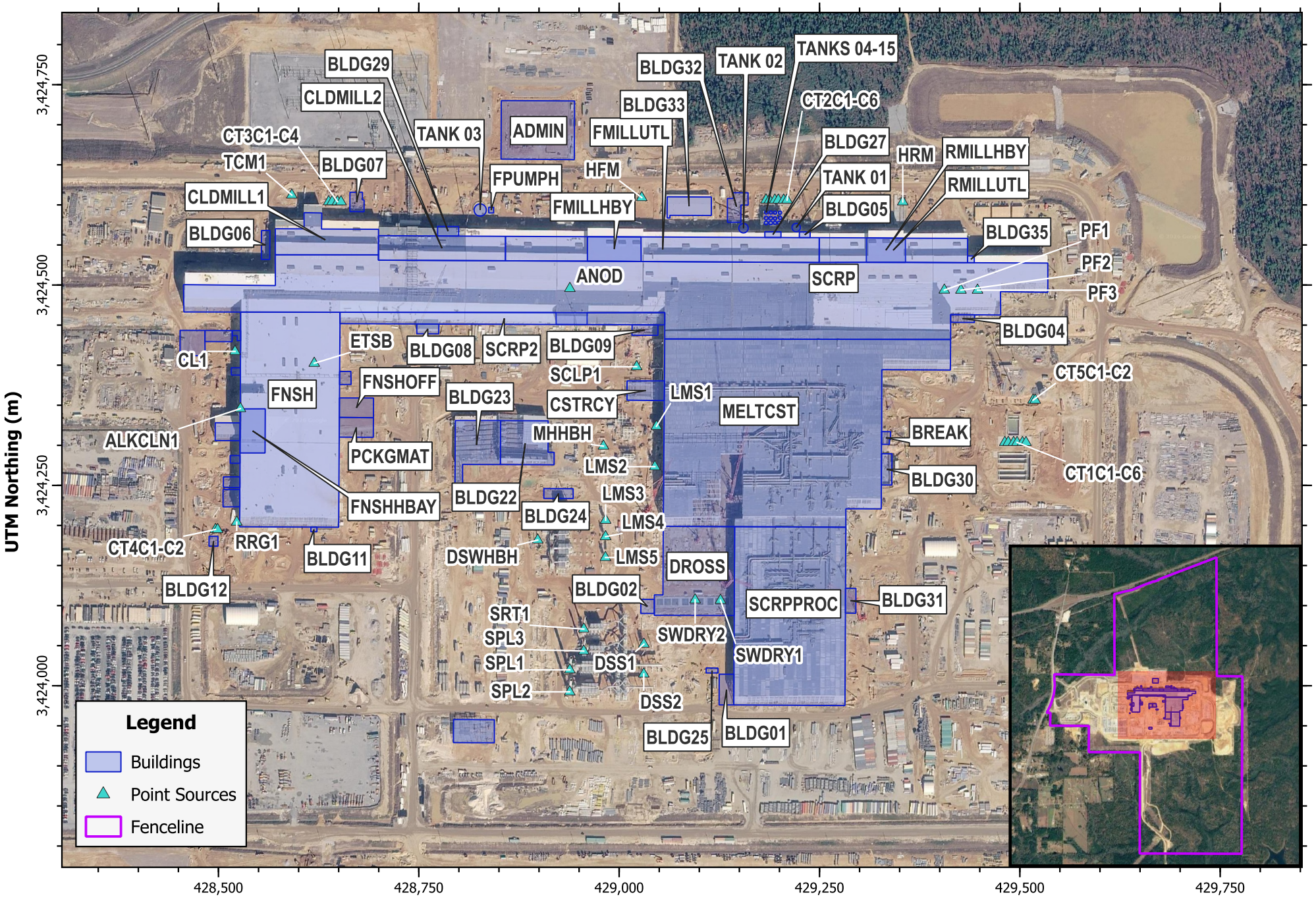
ALABAMA LICENSED 08/29/2025 No. 50983 PROFESSIONAL ENGINEER W RICHARD HALL JR

FLUOR ENTERPRISES, INC.
FLUOR PROJECT NO. A9GO

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DRAWN BY: S.DENNIS	08/19/2022	Novelis Corporation BAY MINETTE PLANT, AL PLANT NO 1225	Novelis
APPROVED BY: C.TAYLOR	08/19/2022	PROJECT GOLDENEYE	
TOLERANCES		DESCRIPTION CIVIL OVERALL SITE PLAN	
ANGLE: ± 0º, 30'	FRACTIONS: ± 1/32		
DECIMAL: .XX ±.01 .XXX ±.005 .XXXX ±.0002	METRIC: .X ±.2 .XX ±.13 .XXX ±.005	DWG NO 1290-2401-CV-PLN-0102	REV 2
MATERIAL: --			
FINISH: --	RMS - U.O.S.	SIZE E / SCALE 1"=800'	SHEET 1 OF 1

Figure A-3. Building Layouts



All coordinates shown in UTM Coordinates,
UTM Zone 16, NAD 83 Datum

APPENDIX B. MODELING FILES

The modeling file zipped directory was submitted concurrently with this modeling report to Mr. Scott Southwick (ADEM) via email. The zipped directory contains all input and output data files used to generate the results from the air quality analyses presented in this report. The following provides a description of the contents of each folder included in the zipper directory.

AERMAP

- Class II Receptors – Contains the AERMAP input (.inp), output (.out), and receptor (.rec) files for the SIL analysis modeling grids described in **Section 2.8** and developed for the SIL, NAAQS, and PSD Increment analyses described in **Section 3**.

MET

- Meteorological data provided by ADEM for use in the modeling assessment.

BPIP

- Contains the input, output, and summary files from the building downwash analysis. This analysis includes all modeled sources and buildings at the facility. This also includes BPIP files provided by ADEM, for use with one inventory source as part of the NO_2 refined modeling analyses.

AERMOD

- CO
  - SIL
    - 1HR – includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the 1-hour and 8-hour CO SIL analysis.
- NO2
  - SIL
    - 1HR – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the 1-hour NO_2 SIL analysis.
    - ANN – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the annual NO_2 SIL analysis.
  - NAAQS
    - 1HR – includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the 1-hour NO_2 NAAQS Analysis.
    - ANN – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the annual NO_2 NAAQS Analysis.
  - PSDINC
    - ANN – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the annual NO_2 PSD Increment Analysis.
- PM25
  - SIL
    - 24HR – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the 24-hour $PM_{2.5}$ SIL analysis.
    - ANN – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the annual $PM_{2.5}$ SIL analysis.
  - NAAQS

- 24HR – includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the 24-hour $PM_{2.5}$ NAAQS Analysis.
- ANN – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the annual $PM_{2.5}$ NAAQS Analysis.

- PSDINC
  - 24HR – includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the 24-hour $PM_{2.5}$ PSD Increment Analysis.
  - ANN – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the annual $PM_{2.5}$ PSD Increment Analysis.

► PM10

- SIL
  - 24HR – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the 24-hour PM_{10} SIL analysis.
  - ANN – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the annual PM_{10} SIL analysis.
- NAAQS
  - 24HR – includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the 24-hour PM_{10} NAAQS Analysis.
- PSDINC
  - 24HR – includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the 24-hour PM_{10} PSD Increment Analysis.
  - ANN – Includes a .zip file containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the annual PM_{10} PSD Increment Analysis.

APPENDIX C. NAAQS AND PSD INCREMENT REGIONAL SOURCE INVENTORY DATA

C-1. AERMOD Model Inputs: $PM_{2.5}$ NAAQS/Increment Inventory Sources

PM2.5			Stack			UTM Coordinates (km)		Increment	Allowable	Actual	Base Elev.	Stack Ht.	GEP	Diameter	Exit Temp	Exit Velocity
Facility No.	Facility Name	Unit Description	No.	Type**	Model ID	East	North	Type*	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	ºK	(m/s)
108-0003	BASF	Area 15 Hazardous Waste Incinerator	X001	V	AL1	404.45	3461.07	E		8.10	14.81	22.86		1.37	351	12.46
108-0008	Olin Chemical	Z008 249 MMBtu/hr Coal Fi	X008	V	AL2	404.00	3458.50	E		3.20	15.24	45.72		1.55	429	21.40
108-0012	PowerSouth Energy-McIntosh	Simple Cycle CT - 1 (Unit 2)	X005-1	V	AL3	401.92	3458.29	B	8.60		13.72	27.43		6.25	818	28.35
108-0012	PowerSouth Energy-McIntosh	Simple Cycle CT - 2 (Unit 3)	X005-2	V	AL4	401.92	3458.27	B	8.60		13.72	27.43		6.25	818	28.35
108-0012	PowerSouth Energy-McIntosh	Simple Cycle CT - 3 (Unit 4)	X007-1	V	AL5	401.87	3458.23	B	3.10		13.72	27.43		6.40	879	41.22
108-0012	PowerSouth Energy-McIntosh	Simple Cycle CT - 4 (Unit 5)	X007-2	V	AL6	401.87	3458.19	B	3.10		13.72	27.43		6.40	879	41.22
108-0018	AL Power-Washington Co. Cogen	Combustion Turbine with Duct Burner	X001	V	AL7	404.54	3459.32	B	7.90		13.11	30.78		4.65	454	26.77
108-0018	AL Power-Washington Co. Cogen	184 MMBTU/hr Boiler (201R)	X004	V	AL8	404.53	3459.29	B	3.00		13.11	18.29		1.83	436	9.16
108-0018	AL Power-Washington Co. Cogen	184 MMBTU/hr Boiler (301R)	X006	V	AL9	404.53	3459.29	B	3.00		13.11	18.29		1.83	422	15.26
501-OVER	Overseas Hardwood	Reman and Planer Operations	N002	V	AL10	418.07	3428.94	B	3.68		76.20	6.10		0.61	295	5.66
501-S001	Crosby Lumber	6 MMBTU/hr Natural Gas-Fired Boiler	N001	V	AL11	428.02	3418.34	E		3.79	79.25	12.19		0.58	450	3.76
501-S002	Baldwin Pole & Piling	27.8 MMbtu / Hr Boiler	X001	V	AL12	428.40	3417.50	E		3.09	79.25	24.38		1.22	477	4.01
501-S007	Brown Wood	8 MMBTU/hr Slope Grate Burner	Z002	V	AL13	427.20	3416.80	E		3.34	79.25	13.72		0.61	1033	10.67
502-S003	Swift Lumber-Atmore	23.25 MMBtu/hr Wood Waste Boiler No. 4 w/ Multiclone	004	V	AL14	451.13	3433.34	B	9.65		82.91	12.19		0.76	477	11.38
502-S003	Swift Lumber-Atmore	29.5 MMBtu/hr Wood Waste Boiler No. 5 w/ Multiclone	005	V	AL15	451.14	3433.32	B	12.90		82.91	10.67		0.76	451	14.51
502-S008	Huxford Pole & Timber	5 MMBTU/hr Boiler #2	Z001	V	AL16	455.20	3452.80	B	4.50		91.44	24.38		0.91	505	4.31
502-S008	Huxford Pole & Timber	5 MMBTU/hr Boiler #1	Z002	V	AL17	455.20	3452.80	B	4.50		91.44	24.38		0.91	505	4.31
503-0002	Continental Aerospace Technologies	6.3 MMBTU/HR NG FIRED BOILER	T001	V	AL18	397.20	3390.80	B	4.20		7.92	10.97		0.91	477	7.19
503-0047	Lenzing Fibers	Tencel Plant	X001	V	AL19	402.10	3425.50	C	3.49		13.41	19.81		0.81	323	18.46
503-0047	Lenzing Fibers	T-2 Lyocell Process with Associated Scrubbers	X015	V	AL20	402.10	3425.50	C	3.28		13.41	60.66		4.42	298	16.46
503-0095	AM/NS Calvert	845 MMBtu/hr Natural Gas-Fired Walking Beam Reheat Furnace (S-1)	X001-A	V	AL21	406.62	3447.11	B	6.42		14.90	66.18	65.00	5.08	623	5.16
503-0095	AM/NS Calvert	845 MMBtu/hr Natural Gas Fired Walking Beam Reheat Furnace 2 (S-2)	X001-B	V	AL22	406.61	3447.09	B	6.42		14.90	66.18	65.00	5.08	623	5.16

C-1. AERMOD Model Inputs: $PM_{2.5}$ NAAQS/Increment Inventory Sources

PM2.5			Stack			UTM Coordinates (km)		Increment	Allowable	Actual	Base Elev.	Stack Ht.	GEP	Diameter	Exit Temp	Exit Velocity
Facility No.	Facility Name	Unit Description	No.	Type**	Model ID	East	North	Type*	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	ºK	(m/s)
503-0095	AM/NS Calvert	845 MMBtu/hr Natural Gas Fired Walking Beam Reheat Furnace 3 (S-3)	X001-C	V	AL23	406.59	3447.07	B	6.42		14.90	66.18	65.00	5.08	623	5.16
503-0095	AM/NS Calvert	471.8 MMBtu/hr Natural Gas Fired Walking Beam Reheat Furnace 4 (S-4)	X001-D	V	AL24	405.46	3446.82	E		3.59	14.90	55.02		3.00	450	11.96
503-0095	AM/NS Calvert	Finishing Mill w/ Wet Scrubber (S-5)	X001-F	V	AL25	405.46	3446.82	B	4.01		14.90	29.99		2.00	313	17.68
503-0095	AM/NS Calvert	Tandem Mill w/ Mist Eliminator (S-12)	X002-C	V	AL26	405.46	3446.82	B	4.32		14.90	33.49		3.00	303	14.54
503-0095	AM/NS Calvert	331 TPH EAF #1	X038A	V	AL27	406.75	3446.70	C	62.04		14.90	61.00		6.50	391	20.30
503-0095	AM/NS Calvert	Continuous Caster #1 Contact Steam	X038B	V	AL28	406.87	3446.97	C	3.44		14.90	40.58		1.42	333	42.28
503-0095	AM/NS Calvert	331 TPH EAF #2	X039A	V	AL29	406.76	3446.67	C	62.04		14.90	61.00		6.50	391	20.30
503-0095	AM/NS Calvert	Continuous Caster #2 Contact Steam	X039B	V	AL30	406.83	3447.01	C	3.44		14.90	40.58		1.42	336	42.28
503-0095	AM/NS Calvert	Scarfer	X043	V	AL31	406.90	3447.14	C	15.36		14.90	65.00	65.00	2.20	333	20.00
503-0106	Outokumpu	Merged Units	MMMM	V	AL32	406.68	3447.39	B	10.72		14.90	49.99		4.80	319	19.17
503-0106	Outokumpu	126 tph Electric Arc Furnace w/ DEC & Elephant House vented to Baghouse 1 (	X001-A	V	AL33	406.68	3447.39	B	10.72		14.90	49.99		4.80	319	19.17
503-0106	Outokumpu	Argon-Oxygen Decarburization Converter w/ Elephant House and 2 Ladle Metall	X001-B	V	AL34	406.67	3447.39	B	10.72		14.90	49.99		4.79	319	17.70
503-0106	Outokumpu	Shotblaster/Scale Breaker w/ Baghouse (LO45)	X008-B	V	AL35	406.39	3446.82	B	4.13		14.90	29.99		1.80	323	19.60
503-0129	Steel Warehouse Company	HCL Steel Pickling Line w/ Wet Scrubber & Mist Eliminator (S-2)	X002	V	AL36	404.32	3444.93	C	3.10		13.72	23.77		0.76	330	10.77
503-1001	AL Power-Barry	Merged Units	MMMM	V	AL37	403.33	3430.73	B	3.62		6.40	182.88	153.92	7.82	422	8.56
503-1001	AL Power-Barry	Unit Number Three	X003	V	AL38	403.33	3430.73	E		17.40	6.40	182.88	153.92	7.82	422	8.56
503-1001	AL Power-Barry	Unit Number Four	X004	V	AL39	403.46	3430.82	B	124.27		6.40	182.88	182.88	4.17	418	41.45
503-1001	AL Power-Barry	Unit Number Five	X005	V	AL40	403.71	3430.76	B	134.63		6.71	182.88	182.88	9.45	331	18.29

C-1. AERMOD Model Inputs: $PM_{2.5}$ NAAQS/Increment Inventory Sources

PM2.5			Stack			UTM Coordinates (km)		Increment	Allowable	Actual	Base Elev.	Stack Ht.	GEP	Diameter	Exit Temp	Exit Velocity
Facility No.	Facility Name	Unit Description	No.	Type**	Model ID	East	North	Type*	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	ºK	(m/s)
503-1001	AL Power-Barry	CT/DB 6A	X006A	V	AL41	402.65	3430.17	B	22.40		7.62	36.88		5.12	357	24.81
503-1001	AL Power-Barry	CT/DB 6B	X006B	V	AL42	402.66	3430.14	B	22.40		7.62	36.88		5.12	357	24.81
503-1001	AL Power-Barry	CT/DB 7A	X006C	V	AL43	402.62	3430.31	B	22.40		7.62	36.88		5.12	357	24.81
503-1001	AL Power-Barry	CT/DB 7B	X006D	V	AL44	402.63	3430.28	B	22.40		7.62	36.88		5.12	357	24.81
503-1001	AL Power-Barry	Unit 8	X014A	V	AL45	402.50	3429.76	C	21.51		7.62	54.86		7.01	355	21.09
503-1001	AL Power-Barry	Unit 9	X014B	V	AL46	402.62	3429.63	C	21.51		7.62	54.86		7.01	355	21.09
503-2002	Armstrong World Industries	Board Mill Dryer and Dry Saw	X003	H	AL47	399.30	3392.40	E		14.05	3.05	12.19		1.22	430	8.17
503-2002	Armstrong World Industries	Coating Line	X005	V	AL48	399.30	3392.40	E		3.55	3.05	6.40		1.07	339	25.34
503-2003	Scotch & Gulf Lumber Co.	68 MMBtu/hr Wood Boiler	001	V	AL49	397.60	3399.20	B	3.50		6.10	21.34		1.18	342	11.92
503-2012	Kimberly Clark-Mobile	Merged Units	MMMM	V	AL50	399.50	3400.60	E		20.00	3.05	55.63		1.83	344	15.27
503-2012	Kimberly Clark-Mobile	Tissue Machines	N013	V	AL51	399.50	3400.60	B	3.26		3.05	12.34		1.52	300	6.10
503-2021	Mobile Energy Services	Merged Units	MMMM	V	AL52	399.61	3401.05	E		14.20	3.96	88.70	88.39	5.64	467	16.76
503-2021	Mobile Energy Services	No. 6 Power Boiler	X002	V	AL53	399.60	3400.85	E		31.50	4.57	60.35		2.87	340	12.02
503-4003	Vertex Refining-Saraland	48.0 MMBtu/hr - Vacuum Tower Preheater (220-50-8010)	018	V	AL54	399.04	3406.86	B	8.75		4.57	30.48		1.22	666	5.74
503-5017	Arkema Inc.	Metablen I Unit	X010	V	AL55	401.70	3427.69	E		5.25	14.02	37.00		0.81	325	28.50
503-5017	Arkema Inc.	D-200 Dryer Unit	X011	V	AL56	401.70	3427.69	B	10.80		14.02	36.88		1.14	347	26.68
503-5017	Arkema Inc.	Metablen II Unit	X023	V	AL57	401.70	3427.69	B	3.55		14.02	42.67		1.19	339	21.63
503-5017	Arkema Inc.	Durastrength Dryer B	X027	V	AL58	401.70	3427.69	B	10.40		14.02	38.71		1.18	358	31.79
503-8004	Building Materials Manufacturing	Merged Units	MMMM	V	AL59	394.80	3395.05	E		3.10	6.10	7.62		1.03	422	5.19
503-8010	UOP LLC-Mobile	Merged Units	MMMM	V	AL60	397.50	3403.20	B	3.00		3.05	22.86		0.10	294	35.64

C-1. AERMOD Model Inputs: $PM_{2.5}$ NAAQS/Increment Inventory Sources

PM2.5			Stack			UTM Coordinates (km)		Increment	Allowable	Actual	Base Elev.	Stack Ht.	GEP	Diameter	Exit Temp	Exit Velocity
Facility No.	Facility Name	Unit Description	No.	Type**	Model ID	East	North	Type*	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	ºK	(m/s)
503-8057	Agrex Inc.	North Headhouse Grain Dryer	X016	H	AL61	400.12	3398.71	E		32.99	3.05	27.43		13.48	311	1.52
503-8065	SSAB Alabama	Twin Shell EAF with DEC, Building Encl and Baghouse	X001	V	AL62	403.50	3423.58	B	33.60		9.14	53.34		7.62	392	16.56
503-8066	Mobile Energy-Hog Bayou	Unit 1	X001	V	AL63	398.80	3402.16	B	21.70		4.88	64.01		5.85	364	19.51

INVENTORY KEYS

INCREMENT TYPE CODE*	
B	Baseline Source
C	Increment Consuming Source
E	Increment Expanding Source

STACK TYPE KEY (Last character in Stack no.) CODE **	
D	A stack discharging downward, or nearly downward.
F	Fugative emissions, no stack exists.
H	A stack discharging in a horizonal direction.
P	A process vent, not otherwised classified.
R	A building roof vent.
V	A stack with an unobstructed opening discharging in a vertical, or nearly vertical direction.
W	A vertical Stack with a weather cap or similar obstruction in the exhaust stream.

C-2. AERMOD Model Inputs: PM_{10} NAAQS/Increment Inventory Sources

PM10			Stack			UTM Coordinates (km)		Increment	Allowable	Actual	Base Elev.	Stack Ht.	GEP	Diameter	Exit Temp	Exit Velocity
Facility No.	Facility Name	Unit Description	No.	Type**	Model ID	East	North	Type*	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	ºK	(m/s)
108-0003	BASF	Area 15 Hazardous Waste Incinerator	X001	V	AL1	404.45	3461.07	E		8.10	14.81	22.86		1.37	351	12.46
108-0012	PowerSouth-McIntosh	Simple Cycle CT - 1 (Unit 2)	X005-1	V	AL2	401.92	3458.29	C	8.60		13.72	27.43		6.25	818	28.35
108-0012	PowerSouth-McIntosh	Simple Cycle CT - 2 (Unit 3)	X005-2	V	AL3	401.92	3458.27	C	8.60		13.72	27.43		6.25	818	28.35
108-0012	PowerSouth-McIntosh	Simple Cycle CT - 3 (Unit 4)	X007-1	V	AL4	401.87	3458.23	C	3.10		13.72	27.43		6.40	879	41.22
108-0012	PowerSouth-McIntosh	Simple Cycle CT - 4 (Unit 5)	X007-2	V	AL5	401.87	3458.19	C	3.10		13.72	27.43		6.40	879	41.22
108-0018	AL Power-Washington Co. Cogen	Combustion Turbine with Duct Burner	X001	V	AL6	404.54	3459.32	C	7.90		13.11	30.78		4.65	454	26.77
108-0018	AL Power-Washington Co. Cogen	184 MMBTU/hr Boiler (201R)	X004	V	AL7	404.53	3459.29	C	3.00		13.11	18.29		1.83	436	9.16
108-0018	AL Power-Washington Co. Cogen	184 MMBTU/hr Boiler (301R)	X006	V	AL8	404.53	3459.29	C	3.00		13.11	18.29		1.83	422	15.26
501-OVER	Overseas Hardwood	Reman and Planer Operations	N002	V	AL9	418.07	3428.94	C	3.68		76.20	6.10		0.61	295	5.66
502-S003	Swift Lumber-Atmore	23.25 MMBtu/hr Wood Waste Boiler No. 4 w/ Multiclone	004	V	AL10	451.13	3433.34	C	9.65		82.91	12.19		0.76	477	11.38
502-S003	Swift Lumber-Atmore	29.5 MMBtu/hr Wood Waste Boiler No. 5 w/ Multiclone	005	V	AL11	451.14	3433.32	C	12.90		82.91	10.67		0.76	451	14.51
502-S008	Huxford Pole & Timber	5 MMBTU/hr Boiler #2	Z001	V	AL12	455.20	3452.80	B	4.50		91.44	24.38		0.91	505	4.31
502-S008	Huxford Pole & Timber	5 MMBTU/hr Boiler #1	Z002	V	AL13	455.20	3452.80	B	4.50		91.44	24.38		0.91	505	4.31
503-0002	Continental Aerospace Technologies	6.3 MMBTU/HR NG FIRED BOILER	T001	V	AL14	397.20	3390.80	E		4.20	7.92	10.97		0.91	477	7.19
503-0003	Gulf Foundry & Machine	Gray Iron Cupola	X001	V	AL15	397.20	3399.40	E		20.70	8.84	7.62		0.91	366	2.15
503-0047	Lenzing Fibers	Tencel Plant	X001	V	AL16	402.10	3425.50	C	3.49		13.41	19.81		0.81	323	18.46
503-0047	Lenzing Fibers	T-2 Lyocell Process with Associated Scrubbers	X015	V	AL17	402.10	3425.50	C	3.34		13.41	60.66		4.42	298	16.46
503-0095	AM/NS Calvert	845 MMBtu/hr Natural Gas-Fired Walking Beam Reheat Furnace (S-1)	X001-A	V	AL18	406.62	3447.11	C	6.42		14.90	66.18	65.00	5.08	623	5.16
503-0095	AM/NS Calvert	845 MMBtu/hr Natural Gas Fired Walking Beam Reheat Furnace 2 (S-2)	X001-B	V	AL19	406.61	3447.09	C	6.42		14.90	66.18	65.00	5.08	623	5.16

C-2. AERMOD Model Inputs: PM_{10} NAAQS/Increment Inventory Sources

PM10			Stack			UTM Coordinates (km)		Increment	Allowable	Actual	Base Elev.	Stack Ht.	GEP	Diameter	Exit Temp	Exit Velocity
Facility No.	Facility Name	Unit Description	No.	Type**	Model ID	East	North	Type*	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	ºK	(m/s)
503-0095	AM/NS Calvert	845 MMBtu/hr Natural Gas Fired Walking Beam Reheat Furnace 3 (S-3)	X001-C	V	AL20	406.59	3447.07	C	6.42		14.90	66.18	65.00	5.08	623	5.16
503-0095	AM/NS Calvert	Finishing Mill w/ Wet Scrubber (S-5)	X001-F	V	AL21	405.46	3446.82	C	4.01		14.90	29.99		2.00	313	17.68
503-0095	AM/NS Calvert	Tandem Mill w/ Mist Eliminator (S-12)	X002-C	V	AL22	405.46	3446.82	C	4.32		14.90	33.49		3.00	303	14.54
503-0095	AM/NS Calvert	331 TPH EAF #1	X038A	V	AL23	406.75	3446.70	C	62.04		14.90	61.00		6.50	391	20.30
503-0095	AM/NS Calvert	Continuous Caster #1 Contact Steam	X038B	V	AL24	406.87	3446.97	C	3.44		14.90	40.58		1.42	333	42.28
503-0095	AM/NS Calvert	331 TPH EAF #2	X039A	V	AL25	406.76	3446.67	C	62.04		14.90	61.00		6.50	391	20.30
503-0095	AM/NS Calvert	Continuous Caster #2 Contact Steam	X039B	V	AL26	406.83	3447.01	C	3.44		14.90	40.58		1.42	336	42.28
503-0095	AM/NS Calvert	Scarfer	X043	V	AL27	406.90	3447.14	C	15.36		14.90	65.00	65.00	2.20	333	20.00
503-0106	Outokumpu	Merged Units	MMMM	V	AL28	406.68	3447.39	C	10.72		14.90	49.99		4.80	319	19.17
503-0106	Outokumpu	126 tph Electric Arc Furnace w/ DEC & Elephant House vented to Baghouse 1	X001-A	V	AL29	406.68	3447.39	C	10.72		14.90	49.99		4.80	319	19.17
503-0106	Outokumpu	Argon-Oxygen Decarburization Converter w/ Elephant House and 2 Ladle Metall	X001-B	V	AL30	406.67	3447.39	C	10.72		14.90	49.99		4.79	319	17.70
503-0106	Outokumpu	Shotblaster/Scale Breaker w/ Baghouse (LO45)	X008-B	V	AL31	406.39	3446.82	C	4.13		14.90	29.99		1.80	323	19.60
503-0129	Steel Warehouse Co.	HCL Steel Pickling Line w/ Wet Scrubber & Mist Eliminator (S-2)	X002	V	AL32	404.32	3444.93	C	3.10		13.72	23.77		0.76	330	10.77
503-1001	AL Power-Barry	Merged Units	MMMM	V	AL33	403.33	3430.73	B	3.62		6.40	182.88	153.92	7.82	422	8.56
503-1001	AL Power-Barry	Unit Number Three	X003	V	AL34	403.33	3430.73	E		40.10	6.40	182.88	153.92	7.82	422	8.56
503-1001	AL Power-Barry	Unit Number Four	X004	V	AL35	403.46	3430.82	B	287.11		6.40	182.88	182.88	4.17	418	41.45
503-1001	AL Power-Barry	Unit Number Five	X005	V	AL36	403.71	3430.76	B	433.01		6.71	182.88	182.88	9.45	331	18.29
503-1001	AL Power-Barry	CT/DB 6A	X006A	V	AL37	402.65	3430.17	C	22.40		7.62	36.88		5.12	357	24.81
503-1001	AL Power-Barry	CT/DB 6B	X006B	V	AL38	402.66	3430.14	C	22.40		7.62	36.88		5.12	357	24.81

C-2. AERMOD Model Inputs: PM_{10} NAAQS/Increment Inventory Sources

PM10			Stack			UTM Coordinates (km)		Increment	Allowable	Actual	Base Elev.	Stack Ht.	GEP	Diameter	Exit Temp	Exit Velocity
Facility No.	Facility Name	Unit Description	No.	Type**	Model ID	East	North	Type*	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	ºK	(m/s)
503-1001	AL Power-Barry	CT/DB 7A	X006C	V	AL39	402.62	3430.31	C	22.40		7.62	36.88		5.12	357	24.81
503-1001	AL Power-Barry	CT/DB 7B	X006D	V	AL40	402.63	3430.28	C	22.40		7.62	36.88		5.12	357	24.81
503-1001	AL Power-Barry	Unit 8	X014A	V	AL41	402.50	3429.76	C	21.51		7.62	54.86		7.01	355	21.09
503-1001	AL Power-Barry	Unit 9	X014B	V	AL42	402.62	3429.63	C	21.51		7.62	54.86		7.01	355	21.09
503-1002	AL Power-Chickasaw	Unit 3	X003	V	AL43	398.50	3403.70	E		8.70	6.40	53.34		3.35	489	9.76
503-2003	Scotch & Gulf Lumber	68 MMBtu/hr Wood Boiler	001	V	AL44	397.60	3399.20	C	18.27		6.10	21.34		1.18	342	11.92
503-2005	IP-Siebert	No. 1 Lime Kiln	X001	V	AL45	398.80	3401.80	E		35.70	3.05	24.87		1.22	347	14.02
503-2005	IP-Siebert	No. 2 Lime Kiln	X002	V	AL46	398.80	3401.80	E		35.70	3.05	24.87		1.22	347	10.74
503-2005	IP-Siebert	No. 3 Lime Kiln	X003	V	AL47	398.80	3401.80	E		35.70	3.05	28.35		1.37	347	7.32
503-2005	IP-Siebert	No. 3 Smelt Vent	X004	V	AL48	398.80	3401.80	E		9.61	3.05	47.55		0.91	347	6.32
503-2005	IP-Siebert	No. 4 Smelt Vent	X005	V	AL49	398.80	3401.80	E		9.61	3.05	47.55		0.91	341	6.75
503-2005	IP-Siebert	Power/Recovery Smelt	X006	V	AL50	398.80	3401.80	E		19.20	3.05	69.70	69.70	1.22	350	7.92
503-2005	IP-Siebert	No. 3 Recovery Furnace	X007	V	AL51	398.80	3401.80	E		68.70	3.05	62.94		2.13	436	15.80
503-2005	IP-Siebert	No. 4 Recovery Furnace	X008	V	AL52	398.80	3401.80	E		68.70	3.05	62.94		2.13	439	17.49
503-2005	IP-Siebert	Power/Recovery Furnace A	X009A	V	AL53	398.80	3401.80	E		68.50	3.05	75.41	75.41	2.44	445	12.37
503-2005	IP-Siebert	Power/Recovery Furnace B	X009B	V	AL54	398.60	3401.70	E		68.50	3.05	78.46	78.46	2.44	445	9.84
503-2005	IP-Siebert	No. 1 Cyclone Boiler	X012	V	AL55	398.80	3401.80	E		49.30	3.05	70.64	70.64	2.74	411	14.15
503-2005	IP-Siebert	No. 2 Cyclone Boiler	X013	V	AL56	398.80	3401.80	E		49.30	3.05	70.61	70.61	2.74	429	15.62
503-2012	Kimberly Clark	Merged Units	MMMM	V	AL57	399.50	3400.60	E		20.00	3.05	55.63		1.83	344	15.27
503-2012	Kimberly Clark	Tissue Machines	N013	V	AL58	399.50	3400.60	C	3.42		5.49	12.34		1.52	300	6.10
503-2021	Mobile Energy Services	No. 6 Power Boiler	X002	V	AL59	399.60	3400.85	E		31.50	4.57	60.35		2.87	340	12.02
503-2021	Mobile Energy Services	No. 3 Recovery Furnace	Z001	V	AL60	399.50	3400.60	E		23.70	3.96	54.86		2.44	415	10.67
503-2021	Mobile Energy Services	No. 4 Recovery Furnace	Z002	V	AL61	399.50	3400.60	E		26.70	3.96	54.86		2.44	415	10.67

C-2. AERMOD Model Inputs: PM_{10} NAAQS/Increment Inventory Sources

PM10			Stack			UTM Coordinates (km)		Increment	Allowable	Actual	Base Elev.	Stack Ht.	GEP	Diameter	Exit Temp	Exit Velocity
Facility No.	Facility Name	Unit Description	No.	Type**	Model ID	East	North	Type*	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	ºK	(m/s)
503-2021	Mobile Energy Services	No. 5 Recovery Furnace	Z003	V	AL62	399.50	3400.60	E		55.00	3.96	54.86		2.44	429	14.60
503-2021	Mobile Energy Services	No. 6 Recovery Furnace	Z004	V	AL63	399.50	3400.60	E		24.70	3.96	51.51		2.13	485	26.32
503-2021	Mobile Energy Services	Nos. 3-5 Smelt Tanks	Z005	V	AL64	399.50	3400.60	E		5.00	3.96	38.40		0.98	356	21.50
503-2021	Mobile Energy Services	No. 6 Smelt Tank	Z006	V	AL65	399.50	3400.60	E		6.58	3.96	48.46		1.22	348	9.48
503-2021	Mobile Energy Services	Nos. 1-4 Power Boilers	Z015	V	AL66	399.50	3400.60	E		66.00	3.96	48.46		3.05	484	14.22
503-4003	Vertex Refining-Saraland	48.0 MMBtu/hr - Vacuum Tower Preheater (220-50-8010)	018	V	AL67	399.04	3406.86	C	8.75		4.57	30.48		1.22	666	5.74
503-5002	Acordis Cellulosic Fibers	Rayon A	001A	V	AL68	402.64	3425.67	E		3.65	13.41	24.69		4.57	316	18.57
503-5002	Acordis Cellulosic Fibers	Rayon B	001B	V	AL69	402.64	3425.67	E		3.64	13.41	24.69		4.57	316	18.57
503-5002	Acordis Cellulosic Fibers	Submerged Combustion Evaporators	X070	V	AL70	402.90	3425.50	E		627.90	13.41	60.96		3.81	358	6.10
503-5017	Arkema Inc.	D-200 Dryer Unit	X011	V	AL71	401.70	3427.69	C	10.80		14.02	36.88		1.14	347	26.68
503-5017	Arkema Inc.	Metablen II Unit	X023	V	AL72	401.70	3427.69	C	3.55		14.02	42.67		1.19	339	21.63
503-5017	Arkema Inc.	Durastrength Dryer B	X027	V	AL73	401.70	3427.69	C	10.40		14.02	38.71		1.18	358	31.79
503-8003	Aluminum Corp. Of America	No. 1 and No. 4 Calcining Kilns with Baghouse A	0005A	V	AL74	399.90	3399.10	E		29.82	1.52	32.61		1.52	414	13.32
503-8003	Aluminum Corp. Of America	No. 1 and No. 4 Calcining Kilns with Baghouse B	0005B	V	AL75	399.90	3399.10	E		29.82	1.52	32.61		1.52	415	12.94
503-8003	Aluminum Corp. Of America	158 MMBTU/hr Power Boiler	0017	V	AL76	399.90	3399.10	E		18.96	1.52	36.58		1.22	484	30.86
503-8003	Aluminum Corp. Of America	Merged Units A	MMMMA	V	AL77	399.90	3399.10	E		59.64	1.52	32.61		1.52	415	11.38
503-8003	Aluminum Corp. Of America	Merged Units B	MMMMB	V	AL78	399.90	3399.10	E		59.64	1.52	32.61		1.52	411	11.85
503-8003	Aluminum Corp. Of America	Merged Units C	MMMMC	V	AL79	399.90	3399.10	E		37.92	1.52	36.58		1.22	484	30.86
503-8003	Aluminum Corp. Of America	Merged Units D	MMMMD	V	AL80	399.90	3399.10	E		20.05	1.52	36.58		1.83	484	13.66
503-8004	Building Materials Manufacturing	Felt Manufacturing Mill	X025	V	AL81	394.80	3395.05	E		37.24	6.10	6.10		1.22	369	14.55

C-2. AERMOD Model Inputs: PM_{10} NAAQS/Increment Inventory Sources

PM10			Stack			UTM Coordinates (km)		Increment	Allowable	Actual	Base Elev.	Stack Ht.	GEP	Diameter	Exit Temp	Exit Velocity
Facility No.	Facility Name	Unit Description	No.	Type**	Model ID	East	North	Type*	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	ºK	(m/s)
503-8010	UOP LLC- Mobile	Merged Units	MMMM	V	AL82	397.50	3403.20	C	3.00		3.05	22.86		0.10	294	35.64
503-8065	SSAB Alabama	Twin Shell EAF with DEC, Building Encl and Baghouse	X001	V	AL83	403.50	3423.58	C	34.16		9.14	53.34		7.62	392	16.56
503-8066	Mobile Energy-Hog Bay	Unit 1	X001	V	AL84	398.80	3402.16	C	21.70		4.88	64.01		5.85	364	19.51

INVENTORY KEYS

INCREMENT TYPE CODE*	
B	Baseline Source
C	Increment Consuming Source
E	Increment Expanding Source

STACK TYPE KEY (Last character in Stack no.) CODE **	
D	A stack discharging downward, or nearly downward.
F	Fugative emissions, no stack exists.
H	A stack discharging in a horizonal direction.
P	A process vent, not otherwised classified.
R	A building roof vent.
V	A stack with an unobstructed opening discharging in a vertical, or nearly vertical direction.
W	A vertical Stack with a weather cap or similar obstruction in the exhaust stream.

C-3 AERMOD Model Inputs: NO_2 1-HR NAAQS Inventory Sources

			Stack			UTM Coordinates		Emission	Base Elev.	Stack Ht.	GEP	Stack Dia.	Exit Temp.	Velocity
Facility No.	Facility Name	Stack Description	No.	Type	Model ID	East	North	(lb/hr)	(m)	(m)	(m)	(m)	K	(m/s)
501-0007	SI Group USA (USAA), LLC	Vent System	002	V	AL1	417.98	3414.35	20.20	45.70	11.58		0.71	588.72	9.17
503-5003	Occidental Chemical Corporation - Mobile	Glass Furnace	X002	V	AL2	397.83	3402.30	3.12	7.62	15.24		0.71	505	13.70
503-5017	Arkema Inc	34.48 MMBTU/hr boiler	024	V	AL3	401.73	3427.73	3.19	12.19	7.01		0.61	480	17.48
106-0034	Venture Oil & Gas, Inc. - Area No. 3 O&G Production Facilities	167 HP, Waukesha F1197 POP (Coffin 14-10 Well)	E-01	V	AL4	458.63	3464.06	8.10	105.77	1.86		0.10	939	60.58
106-0034	Venture Oil & Gas, Inc. - Area No. 3 O&G Production Facilities	Process Flare w/CVS (Coffin 14-10 Well)	FL-01	V	AL5	458.61	3464.12	8.49	105.77	12.19		0.30	1089	26.95
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	97 MMBtu/Hr - South Boiler #1 (B0301A)	001	V	AL6	465.32	3437.69	4.90	79.25	9.14		0.46	727	33.16
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	97 MMBtu/Hr - South Boiler #2 (B01301A)	002	V	AL7	465.32	3437.66	4.90	79.25	9.14		0.46	727	33.16
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	97 MMBtu/Hr - North Boiler #1 (B0301B)	003	V	AL8	465.32	3437.67	4.90	79.25	9.14		0.46	727	33.16
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	97 MMBtu/Hr - North Boiler #2 (B01301B)	004	V	AL9	465.32	3437.65	4.90	79.25	9.14		0.46	727	33.16
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	800 Bhp RIC Gas Engine (CM 11.01)	005	V	AL10	465.32	3437.73	42.94	79.25	6.10		0.20	755	46.54
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	800 Bhp RIC Gas Engine (CM 11.02)	006	V	AL11	465.33	3437.37	42.94	79.25	6.10		0.20	700	46.54
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Sulfur Recovery Unit No. 2 withThermal oxidizer (S1201/2)	010	V	AL12	465.30	3437.55	10.59	79.25		64.92	1.68	977	9.91
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	1100 HP RIC (ENG-01)	028	V	AL13	465.41	3437.71	4.85	79.25	6.10		0.30	866	10.46
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	1,100 HP RIC (ENG-02)	029	V	AL14	465.42	3437.71	6.43	79.25	6.10		0.30	644	10.46
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Condensate/Tank Flare (FL05)	032	V	AL15	465.09	3437.76	4.70	79.25	10.67		0.15	727	2.62
502-0091	Venture Oil & Gas, Inc. - Area No. 1 Oil and Gas Production Facilities	149 BHP 4SRB Power Oil Pump Engine (Fountain Farm 2-2)	E-01	V	AL16	459.77	3449.16	7.22	97.54	2.59		0.10	872	44.55
502-0091	Venture Oil & Gas, Inc. - Area No. 1 Oil and Gas Production Facilities	149 HP POP Engine (Foutain Farm 2-4)	E-02	V	AL17	459.77	3449.16	7.22	96.93	2.03		0.09	950	30.18

			Stack			UTM Coordinates		Emission	Base Elev.	Stack Ht.	GEP	Stack Dia.	Exit Temp.	Velocity
Facility No.	Facility Name	Stack Description	No.	Type	Model ID	East	North	(lb/hr)	(m)	(m)	(m)	(m)	K	(m/s)
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	Utility Boiler No. 3	003	V	AL18	398.91	3406.76	3.40	4.57	22.86		1.37	589	5.78
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 1 Crude Heater	005	V	AL19	398.86	3406.72	12.10	4.57	48.77		2.13	561	5.49
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 1 Reformer Heater	006	V	AL20	398.89	3406.72	14.25	4.57	33.53		1.83	575	9.14
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 2 Crude Heater	009	V	AL21	399.05	3406.82	5.60	4.57	36.12		2.29	466	5.30
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 2 Vacuum Tower Feed Heater	010	V	AL22	399.05	3406.85	3.76	4.57	49.07		2.44	589	3.11
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 2 Reformer No. 1, No. 2 & No. 3 Heaters	011	V	AL23	399.05	3406.78	11.93	4.57	37.87		2.29	644	3.47
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	Vacuum Tower Preheater	018	V	AL24	399.04	3406.86	4.44	4.57	30.48		1.22	666	5.74
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	Refinery LP Flare	026	V	AL25	399.30	3406.75	6.43	4.57	60.35		0.61	811	13.60
503-0047	Lenzing Fibers Inc	95.0 MMBtu/hr Natural Gas Fired Boiler (No. 2)	55-B	V	AL26	402.20	3425.83	3.70	13.41	17.83		1.52	477	10.11
503-0047	Lenzing Fibers Inc	100.0 MMBtu/hr Natural Gas Fired Boiler (No. 1)	55-C	V	AL27	402.20	3425.82	4.60	13.41	17.83		1.52	477	10.11
503-0047	Lenzing Fibers Inc	238 MMBtu/hr Natural Gas Fired Boiler (No. 4)	ST02	V	AL28	402.40	3425.80	9.52	13.41	39.99		1.52	450	12.13
503-0047	Lenzing Fibers Inc	238 MMBtu/hr Natural Gas Fired Boiler (No. 5)	ST03	V	AL29	402.38	3425.80	9.52	13.41	39.99		1.52	450	12.13
503-5001	FMC Corporation - Mobile Manufacturing Center	74.5 MMBtu/hr Natural Gas Fired Boiler	FU203	V	AL30	402.84	3424.88	6.11	11.28	20.38		0.81	420	19.83
503-5001	FMC Corporation - Mobile Manufacturing Center	92 MMBtu/hr Natural Gas Fired Boiler	FU204	V	AL31	402.83	3424.87	4.11	11.28	22.86		1.22	464	16.17
503-5009	Nouryon Functional Chemicals LLC - LeMoyne Site	Carbon Disulfide Tailgas Incinerator (27.5MMBtu/hr)	CS-1	V	AL32	402.81	3426.64	3.90	10.67	45.72		1.98	811	12.50
503-8010	UOP LLC - Mobile Plant	68 MMBtu/hrBoiler (Z001)	EP1	V	AL33	397.70	3403.25	5.12	3.05	10.67		0.91	450	12.94
503-8010	UOP LLC - Mobile Plant	Boiler 8020 (33.5MMBtu/hr)	EP107	V	AL34	397.68	3403.24	3.08	3.05	7.62		0.76	505	13.25
503-8010	UOP LLC - Mobile Plant	DeNox system on X059	EP129	V	AL35	397.65	3403.14	4.80	3.05	33.53		0.61	687	8.52
503-8010	UOP LLC - Mobile Plant	59 MMBtu/hr Boiler (Z004 - CPU 21)	EP62	V	AL36	397.70	3403.26	4.91	3.05	8.72		1.52	516	1.81
503-8010	UOP LLC - Mobile Plant	Baghouse (X060)	EP79	H	AL37	397.67	3403.22	24.00	3.05	30.48		0.61	464	16.17
503-8010	UOP LLC - Mobile Plant	Impingement Plate Vent (Z006)	EP83	V	AL38	397.62	3403.23	12.54	3.05	21.34		0.88	317	11.54
503-5010	U.S. Amines (Bucks) LLC	120.46 MMBtu Boiler	BO02	V	AL39	402.58	3428.45	6.40	12.19	15.24		1.14	444	17.28
503-2012	Kimberly-Clark Corporation - Mobile Operations	TM 6 Hood	101B	V	AL40	399.69	3400.79	3.30	6.40	28.65		1.05	634	24.10
503-2012	Kimberly-Clark Corporation - Mobile Operations	TM 8 Hood	103B	V	AL41	399.64	3400.79	3.60	7.32	35.36		1.27	430	23.50
503-2012	Kimberly-Clark Corporation - Mobile Operations	TM 11 Hood	104B	V	AL42	399.63	3400.81	5.21	6.40	21.34		0.90	350	28.30

			Stack			UTM Coordinates		Emission	Base Elev.	Stack Ht.	GEP	Stack Dia.	Exit Temp.	Velocity
Facility No.	Facility Name	Stack Description	No.	Type	Model ID	East	North	(lb/hr)	(m)	(m)	(m)	(m)	K	(m/s)
502-S003	Swift Lumber Inc - Atmore Facility	23.25 MMBtu/hr Boiler (No. 4)	001	V	AL43	451.13	3433.34	5.12	82.91	12.19		0.76	477	11.38
502-S003	Swift Lumber Inc - Atmore Facility	29.5 MMBtu/hr Wood Waste Boiler with Multiclone (No. 5)	015	V	AL44	451.14	3433.32	6.49	82.91	10.67		0.76	451	14.51
503-2003	Scotch and Gulf Lumber Company, LLC	68 MMBTU/Hr Wood Boiler	001	V	AL45	397.60	3399.20	14.96	6.10	21.34		1.18	342	11.92
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CAES Unit (Unit 1)	001	V	AL46	401.94	3458.38	53.30	13.72	27.74		3.06	407	23.59
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT - 1 (Unit 2)	002	V	AL47	401.92	3458.29	97.00	13.72	27.43		6.25	818	28.35
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT - 2 (Unit 3)	003	V	AL48	401.92	3458.27	92.60	13.72	27.43		6.25	818	28.35
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT - 3 (Unit 4)	005	V	AL49	401.87	3458.23	104.70	13.72	27.43		6.40	879	41.22
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT -4 (Unit 5)	006	V	AL50	401.87	3458.19	131.40	13.72	27.43		6.40	879	41.22
108-0018	Alabama Power Company - Washington County Cogen	CT and Duct Burner	001	V	AL51	404.54	3459.32	64.20	13.11	30.78		4.65	454	26.77
108-0018	Alabama Power Company - Washington County Cogen	274 MMBTU/hr Boiler	002	V	AL52	404.53	3459.26	7.10	13.11	18.29		1.52	422	18.08
108-0018	Alabama Power Company - Washington County Cogen	184 MMBTU/hr Boiler	004	V	AL53	404.53	3459.29	7.80	13.11	18.29		1.83	436	9.16
108-0018	Alabama Power Company - Washington County Cogen	184 MMBTU/hr Boiler	006	V	AL54	404.53	3459.29	7.10	13.11	18.29		1.83	422	15.26
503-1001	Alabama Power Company - Barry	Common 1, 2	001	V	AL55	403.33	3430.73	380.00	6.40		153.92	7.82	422	8.56
503-1001	Alabama Power Company - Barry	Unit 4	004	V	AL56	403.46	3430.82	1448.10	6.40		182.88	4.17	418	41.45
503-1001	Alabama Power Company - Barry	Unit 5	005	V	AL57	403.71	3430.76	688.50	6.71		182.88	9.45	331	18.29
503-1001	Alabama Power Company - Barry	Auxiliary Package Boiler for Unit 5 Startup	005AUX	V	AL58	403.83	3430.78	8.25	6.40	24.38		1.52	422	21.20
503-1001	Alabama Power Company - Barry	CT/DB 6A	007	V	AL59	402.65	3430.17	5.50	7.62	36.88		5.12	361	24.81
503-1001	Alabama Power Company - Barry	CT/DB 6B	008	V	AL60	402.66	3430.14	19.20	7.62	36.88		5.12	361	24.81
503-1001	Alabama Power Company - Barry	CT/DB 7A	009	V	AL61	402.62	3430.31	22.20	7.62	36.88		5.12	361	24.81
503-1001	Alabama Power Company - Barry	CT/DB 7B	010	V	AL62	402.63	3430.28	20.90	7.62	36.88		5.12	361	24.81
503-1001	Alabama Power Company - Barry	Unit 8	012	V	AL63	402.50	3429.76	39.10	7.62	54.86		7.01	355	21.09
503-1001	Alabama Power Company - Barry	Unit 9	013	V	AL64	402.62	3429.63	39.10	7.62	54.86		7.01	355	21.09
503-8066	Mobile Energy LLC - Hog Bayou Energy	Unit 1	001	V	AL65	398.80	3402.16	20.20	4.88		60.96	5.85	364	19.51
503-0095	AM/NS Calvert LLC	Walking Beam Reheat Furnace 1 (S-1)	S-1	V	AL66	406.62	3447.11	71.82	14.90	66.18		5.08	623	5.16
503-0095	AM/NS Calvert LLC	Galvanizing Line 1 Annealing Furnace , 110 MMBtu/hr (S-19)	S-19	V	AL67	405.57	3446.12	6.60	14.90	44.99		1.45	573	18.77
503-0095	AM/NS Calvert LLC	Walking Beam Reheat Furnace 2 (S-2)	S-2	V	AL68	406.61	3447.09	71.82	14.90	66.18		5.08	623	5.16

			Stack			UTM Coordinates		Emission	Base Elev.	Stack Ht.	GEP	Stack Dia.	Exit Temp.	Velocity
Facility No.	Facility Name	Stack Description	No.	Type	Model ID	East	North	(lb/hr)	(m)	(m)	(m)	(m)	K	(m/s)
503-0095	AM/NS Calvert LLC	Galv Line Annealing Furnace #2 (S-20)	S-20	V	AL69	405.53	3446.16	7.43	14.90	44.81		1.25	500	16.34
503-0095	AM/NS Calvert LLC	Galv Line Annealing Furnace 3 110 MMBtu/hr (S-21)	S-21	V	AL70	405.44	3446.20	6.60	14.90	44.99		1.45	573	17.45
503-0095	AM/NS Calvert LLC	Line 4 Annealing Furnace 4 w/ SCR 120 MMBtu/hr (S-22)	S-22	V	AL71	405.43	3446.26	7.20	14.90	45.70		1.25	566	29.20
503-0095	AM/NS Calvert LLC	Walking Beam Reheat Furnace 3 (S-3)	S-3	V	AL72	406.59	3447.07	71.82	14.90	66.18		5.08	623	5.16
503-0095	AM/NS Calvert LLC	Spray Roaster Scrubber (S-60)	S-60	V	AL73	405.69	3446.63	4.58	14.90	45.72		1.01	358	17.34
503-0095	AM/NS Calvert LLC	70.68 MMBtu/hr Batch Annealing Furnace (S-63)	S-63	V	AL74	405.46	3446.82	6.86	14.90	25.15		5.08	310	1.17
503-0095	AM/NS Calvert LLC	EAF #1 Baghouse (S-64)	S-64	V	AL75	406.75	3446.70	115.90	14.90	61.00		6.50	391	20.30
503-0095	AM/NS Calvert LLC	EAF #2 Baghouse (S-68)	S-68	V	AL76	406.76	3446.67	115.90	14.90	61.00		6.50	391	20.30
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	126 tph Electric Arc Furnace w/DEC & Elephant House vented to Baghouse 1 (LO1)	LO1	V	AL77	406.68	3447.39	30.95	14.90	49.99		4.80	319	19.17
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	Argon-Oxygen Decarburization Converter w/ Elephant House and 2 Ladle Metallurgy Stations to Baghouse 2 (LO2)	LO2	V	AL78	406.67	3447.39	30.95	14.90	49.99		4.80	319	17.59
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	95 MMBtu/hr Passive Annealing Furnace (LO41A)	LO41A	V	AL79	406.58	3447.20	7.84	14.90	25.33		1.83	573	4.15
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	Natural Gas Fired Annealing Furnace 143 MMBtu/hr (LO43)	LO43	V	AL80	405.85	3447.10	8.58	14.90	29.99		2.51	523	12.73
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	Nitric & Hydrofluoric Acid Pickling w/ Caustic Scrubber + de-NOx SCR (LO47)	LO47	V	AL81	405.97	3447.22	6.73	14.90	30.47		0.60	403	17.34
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	CAPL Natural Gas Fired Annealing Furnace, 116 MMBtu/hr (LO53)	LO53	V	AL82	405.81	3447.53	3.22	14.90	30.49		1.70	623	16.79
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	CAPL Nitric & Hydrofluoric Acid Pickling w/ Wet Scrubber + de-NOx SCR (LO57)	LO57	V	AL83	405.90	3447.62	3.22	14.90	25.49		0.99	513	12.28
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	Acid Regeneration Line #1 21.51 MMBtu/hr w/ Caustic Scrubber + de-NOx SCR (LO72)	LO72	V	AL84	405.94	3447.26	3.22	14.90	24.99		0.94	589	5.61
503-0116	Linde Inc. - Linde - Calvert	35 MMBtu/hr Natural Gas Vaporizer	X001	V	AL85	406.26	3446.47	3.43	14.63	5.79		0.46	700	16.48
503-8065	SSAB Alabama Inc	Meltshop Baghouse	001	V	AL86	403.50	3423.58	71.40	9.14	53.34		7.62	392	16.56
503-8065	SSAB Alabama Inc	Reheat Furnace	003	V	AL87	403.23	3423.49	65.31	9.14	45.72		3.05	1044	17.50
503-4002	Zenith Energy Terminals Mobile Holdings, LLC - Mobile Terminal	#5 Boiler Stack	005	V	AL88	400.87	3397.87	3.53	3.05	12.19		1.04	561	9.37
503-4002	Zenith Energy Terminals Mobile Holdings, LLC - Mobile Terminal	Thermal Oxidizer Stack	006	V	AL89	400.87	3397.80	3.47	3.05	12.50		1.14	1033	21.54
108-0017	Bay Gas Storage Company, LLC - Bay Gas	2,000 Hp Superior Recip. Engine (C-100)	001	V	AL90	403.50	3458.30	7.92	15.24	6.10		0.46	700	64.19

			Stack			UTM Coordinates		Emission	Base Elev.	Stack Ht.	GEP	Stack Dia.	Exit Temp.	Velocity
Facility No.	Facility Name	Stack Description	No.	Type	Model ID	East	North	(lb/hr)	(m)	(m)	(m)	(m)	K	(m/s)
108-0017	Bay Gas Storage Company, LLC - Bay Gas	2,000 Hp Superior Recip. Engine (C-101)	002	V	AL91	403.50	3458.30	7.92	15.24	6.10		0.46	700	64.19
108-0017	Bay Gas Storage Company, LLC - Bay Gas	4,735 Hp Caterpillar Recip. Engine (C-201)	003	V	AL92	403.50	3458.30	7.32	15.24	12.04		0.76	727	32.11
108-0017	Bay Gas Storage Company, LLC - Bay Gas	4,735 Hp Caterpillar Recip. Engine (C-202)	004	V	AL93	403.50	3458.30	7.32	15.24	12.04		0.76	727	32.11
108-0017	Bay Gas Storage Company, LLC - Bay Gas	4,735 Hp Caterpillar Recip. Engine w/ Catalytic Converter (C-200)	005	V	AL94	403.50	3458.30	7.32	15.24	12.04		0.76	727	32.11
108-0017	Bay Gas Storage Company, LLC - Bay Gas	4,735 Hp Caterpillar Recip. Engine w/ catalytic converter (C-7400)	006	V	AL95	403.50	3458.30	3.94	15.24	12.04		0.76	816	32.11
503-3013	Plains Marketing LP - Mobile Terminal	111 Hp CI ICE Stormwater Pump No. 1	024	V	AL96	399.90	3399.90	3.43	1.62	1.98		0.04	953	75.90
503-3013	Plains Marketing LP - Mobile Terminal	Diesel Pump Engine 1, Diesel Pump Engine 2, Diesel Firewater Engine	P1-3	V	AL97	399.90	3399.90	14.99	9.14	2.13		0.10	524.82	12.50
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip (Engine 1101)	001	V	1101	403.49	3443.02	50.20	12.60	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip (Engine 1102)	002	V	1102	403.48	3443.02	50.20	12.66	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip (Engine 1103)	003	V	1103	403.47	3443.02	50.20	12.74	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip Engine w/Catalytic Converter (Engine 1104)	004	V	1104	403.46	3443.02	14.72	12.80	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip (Engine 1105)	005	V	1105	403.45	3443.02	50.20	12.87	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	15,000 HP Solar Turbine w/SoLoNOx Combustors (Engine 1107)	007	V	1107	403.43	3442.87	7.93	13.07	18.29		2.29	756	17.29
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	15,000 HP Solar Turbine w/SoLoNOx Combustors (Engine 1108)	008	V	1108	403.45	3442.87	6.17	12.92	18.29		2.29	760	17.29
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	15,700 HP Pignone Combustion Turbine (Engine 1109)	9	V	1109	403.48	3442.87	7.94	12.69	18.75		2.19	760	18.96
503-3035	Alabama Bulk Terminal Company	25.15 MMBtu/hr Boiler	X001	V	AL106	401.17	3396.46	3.56	3.05	6.71		0.70	561	4.69
503-2022	Hilcorp Energy Company - Chunchula Gas Compressor Station	Compressor No. 806	806	V	AL107	390.43	3427.45	3.05	55.02	4.27		0.25	794	29.81
503-2022	Hilcorp Energy Company - Chunchula Gas Compressor Station	Compressor No. 807	807	V	AL108	390.42	3427.45	9.00	55.02	4.27		0.25	834	31.29
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	48 MMBtu/Hr - South Process Heater	002	V	AL109	398.00	3418.11	3.39	15.24	18.49		1.68	616	3.98
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	48 MMBtu/Hr - North Process Heater	003	V	AL110	398.01	3418.12	3.27	15.24	18.49		1.68	616	3.99
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	2700 BHP Ref. Compressor Engine - East Cooper [2700CB]	004	V	AL111	398.08	3418.16	15.65	18.14	11.58		0.61	922	34.04
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	2600 BHP Inj Compressor Engine - East Ingersoll [2600IR-A]	005	V	AL112	398.08	3418.08	12.60	15.24	9.14		0.45	922	28.54
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	1626 BHP Inlet Compressor Engine - North Ingersoll [1626IR-A]	007	V	AL113	398.05	3418.20	21.33	15.24	7.92		0.45	950	18.39

			Stack			UTM Coordinates		Emission	Base Elev.	Stack Ht.	GEP	Stack Dia.	Exit Temp.	Velocity
Facility No.	Facility Name	Stack Description	No.	Type	Model ID	East	North	(lb/hr)	(m)	(m)	(m)	(m)	K	(m/s)
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	1626 BHP Inlet Compressor Engine - South Ingersoll [1626IR-B]	008	V	AL114	398.05	3418.19	23.93	15.24	7.92	[redacted]	0.45	811	23.77
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	1642 BHP Inlet Compressor Engine - Waukesha [1642W]	009	V	AL115	397.93	3418.24	4.57	15.24	7.92	[redacted]	0.46	950	22.09
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	600 BHP Inlet Compressor - South Cooper [600CB-B]	012	V	AL116	397.94	3418.19	3.77	15.24	5.49	[redacted]	0.30	644	17.57
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	Primary Plant Flare	015	V	AL117	398.00	3418.00	5.32	15.24	41.15	[redacted]	1.62	1255	18.30
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	111 BHP Air Compressor (Diesel)	019	V	AL118	398.03	3418.10	3.44	15.24	1.92	[redacted]	0.09	533	3.74
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	1680 HP 4SRB Compressor Engine (1680W)	024	V	AL119	398.05	3418.19	7.41	15.24	7.62	[redacted]	0.34	1005	43.17
108-0003	BASF Corporation	Boiler #6	011	V	AL120	404.38	3460.63	13.20	14.81	23.16	[redacted]	1.62	436	8.72
108-0003	BASF Corporation	Boiler #8	013	W	AL121	404.39	3460.64	12.94	14.81	12.19	[redacted]	1.47	422	12.13
108-0003	BASF Corporation	Boiler #4	118	V	AL122	404.35	3460.64	8.61	14.81	22.86	[redacted]	1.22	439	10.36
108-0003	BASF Corporation	Boiler #7	164	V	AL123	404.45	3461.07	30.35	14.81	18.44	[redacted]	1.17	430	19.40
108-0003	BASF Corporation	99.9 MMBTU Temp Boiler	TEMPBOILER	W	AL124	404.44	3461.07	3.60	16.76	8.38	[redacted]	1.42	455	9.58
108-0020	Tate & Lyle Sucralose LLC	Boiler A	001	V	AL125	403.28	3457.85	5.53	15.24	12.50	[redacted]	1.22	376	21.79
108-0020	Tate & Lyle Sucralose LLC	Boiler B	002	V	AL126	403.26	3457.82	5.53	15.24	13.11	[redacted]	1.22	355	21.79
108-0020	Tate & Lyle Sucralose LLC	Thermal Oxidizer	022	V	AL127	403.46	3457.88	4.03	14.94	24.69	[redacted]	0.91	511	3.02
108-0020	Tate & Lyle Sucralose LLC	Boiler C	033	V	AL128	403.30	3457.78	5.53	15.24	12.19	[redacted]	1.22	355	21.79
108-0022	Huntsman Advanced Materials	Area 12/19 Thermal Oxidizer with Tail Gas Scrubber	19EP34	V	AL129	404.70	3460.88	16.20	16.18	15.24	[redacted]	0.61	350	6.25
x	International Paper Pensacola Mill	NO. 6 POWER BOILER	x	V	FL1	468.86	3386.21	32.0	46	38.10	[redacted]	2.59	449.82	14.39
x	International Paper Pensacola Mill	LIME KILN - MUD DRYER SYSTEM (LK-MDS)	x	V	FL2	468.86	3386.21	49.3	46	41.45	[redacted]	1.98	342.59	8.75
x	International Paper Pensacola Mill	LIME KILN - MUD DRYER SYSTEM (LK-MDS)	x	V	FL3	468.86	3386.21	49.3	46	41.45	[redacted]	1.98	342.59	8.75
x	International Paper Pensacola Mill	NO. 2 RECOVERY BOILER	x	V	FL4	468.86	3386.21	324.5	46	55.47	[redacted]	2.74	499.82	27.13
x	International Paper Pensacola Mill	NO. 1 RECOVERY BOILER	x	V	FL5	468.86	3386.21	324.5	46	55.47	[redacted]	2.74	516.48	27.13
x	International Paper Pensacola Mill	POWER BOILER #3	x	V	FL6	468.86	3386.21	188.0	46	40.23	[redacted]	2.44	335.93	7.62
x	International Paper Pensacola Mill	POWER BOILER #3	x	V	FL7	468.86	3386.21	188.0	46	40.23	[redacted]	2.44	335.93	7.62
x	International Paper Pensacola Mill	BARK BOILER #4 FUELED WITH WOOD WASTE,COAL, GAS, & OIL	x	V	FL8	468.86	3386.21	382.0	46	67.36	[redacted]	3.66	335.37	10.24
x	International Paper Pensacola Mill	Thermal Oxidizer	x	V	FL9	468.86	3386.21	15.6	46	30.48	[redacted]	0.67	355.37	45.45
x	International Paper Pensacola Mill	125000 LB/HR BOILER, #5 PACKAGE BOILER	x	V	FL10	469.03	3385.07	19.5	46	14.33	[redacted]	1.22	533.15	26.30

NOx 1 -Hour									Base	Stack		Stack	Exit	
		Stack		UTM Coordinates (km)		Increment	Allowable	actual	Elev.	Ht.	GEP	Dia.	Temp.	Velocity
Facility No.	Stack Description	No.	Type	East	North	Type	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	K	(m/s)
108-0028	Steam Methane Reformer Furnace	EPN1	V	404.26	3459.54	Increment Consumer	15.37		14.02	21.64		1.05	411	20.40
108-0028	Process Flare	EPN4	V	404.26	3459.54	Increment Consumer	31.87		14.02	38.10		0.46	310	19.54
503-0094	5,043 Hp NG Turbine w/SoLoNOx	X001	V	389.45	3403.25	Increment Consumer	4.66		60.96	12.19		1.22	851	35.73
503-5010	120.46 MMBtu Boiler	BO02	V	402.58	3428.45	Baseline Source	16.45		12.19	15.24		1.14	444	17.28
106-0037	Power Oil Pump Engine at Seitel Well	ENG-03	V	443.33	3470.04	Increment Consumer	4.48		55.47	2.44		0.10	872	0.67
503-0048	Vent Gas Incinerators (F-P1161 and F-P1162) w/ Scrubber	F-P1161/62	V	402.74	3424.75	Increment Consumer	3.42		13.11	30.48		0.41	333	7.38

STACK TYPE KEY

Code	
D	A stack discharging downward, or nearly downward.
F	Fugative emissions, no stack exists.
H	A stack discharging in a horizonal direction.
P	A process vent, not otherwised classified.
R	A building roof vent.
V	A stack with an unobstructed opening discharging in a vertical, or nearly vertical direction.
W	A vertical Stack with a weather cap or similar obstruction in the exhaust stream.

NOx Facility Name

Facility No.	Facility Name
108-0028	Linde Inc. - McIntosh Plant
503-0094	Gulf South Pipeline Company, LLC - Whistler Junction Compressor Station
503-5010	U.S. Amines (Bucks) LLC
106-0037	Craft Operating Company IX, LLC - Uriah Land 28-13 Well and UL 28-12 Tank Battery
503-0048	AMVAC Chemical Company - Axis Plant

C-4 AERMOD Model Inputs: NO_2 Annual NAAQS/Increment Inventory Sources

Facility No.	Facility Name	Stack Description	Stack No.	Stack Type	Model ID	UTM Coordinates East	UTM Coordinates North	Increment Type	Allowable (lb/hr)	actual (lb/hr)	Base Elev. (m)	Stack Ht. (m)	GEP (m)	Stack Dia. (m)	Exit Temp. K	Velocity (m/s)
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	97 MMBtu/Hr - South Boiler #1 (B0301A)	001	V	AL1	465.32	3437.69	Baseline Source	4.90		79.25	9.14		0.46	727	33.16
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	97 MMBtu/Hr - South Boiler #2 (B01301A)	002	V	AL2	465.32	3437.66	Baseline Source	4.90		79.25	9.14		0.46	727	33.16
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	97 MMBtu/Hr - North Boiler #1 (B0301B)	003	V	AL3	465.32	3437.67	Baseline Source	4.90		79.25	9.14		0.46	727	33.16
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	97 MMBtu/Hr - North Boiler #2 (B01301B)	004	V	AL4	465.32	3437.65	Baseline Source	4.90		79.25	9.14		0.46	727	33.16
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	800 Bhp RIC Gas Engine (CM 11.01)	005	V	AL5	465.32	3437.73	Baseline Source	42.94		79.25	6.10		0.20	755	46.54
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	800 Bhp RIC Gas Engine (CM 11.02)	006	V	AL6	465.33	3437.37	Baseline Source	42.94		79.25	6.10		0.20	700	46.54
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Sulfur Recovery Unit No. 2 with Thermal oxidizer (S1201/2)	010	V	AL7	465.30	3437.55	Baseline Source	10.59		79.25		64.92	1.68	977	9.91
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Refrigeration Compressor No. 1	021	V	AL8	465.30	3436.40	Increment Expander		10.25	79.25	4.88		0.25	739	37.55
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Refrigeration Compressor No. 2	022	V	AL9	465.30	3436.40	Increment Expander		10.25	79.25	4.88		0.25	739	37.55
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Original Inlet Compressor No. 1	023	V	AL10	465.30	3436.40	Increment Expander		8.64	79.25	4.57		0.24	700	40.43
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Original Inlet Compressor No. 3	025	V	AL11	465.30	3436.40	Increment Expander		8.64	79.25	4.57		0.24	700	11.49
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Original Inlet Compressor No. 4	026	V	AL12	465.30	3436.40	Increment Expander		3.20	79.25	7.32		0.46	811	11.49
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	1100 HP RIC (ENG-01)	028	V	AL13	465.41	3437.71	Increment Consumer	4.85		79.25	6.10		0.30	866	10.46
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	1,100 HP RIC (ENG-02)	029	V	AL14	465.42	3437.71	Increment Consumer	6.43		79.25	6.10		0.30	644	10.46
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Condensate/Tank Flare (FL05)	032	V	AL15	465.09	3437.76	Increment Consumer	4.70		79.25	10.67		0.15	727	2.62
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	600 BHP Recip Gas Engine - (K1101A)	K1101A	V	AL16	465.30	3436.40	Increment Expander		14.40	79.25	4.57		0.20	644	31.09
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	600 BHP Recip Gas Engine - (K1101B)	K1101B	V	AL17	465.30	3436.40	Increment Expander		14.40	79.25	4.57		0.20	644	31.09
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	800 HP Recip Gas Engine - (K503)	K503	V	AL18	465.30	3436.40	Increment Expander		19.20	79.25	6.10		0.20	644	31.09
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	800 HP Recip Gas Engine - (K504)	K504	V	AL19	465.30	3436.40	Increment Expander		19.20	79.25	6.10		0.20	644	31.09
502-0007	Escambia Operating Company LLC - Big Escambia Creek Plant	Original Inlet Compressor No. 2	ZZO24	V	AL20	465.30	3436.40	Increment Expander		8.64	79.25	4.57		0.24	700	30.32

C-4 AERMOD Model Inputs: NO_2 Annual NAAQS/Increment Inventory Sources

Facility No.	Facility Name	Stack Description	Stack No.	Stack Type	Model ID	UTM Coordinates East	UTM Coordinates North	Increment Type	Allowable (lb/hr)	actual (lb/hr)	Base Elev. (m)	Stack Ht. (m)	GEP (m)	Stack Dia. (m)	Exit Temp. K	Velocity (m/s)
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	Utility Boiler No. 3	003	V	AL21	398.91	3406.76	Increment Consumer	3.40		4.57	22.86		1.37	589	5.78
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 1 Crude Heater	005	V	AL22	398.86	3406.72	Baseline Source	40.32		4.57	48.77		2.13	561	5.49
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 1 Reformer Heater	006	V	AL23	398.89	3406.72	Baseline Source	42.00		4.57	33.53		1.83	575	9.14
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 2 Crude Heater	009	V	AL24	399.05	3406.82	Baseline Source	7.00		4.57	36.12		2.29	466	5.30
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 2 Vacuum Tower Feed Heater	010	V	AL25	399.05	3406.85	Baseline Source	9.60		4.57	49.07		2.44	589	3.11
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	No. 2 Reformer No. 1, No. 2 & No. 3 Heaters	011	V	AL26	399.05	3406.78	Baseline Source	13.28		4.57	37.87		2.29	644	3.47
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	Vacuum Tower Preheater	018	V	AL27	399.04	3406.86	Baseline Source	4.44		4.57	30.48		1.22	666	5.74
503-4003	Vertex Refining Alabama LLC - Saraland Petroleum Refinery	Refinery LP Flare	026	V	AL28	399.30	3406.75	Baseline Source	50.00		4.57	60.35		0.61	811	13.60
503-2005	#N/A	No. 1 Lime Kiln	001	V	AL29	398.80	3401.80	Increment Expander		21.90	3.05	24.87		1.22	347	14.02
503-2005	#N/A	No. 2 Lime Kiln	002	V	AL30	398.80	3401.80	Increment Expander		21.90	3.05	24.87		1.22	347	10.74
503-2005	#N/A	No. 3 Lime Kiln	003	V	AL31	398.80	3401.80	Increment Expander		21.90	3.05	28.35		1.37	347	7.32
503-2005	#N/A	No. 3 Recovery Furnace	007	V	AL32	398.80	3401.80	Increment Expander		140.00	3.05	62.94		2.13	436	15.80
503-2005	#N/A	No. 4 Recovery Furnace	008	V	AL33	398.80	3401.80	Increment Expander		140.00	3.05	62.94		2.13	439	17.49
503-2005	#N/A	No. 1 Cyclone Boiler	012	V	AL34	398.80	3401.80	Increment Expander		765.00	3.05	70.64		2.74	411	14.15
503-2005	#N/A	No. 2 Cyclone Boiler	013	V	AL35	398.80	3401.80	Increment Expander		765.00	3.05	70.61		2.74	429	15.62
503-2005	#N/A	Combination Fuel Boiler	014	V	AL36	398.80	3401.80	Increment Expander		544.60	3.05	69.70		3.05	466	20.05
503-2005	#N/A	Power/Recovery Furnace (A Side)	A09	V	AL37	398.80	3401.80	Increment Expander		164.50	3.05	75.41		2.44	445	12.37
503-2005	#N/A	Power/Recovery Furnace (B Side)	B09	V	AL38	398.60	3401.70	Increment Expander		164.50	3.05		78.46	2.44	445	9.84
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CAES Unit (Unit 1)	001	V	AL39	401.94	3458.38	Increment Consumer	53.30		13.72	27.74		3.06	407	23.59
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT - 1 (Unit 2)	002	V	AL40	401.92	3458.29	Increment Consumer	158.90		13.72	27.43		6.25	818	28.35
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT - 2 (Unit 3)	003	V	AL41	401.92	3458.27	Increment Consumer	158.90		13.72	27.43		6.25	818	28.35
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT - 3 (Unit 4)	005	V	AL42	401.87	3458.23	Increment Consumer	159.70		13.72	27.43		6.40	879	41.22
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT -4 (Unit 5)	006	V	AL43	401.87	3458.19	Increment Consumer	159.70		13.72	27.43		6.40	879	41.22

C-4 AERMOD Model Inputs: NO_2 Annual NAAQS/Increment Inventory Sources

Facility No.	Facility Name	Stack Description	Stack No.	Stack Type	Model ID	UTM Coordinates East	UTM Coordinates North	Increment Type	Allowable (lb/hr)	actual (lb/hr)	Base Elev. (m)	Stack Ht. (m)	GEP (m)	Stack Dia. (m)	Exit Temp. K	Velocity (m/s)
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CAES Unit (Unit 1)	001	V	AL44	401.94	3458.38	Increment Consumer	53.30		13.72	27.74		3.06	407	23.59
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT - 1 (Unit 2)	002	V	AL45	401.92	3458.29	Increment Consumer	158.90		13.72	27.43		6.25	818	28.35
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT - 2 (Unit 3)	003	V	AL46	401.92	3458.27	Increment Consumer	158.90		13.72	27.43		6.25	818	28.35
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT - 3 (Unit 4)	005	V	AL47	401.87	3458.23	Increment Consumer	159.70		13.72	27.43		6.40	879	41.22
108-0012	PowerSouth Energy Cooperative Inc - McIntosh	CT -4 (Unit 5)	006	V	AL48	401.87	3458.19	Increment Consumer	159.70		13.72	27.43		6.40	879	41.22
503-1001	Alabama Power Company - Barry	Common 1, 2	001	V	AL49	403.33	3430.73	Increment Expander		1177.90	6.40		153.92	7.82	422	8.56
503-1001	Alabama Power Company - Barry	Common 1, 2	001	V	AL50	403.33	3430.73	Baseline Source	380.00		6.40		153.92	7.82	422	8.56
503-1001	Alabama Power Company - Barry	Unit 4	004	V	AL51	403.46	3430.82	Baseline Source	2499.70		6.40		182.88	4.17	418	41.45
503-1001	Alabama Power Company - Barry	Unit 5	005	V	AL52	403.71	3430.76	Baseline Source	5309.78		6.71		182.88	9.45	331	18.29
503-1001	Alabama Power Company - Barry	Auxiliary Package Boiler for Unit 5 Startup	005AUX	V	AL53	403.83	3430.78	Increment Consumer	8.25		7.01	24.38		1.52	422	21.20
503-1001	Alabama Power Company - Barry	CT/DB 6A	007	V	AL54	402.65	3430.17	Increment Consumer	27.70		7.62	36.88		5.12	357	24.81
503-1001	Alabama Power Company - Barry	CT/DB 6B	008	V	AL55	402.66	3430.14	Increment Consumer	27.70		7.62	36.88		5.12	357	24.81
503-1001	Alabama Power Company - Barry	CT/DB 7A	009	V	AL56	402.62	3430.31	Increment Consumer	27.70		7.62	36.88		5.12	357	24.81
503-1001	Alabama Power Company - Barry	CT/DB 7B	010	V	AL57	402.63	3430.28	Increment Consumer	27.70		7.62	36.88		5.12	357	24.81
503-1001	Alabama Power Company - Barry	Unit 8	012	V	AL58	402.50	3429.76	Increment Consumer	39.10		7.62	54.86		7.01	355	21.09
503-1001	Alabama Power Company - Barry	Unit 9	013	V	AL59	402.62	3429.63	Increment Consumer	39.10		7.62	54.86		7.01	355	21.09
503-2021	#N/A	No. 5 Power Boiler	001	V	AL60	399.56	3400.85	Increment Expander		23.00	4.57	38.10		2.74	427	6.39
503-2021	#N/A	No. 6 Power Boiler	002	V	AL61	399.60	3400.85	Increment Expander		70.30	4.57	60.35		2.87	340	12.02
503-2021	#N/A	No. 7 Combination Fuel Boiler, No. 8 Power Boiler	003	V	AL62	399.61	3401.05	Increment Expander		152.20	3.96		88.39	5.64	467	16.76
503-2021	#N/A	No. 6 Recovery Furnace	Z004	V	AL63	399.50	3400.60	Increment Expander		19.90	3.96	51.51		2.13	485	26.32
503-0095	AM/NS Calvert LLC	Walking Beam Reheat Furnace 1 (S-1)	S-1	V	AL64	406.62	3447.11	Increment Consumer	71.82		14.90	66.18		5.08	623	5.16
503-0095	AM/NS Calvert LLC	Galvanizing Line 1 Annealing Furnace , 110 MMBtu/hr (S-19)	S-19	V	AL65	405.57	3446.12	Increment Consumer	6.60		14.90	44.99		1.45	573	18.77
503-0095	AM/NS Calvert LLC	Walking Beam Reheat Furnace 2 (S-2)	S-2	V	AL66	406.61	3447.09	Increment Consumer	71.82		14.90	66.18		5.08	623	5.16
503-0095	AM/NS Calvert LLC	Galv Line Annealing Furnace #2 (S-20)	S-20	V	AL67	405.53	3446.16	Increment Consumer	7.43		14.90	44.81		1.25	500	16.34
503-0095	AM/NS Calvert LLC	Galv Line Annealing Furnace 3 110 MMBtu/hr (S-21)	S-21	V	AL68	405.44	3446.20	Increment Consumer	6.60		14.90	44.99		1.45	573	17.45

C-4 AERMOD Model Inputs: NO_2 Annual NAAQS/Increment Inventory Sources

			Stack			UTM Coordinates		Increment	Allowable	actual	Base Elev.	Stack Ht.	GEP	Stack Dia.	Exit Temp.	Velocity
Facility No.	Facility Name	Stack Description	No.	Type	Model ID	East	North	Type	(lb/hr)	(lb/hr)	(m)	(m)	(m)	(m)	K	(m/s)
503-0095	AM/NS Calvert LLC	Line 4 Annealing Furnace 4 w/ SCR 120 MMBtu/hr (S-22)	S-22	V	AL69	405.43	3446.26	Increment Consumer	7.20		14.90	45.70		1.25	566	29.20
503-0095	AM/NS Calvert LLC	Walking Beam Reheat Furnace 3 (S-3)	S-3	V	AL70	406.59	3447.07	Increment Consumer	71.82		14.90	66.18		5.08	623	5.16
503-0095	AM/NS Calvert LLC	Spray Roaster Scrubber (S-60)	S-60	V	AL71	405.69	3446.63	Increment Consumer	4.58		14.90	45.72		1.01	358	17.34
503-0095	AM/NS Calvert LLC	70.68 MMBtu/hr Batch Annealing Furnace (S-63)	S-63	V	AL72	405.46	3446.82	Increment Consumer	6.86		14.90	25.15		5.08	310	1.17
503-0095	AM/NS Calvert LLC	EAF #1 Baghouse (S-64)	S-64	V	AL73	406.75	3446.70	Increment Consumer	115.90		14.90	61.00		6.50	391	20.30
503-0095	AM/NS Calvert LLC	EAF #2 Baghouse (S-68)	S-68	V	AL74	406.76	3446.67	Increment Consumer	115.90		14.90	61.00		6.50	391	20.30
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	126 tph Electric Arc Furnace w/DEC & Elephant House vented to Baghouse 1 (LO1)	LO1	V	AL75	406.68	3447.39	Increment Consumer	75.60		14.90	49.99		4.80	319	19.17
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	Argon-Oxygen Decarburization Converter w/ Elephant House and 2 Ladle Metallurgy Stations to Baghouse 2 (LO2)	LO2	V	AL76	406.67	3447.39	Increment Consumer	43.97		14.90	49.99		4.79	319	17.70
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	95 MMBtu/hr Passive Annealing Furnace (LO41A)	LO41A	V	AL77	406.58	3447.20	Increment Consumer	7.84		14.90	25.33		1.83	573	4.15
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	Natural Gas Fired Annealing Furnace 143 MMBtu/hr (LO43)	LO43	V	AL78	405.85	3447.10	Increment Consumer	8.58		14.90	29.99		2.51	523	12.73
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	Nitric & Hydrofluoric Acid Pickling w/ Caustic Scrubber + de-NOx SCR (LO47)	LO47	V	AL79	405.97	3447.22	Increment Consumer	6.73		14.90	30.47		0.60	403	17.34
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	CAPL Natural Gas Fired Annealing Furnace, 116 MMBtu/hr (LO53)	LO53	V	AL80	405.81	3447.53	Increment Consumer	7.51		14.90	30.49		1.70	623	16.79
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	CAPL Nitric & Hydrofluoric Acid Pickling w/ Wet Scrubber + de-NOx SCR (LO57)	LO57	V	AL81	405.90	3447.62	Increment Consumer	7.59		14.90	25.49		0.99	513	12.28
503-0106	Outokumpu Stainless USA, LLC - Outokumpu Stainless USA LLC	Acid Regeneration Line #1 21.51 MMBtu/hr w/ Caustic Scrubber + de-NOx SCR (LO72)	LO72	V	AL82	405.94	3447.26	Increment Consumer	3.22		14.90	24.99		0.94	589	5.61
503-8065	SSAB Alabama Inc	Meltshop Baghouse	001	V	AL83	403.50	3423.58	Increment Consumer	100.00		9.14	53.34		7.62	392	16.56
503-8065	SSAB Alabama Inc	Reheat Furnace	003	V	AL84	403.23	3423.49	Increment Consumer	77.40		9.14	45.72		3.05	1044	17.50
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip (Engine 1101)	001	V	1101	403.49	3443.02	Baseline Source	50.20		12.60	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip (Engine 1102)	002	V	1102	403.48	3443.02	Baseline Source	50.20		12.66	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip (Engine 1103)	003	V	1103	403.47	3443.02	Baseline Source	50.20		12.74	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip Engine w/Catalytic Converter (Engine 1104)	004	V	1104	403.46	3443.02	Baseline Source	22.17		12.80	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,000 HP Cooper Recip (Engine 1105)	005	V	1105	403.45	3443.02	Baseline Source	50.20		12.87	8.05		0.30	741	46.92
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	2,700 HP Cooper Recip Engine (Engine 1106)	006	V	1106	403.43	3443.02	Increment Consumer	10.58		12.96	15.24		0.64	561	27.22

C-4 AERMOD Model Inputs: NO_2 Annual NAAQS/Increment Inventory Sources

Facility No.	Facility Name	Stack Description	Stack No.	Stack Type	Model ID	UTM Coordinates East	UTM Coordinates North	Increment Type	Allowable (lb/hr)	actual (lb/hr)	Base Elev. (m)	Stack Ht. (m)	GEP (m)	Stack Dia. (m)	Exit Temp. K	Velocity (m/s)
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	15,000 HP Solar Turbine w/SoLoNOx Combustors (Engine 1107)	007	V	1107	403.43	3442.87	Increment Consumer	15.00		13.07	18.29		2.29	756	17.29
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	15,000 HP Solar Turbine w/SoLoNOx Combustors (Engine 1108)	008	V	1108	403.45	3442.87	Increment Consumer	15.00		12.92	18.29		2.29	760	17.29
503-3028	Florida Gas Transmission Co - Mt Vernon Station 11	15,700 HP Pignone Combustion Turbine (Engine 1109)	009	V	1109	403.48	3442.87	Increment Consumer	14.10		12.69	18.75		2.19	760	18.96
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	48 MMBtu/Hr - South Process Heater	002	V	AL94	398.00	3418.11	Baseline Source	4.70		15.24	18.49		1.68	616	3.98
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	48 MMBtu/Hr - North Process Heater	003	V	AL95	398.01	3418.12	Baseline Source	4.70		15.24	18.49		1.68	616	3.99
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	2700 BHP Ref. Compressor Engine - East Cooper [2700CB]	004	V	AL96	398.08	3418.16	Baseline Source	17.80		18.14	11.58		0.61	922	34.04
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	2600 BHP Inj Compressor Engine - East Ingersoll [2600IR-A]	005	V	AL97	398.08	3418.08	Baseline Source	12.60		15.24	9.14		0.45	922	28.54
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	Injection Compressor - West Ingersoll [2600IR-B]	006	V	AL98	398.09	3418.08	Increment Expander		12.61	12.04	9.14		0.61	811	29.05
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	1626 BHP Inlet Compressor Engine - North Ingersoll [1626IR-A]	007	V	AL99	398.05	3418.20	Baseline Source	28.10		15.24	7.92		0.45	950	18.39
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	1626 BHP Inlet Compressor Engine - South Ingersoll [1626IR-B]	008	V	AL100	398.05	3418.19	Baseline Source	28.10		15.24	7.92		0.45	811	23.77
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	1642 BHP Inlet Compressor Engine - Waukesha [1642W]	009	V	AL101	397.93	3418.24	Increment Consumer	9.10		15.24	7.92		0.46	950	22.09
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	1665 BHP Combo Compressor Engine - Caterpillar [1665C]	010	V	AL102	397.94	3418.16	Increment Consumer	9.10		15.24	7.92		0.46	755	17.74
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	600 BHP Inlet Compressor - North Cooper [600CB-A]	011	V	AL103	397.95	3418.21	Baseline Source	15.87		15.24	5.49		0.30	644	17.57
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	600 BHP Inlet Compressor - South Cooper [600CB-B]	012	V	AL104	397.94	3418.19	Baseline Source	15.87		15.24	5.49		0.30	644	17.57
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	Primary Plant Flare	015	V	AL105	398.00	3418.00	Increment Consumer	10.00		15.24	41.15		1.62	1255	18.30
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	111 BHP Air Compressor (Diesel)	019	V	AL106	398.03	3418.10	Baseline Source	3.44		15.24	1.92		0.09	533	3.74
503-4004	Hilcorp Energy Company - Hatter's Pond Plant	1680 HP 4SRB Compressor Engine (1680W)	024	V	AL107	398.05	3418.19	Increment Consumer	7.41		15.24	7.62		0.34	1005	43.17
503-4005	Unknown	93 MMBtu/Hr Gas Boiler - A	25-301A	V	AL108	388.45	3424.55	Increment Expander		9.12	51.82	9.14		1.07	561	13.08
503-4005	Unknown	600 Bhp RIC Gas Engine - Cooper- Bessemer - Inlet Comp A	42-101A	V	AL109	388.33	3424.45	Increment Expander		12.11	51.82	7.62		0.46	700	5.93
503-4005	Unknown	600 Bhp RIC Gas Engine - Cooper- Bessemer - Inlet Comp B	42-101B	V	AL110	388.33	3424.48	Increment Expander		13.52	51.82	7.62		0.46	700	5.93
503-4005	Unknown	600 Bhp RIC Gas Engine - Cooper- Bessemer - Inlet Comp C	42-101C	V	AL111	388.33	3424.48	Increment Expander		12.15	51.82	7.62		0.46	700	5.93
503-4005	Unknown	2500 Bhp RIC Gas Engine - Ingersoll-Rand - Ref Comp A	42-401A	V	AL112	388.46	3424.45	Increment Expander		21.66	51.82	12.50		0.61	655	13.01

C-4 AERMOD Model Inputs: NO_2 Annual NAAQS/Increment Inventory Sources

Facility No.	Facility Name	Stack Description	Stack No.	Stack Type	Model ID	UTM Coordinates East	UTM Coordinates North	Increment Type	Allowable (lb/hr)	actual (lb/hr)	Base Elev. (m)	Stack Ht. (m)	GEP (m)	Stack Dia. (m)	Exit Temp. K	Velocity (m/s)
503-4005	Unknown	2500 Bhp RIC Gas Engine - Ingersoll-Rand - Ref Comp B	42-401B	V	AL113	388.46	3424.44	Increment Expander		36.86	51.82	12.50		0.61	655	13.01
503-4005	Unknown	2500 Bhp RIC Gas Engine - Ingersoll-Rand -Inj Comp A	42-801A	V	AL114	388.46	3424.43	Increment Expander		27.45	51.82	12.19		0.61	672	13.34
503-4005	Unknown	2500 Bhp RIC Gas Engine - Ingersoll-Rand -Inj Comp B	42-801B	V	AL115	388.46	3424.42	Increment Expander		19.26	51.82	12.19		0.61	672	13.34
503-4005	Unknown	Ingersoll-Rand - Inj Comp C	42-801C	V	AL116	388.50	3424.35	Increment Expander		44.20	51.82	11.28		0.61	659	23.77
503-4005	Unknown	Ingersoll-Rand - Inj Comp D	42-801D	V	AL117	388.50	3424.35	Increment Expander		44.20	51.82	11.28		0.61	624	23.77
503-4005	Unknown	Solar Turbine - Gen A	43-501A	V	AL118	388.50	3424.35	Increment Expander		3.07	51.82	8.84		0.69	444	19.56
503-4005	Unknown	Solar Turbine - Gen B	43-501B	V	AL119	388.50	3424.35	Increment Expander		3.07	51.82	8.84		0.69	444	19.56
x	International Paper Pensacola Mill	NO. 6 POWER BOILER	x	V	FL1	468.86	3386.21		32.0		46	38.10		2.59	449.82	14.39
x	International Paper Pensacola Mill	LIME KILN - MUD DRYER SYSTEM (LK-MDS)	x	V	FL2	468.86	3386.21		49.3		46	41.45		1.98	342.59	8.75
x	International Paper Pensacola Mill	LIME KILN - MUD DRYER SYSTEM (LK-MDS)	x	V	FL3	468.86	3386.21		49.3		46	41.45		1.98	342.59	8.75
x	International Paper Pensacola Mill	NO. 2 RECOVERY BOILER	x	V	FL4	468.86	3386.21		324.5		46	55.47		2.74	499.82	27.13
x	International Paper Pensacola Mill	NO. 1 RECOVERY BOILER	x	V	FL5	468.86	3386.21		324.5		46	55.47		2.74	516.48	27.13
x	International Paper Pensacola Mill	POWER BOILER #3	x	V	FL6	468.86	3386.21		188.0		46	40.23		2.44	335.93	7.62
x	International Paper Pensacola Mill	POWER BOILER #3	x	V	FL7	468.86	3386.21		188.0		46	40.23		2.44	335.93	7.62
x	International Paper Pensacola Mill	BARK BOILER #4 FUELED WITH WOOD WASTE,COAL, GAS, & OIL	x	V	FL8	468.86	3386.21		382.0		46	67.36		3.66	335.37	10.24
x	International Paper Pensacola Mill	Thermal Oxidizer	x	V	FL9	468.86	3386.21		15.6		46	30.48		0.67	355.37	45.45
x	International Paper Pensacola Mill	125000 LB/HR BOILER, #5 PACKAGE BOILER	x	V	FL10	469.03	3385.07		19.5		46	14.33		1.22	533.15	26.30

APPENDIX D. CLASS II MODELING RESULTS FIGURES

Figure D-1. Maximum Five-Year Average High First High Maximum 1-hr NO_2 Impacts (µg/m³) for SIL Analysis From Among Five Meteorological Years Modeled

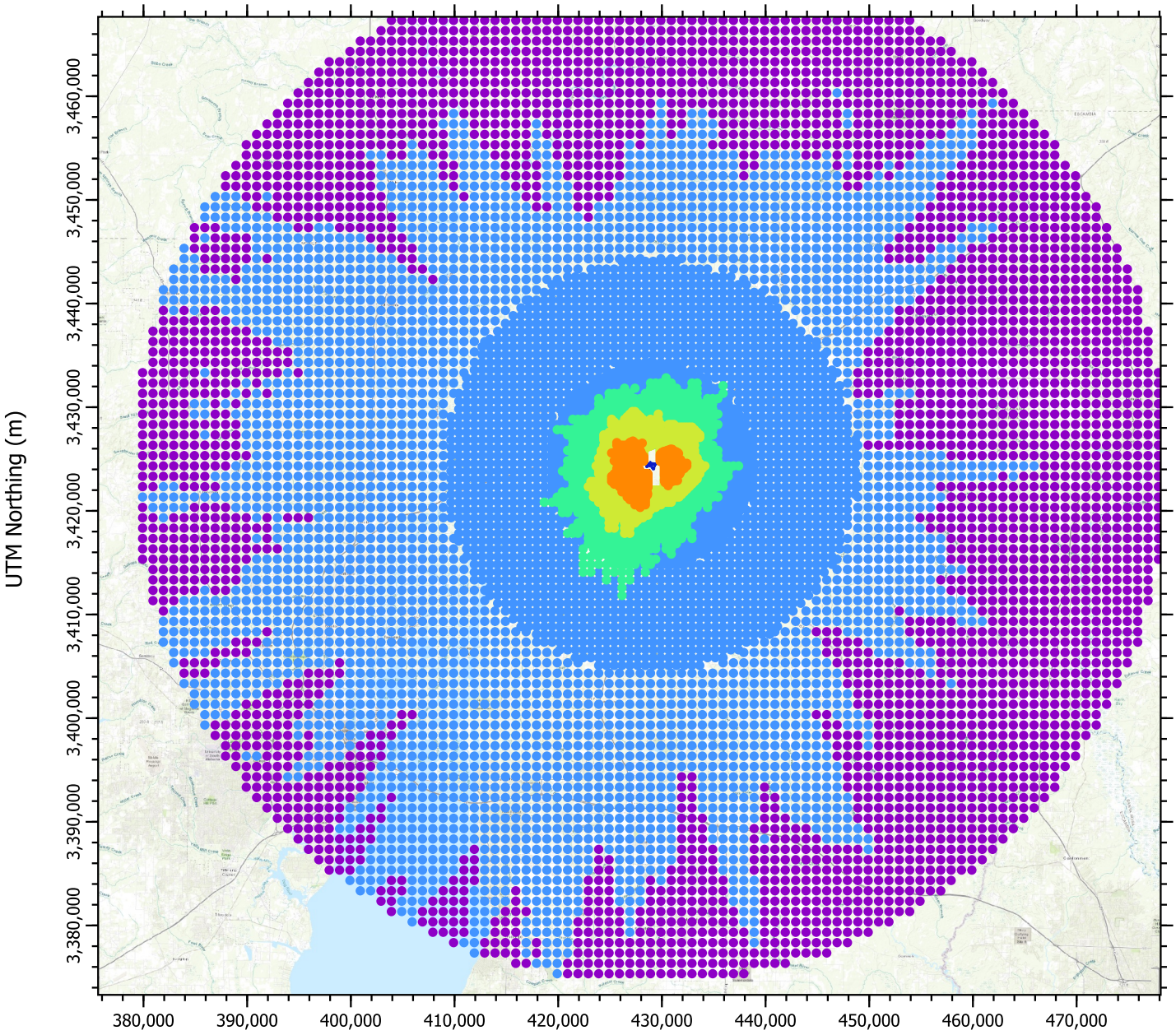


Figure D-2. Maximum Five-Year Average High First High Maximum 24-hr $PM_{2.5}$ Impacts (µg/m³) for SIL Analysis From Among Five Meteorological Years Modeled

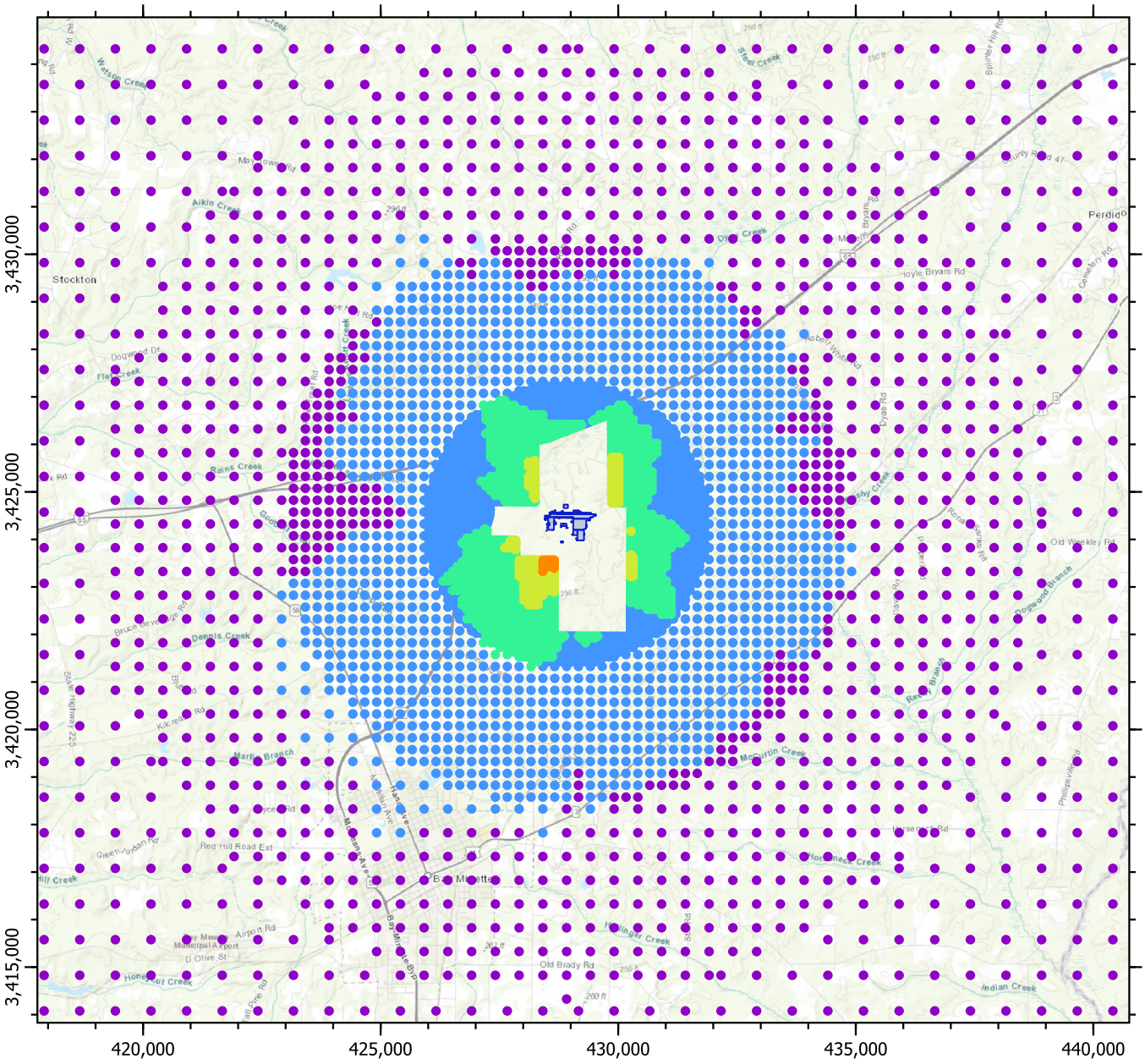
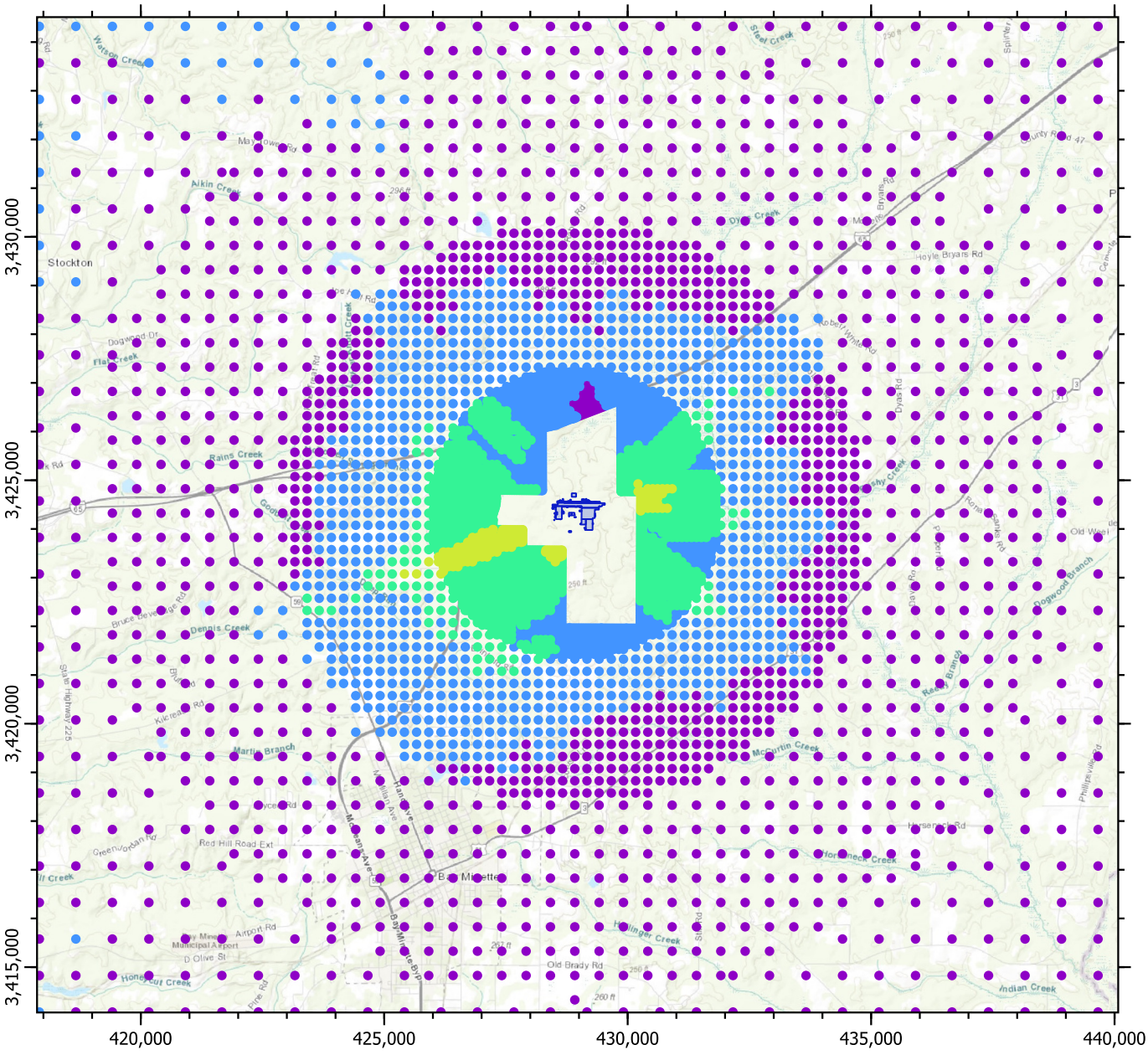


Figure D-3A. Maximum Five-Year Average 8th-High Daily Maximum 1-hr NO_2 Impacts (µg/m³) for NAAQS Analysis From Among Five Meteorological Years Modeled Zoom in View - Fenceline Based Impacts



UTM Easting (m)

Maximum 1-Hour NO_2 concentration (799.45 µg/m³) occurs 30.7 km northwest of Novelis.

All coordinates shown in UTM Coordinates, UTM Zone 16, NAD 83 Datum

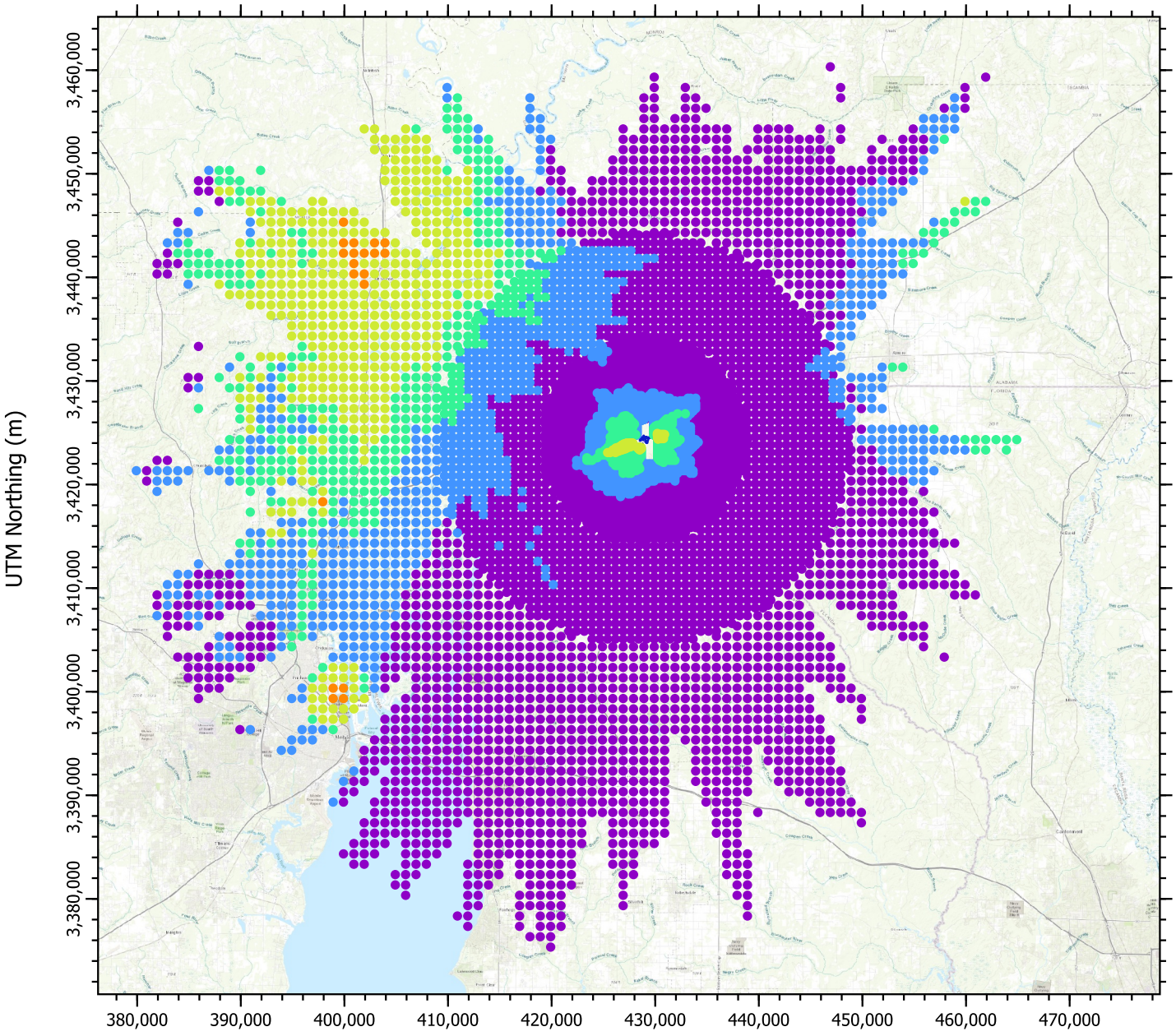
1-Hour NO_2 NAAQS: 188 µg/m³

NO_2 Concentrations* (µg/m³)

- 51.8 - 75.0
- 75.0 - 95.0
- 95.0 - 115.0
- 115.0 - <188
- 188.0 - 799.45

*All values shown include background concentration.

Figure D-3B. Maximum Five-Year Average 8th-High Daily Maximum 1-hr NO2 Impacts (µg/m³) for NAAQS Analysis From Among Five Meteorological Years Modeled Zoom Out View - Full Extent of Receptors Showing Area of Maximum Impact



Maximum 1-Hour NO_2 concentration (799.45 µg/m³) occurs 30.7 km northwest of Novelis.

All coordinates shown in UTM Coordinates, UTM Zone 16, NAD 83 Datum

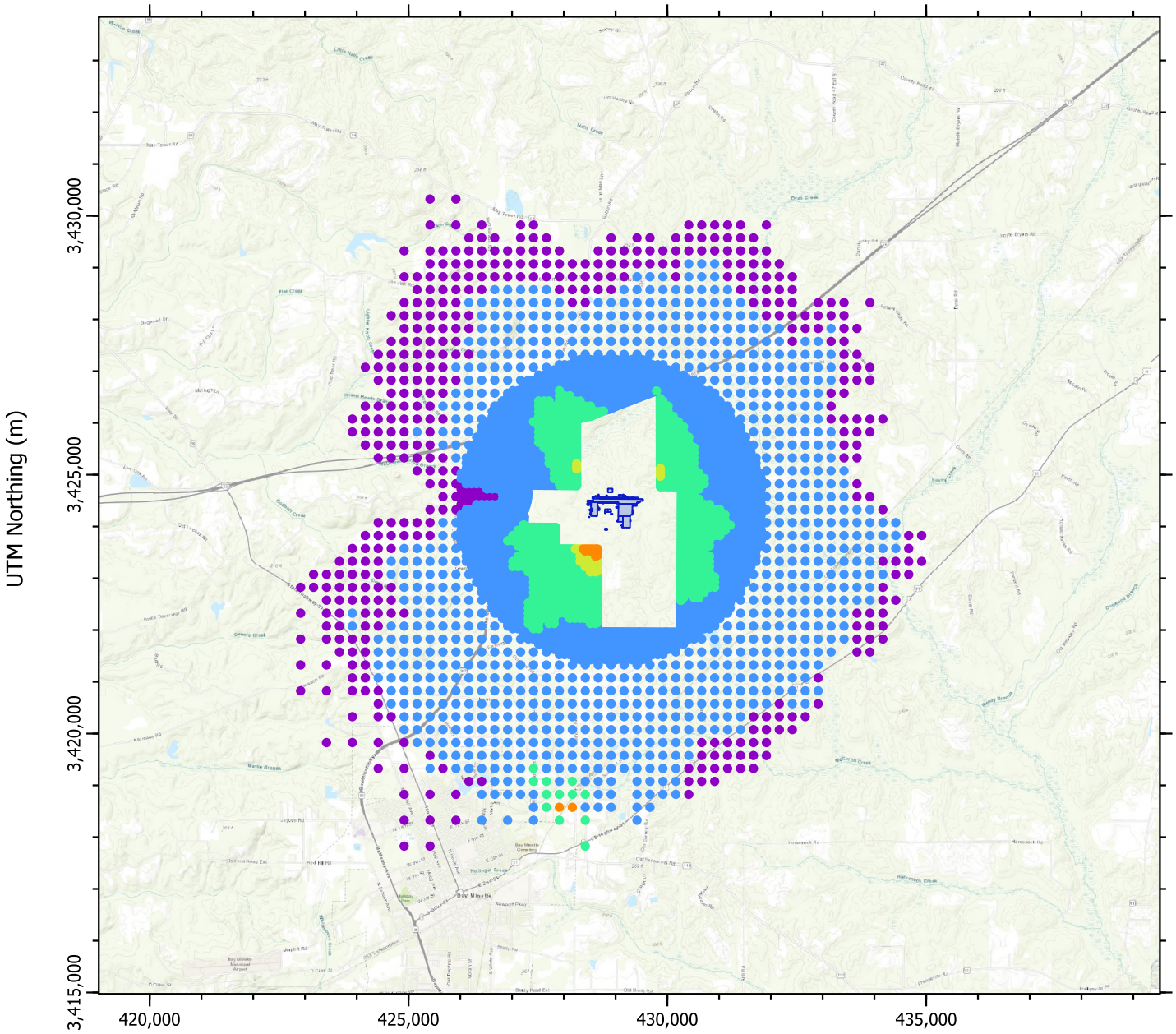
1-Hour NO2 NAAQS: 188 µg/m³

NO2 Concentrations* (µg/m³)

- 51.8 - 75.0
- 75.0 - 95.0
- 95.0 - 115.0
- 115.0 - <188
- 188.0 - 799.45

*All values shown include background concentration.

Figure D-4. Maximum Five-Year Average 8th-High Daily Maximum 24-hr $PM_{2.5}$ Impacts (µg/m³) for NAAQS Analysis From Among Five Meteorological Years Modeled



Maximum 24-Hour $PM_{2.5}$ concentration (22.76 µg/m³)

All coordinates shown in UTM Coordinates, UTM Zone 16, NAD 83 Datum

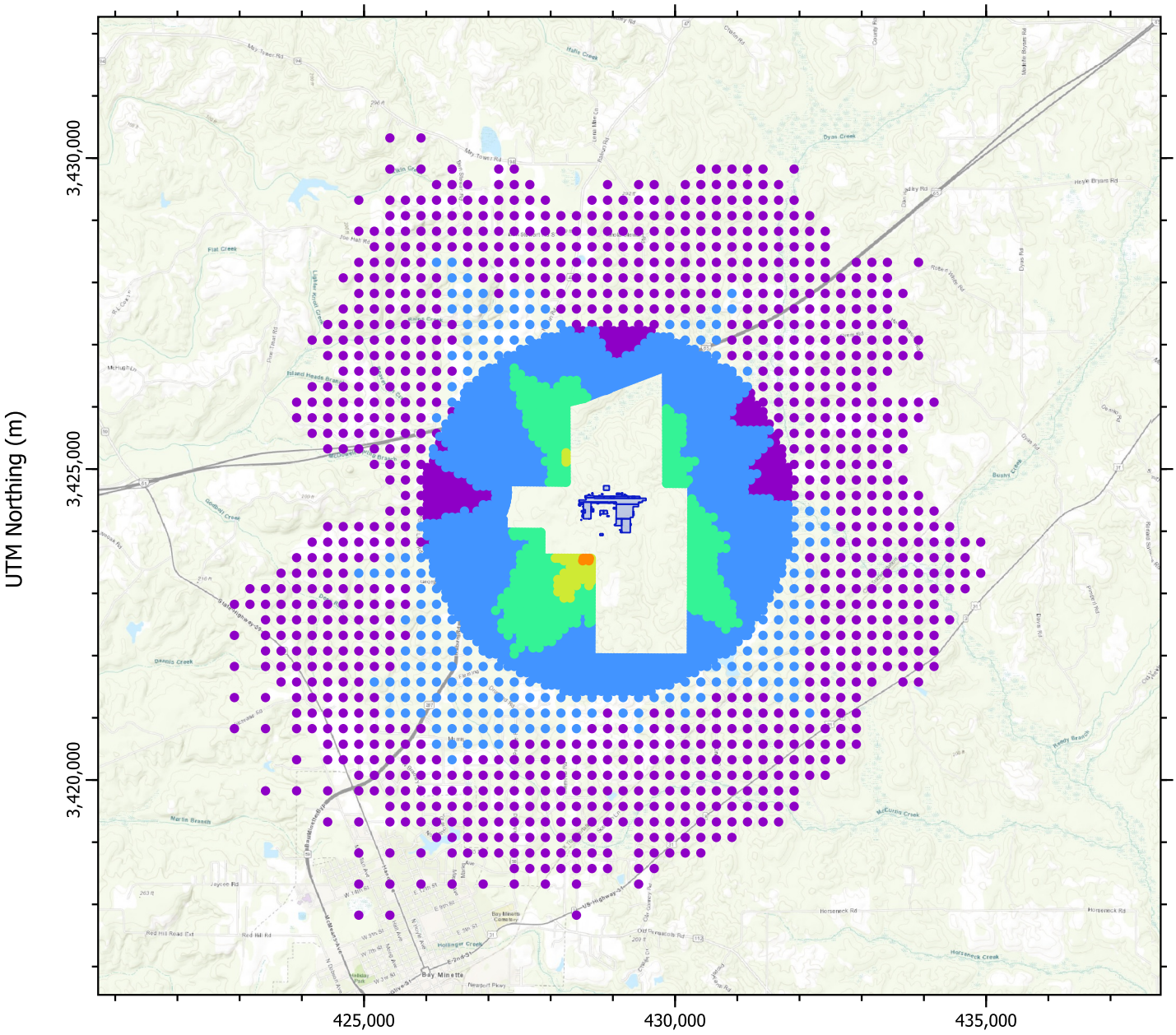
24-Hour $PM_{2.5}$ NAAQS: 35 µg/m³

$PM_{2.5}$ Concentrations* (µg/m³)

- 17.0 - 17.5
- 17.5 - 19.0
- 19.0 - 21.0
- 21.0 - 22.0
- 22.0 - 22.76

*All values shown include background concentration.

Figure D-5. Five-Year High Second High Impact 24-hr $PM_{2.5}$ Impacts (µg/m³) for Class II Increment Analysis From Among Five Meteorological Years Modeled



APPENDIX E. ADEM AMBIENT MONITORING DATA

Justin Fickas

From: Curvin, Gina <GCurvin@adem.alabama.gov>
Sent: Monday, July 11, 2022 4:45 PM
To: Justin Fickas
Cc: Jones, Azure
Subject: RE: AQS Forms/Monitoring Data for a PSD Permit Application (Novelis)
Attachments: AMP350_MOM_PM10 2019-2021.pdf; AMP350_CHK_PM25 2019-2021.pdf

Please find the data you requested attached. I think I pulled what you needed but if I missed anything please let me know. I know you said you didn't need all of the data but with particulate data it's a little different to pull since they are 24-hr composites instead of hourly. Hopefully I pulled the right report for your needs.

Gina L Curvin
Chief, Air/Facility Section
ADEM Field Operations Division
1350 Coliseum Blvd
Montgomery, AL 36110
Phone/Fax (334) 260-2783

From: Justin Fickas <JFickas@trinityconsultants.com>
Sent: Monday, July 11, 2022 11:58 AM
To: Curvin, Gina <GCurvin@adem.alabama.gov>
Subject: RE: AQS Forms/Monitoring Data for a PSD Permit Application (Novelis)

Thanks Gina. I would say the last 3 calendar years of data for PM2.5 for the Chickasaw site, as well as the last 3 calendar years of data for PM10 for the Montgomery County site, should be sufficient. I don't need "all" the data for each year, just annual summary data.

Thanks

Justin Fickas, P.E.
Principal Consultant

Office: 678.441.9977, ext. 228 | Direct: 404.751.0228 | Fax 678.441.9978
3495 Piedmont Road NE, Building 10, Suite 905 Atlanta, GA 30305
Email: jfickas@trinityconsultants.com

From: Curvin, Gina <GCurvin@adem.alabama.gov>
Sent: Monday, July 11, 2022 9:11 AM
To: Justin Fickas <JFickas@trinityconsultants.com>
Subject: RE: AQS Forms/Monitoring Data for a PSD Permit Application (Novelis)

Sorry I was out of the office last week. We do not monitor PM10 in the Mobile area. The only PM10 site we operate is in Montgomery County.

For The Chickasaw site, how many years of PM2.5 data are you interested in?

Gina L Curvin
Chief, Air/Facility Section
ADEM Field Operations Division
1350 Coliseum Blvd
Montgomery, AL 36110
Phone/Fax (334) 260-2783

From: Justin Fickas <JFickas@trinityconsultants.com>
Sent: Tuesday, July 5, 2022 2:35 PM
To: Curvin, Gina <GCurvin@adem.alabama.gov>
Subject: AQS Forms/Monitoring Data for a PSD Permit Application (Novelis)

Dear Ms. Curvin

Trinity is preparing a PSD permit application for Novelis, for a greenfield site to be located in Baldwin County near Bay Minette, Alabama. As part of the modeling protocol process, Jim Owen of ADEM asked that I reach out to you to obtain appropriate "pre-construction monitoring" data for the Chickasaw monitor (for PM2.5) and Mobile monitor (for PM10), and include that data as an appendix to the permit application. If you could provide that data to me, it would be appreciated.

If you have any questions, please let me know.

Thanks

Justin Fickas, P.E.
Principal Consultant

Office: 678.441.9977, ext. 228 | Direct: 404.751.0228 | Fax 678.441.9978
3495 Piedmont Road NE, Building 10, Suite 905 Atlanta, GA 30305
Email: jfickas@trinityconsultants.com

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

User ID: GCURVIN

RAW DATA REPORT

Report Request ID: 2032751 Report Code: AMP350 Jul. 11, 2022

GEOGRAPHIC SELECTIONS

Tribal Code	State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	EPA Region
	01	097	0003		1						

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration
CRITERIA	88101		

AGENCY SELECTIONS

Al Dept Of Env Mgt

SELECTED OPTIONS

Option Type	Option Value
INCLUDE NULLS	YES
DAILY STATISTICS	MAXIMUM
UNITS	STANDARD
RAW DATA EVENTS	INCLUDE EVENTS
MERGE PDF FILES	YES
AGENCY ROLE	PQAO

SORT ORDER

Order	Column
1	STATE_CODE
2	COUNTY_CODE
3	SITE_ID
4	PARAMETER_CODE
5	POC

DATE CRITERIA

Start Date	End Date
2019 01 01	2021 12 31

APPLICABLE STANDARDS

Standard Description
PM25 24-hour 2012

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
RAW DATA REPORT

Jul. 11, 2022

(88101) PM2.5 - Local Conditions

SITE ID: 01-097-0003 POC: 1
COUNTY: (097) Mobile
CITY: (14392) Chickasaw
SITE ADDRESS: Iroquois and Azalea, CHICKASAW, MOBILE CO., ALABAMA
SITE COMMENTS: TRAILER AT FT. EVERETTE NAT. GUARD ARMORY CHICKASAW OZONE
MONITOR COMMENTS:

STATE: (01) Alabama
AQCR: (005) MOBILE-PENSACOLA-PANAMA CITY-SOUTH
URBANIZED AREA: (5160) MOBILE, AL
LAND USE: COMMERCIAL
LOCATION SETTING: SUBURBAN

CAS NUMBER:
LATITUDE: 30.7701810008
LONGITUDE: -88.087761
UTM ZONE:
UTM NORTHING:
UTM EASTING:
ELEVATION-MSL: 10.67
PROBE HEIGHT: 2

SUPPORT AGENCY: (0013) Al Dept Of Env Mgt
MONITOR TYPE: SLAMS
COLLECTION AND ANALYSIS METHOD: (145) R & P Model 2025 PM-2.5 Sequential
PQAO: (0013) Al Dept Of Env Mgt

REPORT FOR: 2019

DURATION: 24 HOUR
UNITS: Micrograms/cubic meter (LC)
MIN DETECTABLE: 2

Day	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1			5.9					AS				
2		10.0				14.4	11.1				TS	2.7
3	4.8 2			9.3	6.6				7.1	10.3		
4			6.4					4.6				
5		5.0				8.1	19.4				10.8	TS
6	9.5			7.1	6.9 5				10.0	7.7		
7			8.9					8.1				
8		4.2				6.4	12.0				5.8	TS
9	3.5			4.9	6.0				16.6	8.0		
10			8.9					8.4				
11		6.7				11.0	5.3				AF	2.5
12	8.7			5.5	5.5				11.1	6.0		
13			9.7					11.8				
14		AF				8.6	11.5				8.3	15.0 5
15	8.2			5.3 5	9.3				8.6	7.1		
16			3.7					11.0				
17		6.8				4.6	14.9				15.6	3.8
18	8.0			BJ	8.7				9.2	6.1		
19			9.2					4.9				
20		10.1				12.4	4.3				12.3	9.0
21	7.6			4.5	6.8				5.2	5.7		
22			11.2					6.3				
23		7.8				19.3	6.6				4.9	AS
24	3.7			8.0	7.8				8.0	7.9		
25			8.5					4.5				
26		14.7				13.7	10.2				7.6	7.4
27	11.2			8.5	9.9				11.4	4.3		
28			9.3					7.0				
29						7.9	10.8				11.6	5.4
30	5.1			10.0	11.0				8.0	3.6		
31			TS					7.3				
NO.:	10	8	10	9	10	10	10	10	10	10	8	7
MAX:	11.2	14.7	11.2	10.0	11.0	19.3	19.4	11.8	16.6	10.3	15.6	15.0
MEAN:	7.03	8.16	8.17	7.01	7.85	10.64	10.61	7.39	9.52	6.67	9.61	6.54

ANNUAL OBSERVATIONS: 112 ANNUAL MEAN: 8.30 ANNUAL MAX: 19.4

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

(88101) PM2.5 - Local Conditions

SITE ID: 01-097-0003 POC: 1
COUNTY: (097) Mobile
CITY: (14392) Chickasaw
SITE ADDRESS: Iroquois and Azalea, CHICKASAW, MOBILE CO., ALABAMA
SITE COMMENTS: TRAILER AT FT. EVERETTE NAT. GUARD ARMORY CHICKASAW OZONE
MONITOR COMMENTS:

STATE: (01) Alabama
AQCR: (005) MOBILE-PENSACOLA-PANAMA CITY-SOUTH
URBANIZED AREA: (5160) MOBILE, AL
LAND USE: COMMERCIAL
LOCATION SETTING: SUBURBAN

CAS NUMBER:
LATITUDE: 30.7701810008
LONGITUDE: -88.087761
UTM ZONE:
UTM NORTHING:
UTM EASTING:
ELEVATION-MSL: 10.67
PROBE HEIGHT: 2

SUPPORT AGENCY: (0013) Al Dept Of Env Mgt
MONITOR TYPE: SLAMS
COLLECTION AND ANALYSIS METHOD: (145) R & P Model 2025 PM-2.5 Sequential
PQAO: (0013) Al Dept Of Env Mgt

REPORT FOR: 2020

DURATION: 24 HOUR
UNITS: Micrograms/cubic meter (LC)
MIN DETECTABLE: 2

	MONTH											
Day	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1	11.9		BE					11.6				
2						9.0	10.2				4.8	7.5
3		AN		12.2	6.3				16.3	7.5		
4	3.9		3.4					11.2				
5						5.0	6.6				9.0	7.7
6		4.3		12.0	4.3				9.4	12.6		
7	3.3		5.1					14.2				
8						7.3	7.2				4.5	11.1
9		6.1		BJ	AG				8.8	6.8		
10	8.8		7.5					9.7				
11						5.6	10.0				7.0	9.0
12		7.7		17.5	AN				3.9	8.6		
13	9.3		6.7					8.2				
14						8.8	9.5				13.6	2.6
15		5.5		6.4	7.3				AO	12.7		
16	4.7		10.3					11.0				
17						8.7	8.4				8.0	8.4
18		6.2		8.7	4.0				AO	11.3		
19	2.7		6.9					12.1				
20						8.9	4.8				8.9	7.8
21		4.4 TT		6.9	6.7				AD	7.9		
22	7.3		7.1					6.5				
23						5.9	3.1				6.2	9.5
24		7.4		4.6	7.4				AD	3.6		
25	5.9		13.0					7.1				
26						20.1 IA	3.8				8.6	11.5
27		BE		5.2	4.5				8.6	7.6		
28	5.6		14.8					8.4				
29						9.8	7.6				6.7	9.4
30				5.3	8.5				9.2	5.3		
31	AN		9.1					7.0				
NO.:	10	7	10	9	8	10	10	11	6	10	10	10
MAX:	11.9	7.7	14.8	17.5	8.5	20.1	10.2	14.2	16.3	12.7	13.6	11.5
MEAN:	6.34	5.94	8.39	8.76	6.13	8.91	7.12	9.73	9.37	8.39	7.73	8.45

ANNUAL OBSERVATIONS: 111 ANNUAL MEAN: 7.98 ANNUAL MAX: 20.1

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

(88101) PM2.5 - Local Conditions

SITE ID: 01-097-0003 POC: 1
COUNTY: (097) Mobile
CITY: (14392) Chickasaw
SITE ADDRESS: Iroquois and Azalea, CHICKASAW, MOBILE CO., ALABAMA
SITE COMMENTS: TRAILER AT FT. EVERETTE NAT. GUARD ARMORY CHICKASAW OZONE
MONITOR COMMENTS:

STATE: (01) Alabama
AQCR: (005) MOBILE-PENSACOLA-PANAMA CITY-SOUTH
URBANIZED AREA: (5160) MOBILE, AL
LAND USE: COMMERCIAL
LOCATION SETTING: SUBURBAN

CAS NUMBER:
LATITUDE: 30.7701810008
LONGITUDE: -88.087761
UTM ZONE:
UTM NORTHING:
UTM EASTING:
ELEVATION-MSL: 10.67
PROBE HEIGHT: 2

SUPPORT AGENCY: (0013) Al Dept Of Env Mgt
MONITOR TYPE: SLAMS
COLLECTION AND ANALYSIS METHOD: (145) R & P Model 2025 PM-2.5 Sequential
PQAO: (0013) Al Dept Of Env Mgt

REPORT FOR: 2021

DURATION: 24 HOUR
UNITS: Micrograms/cubic meter (LC)
MIN DETECTABLE: 2

Day	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1	6.5			3.5	7.9				8.7	9.3		
2			2.6					11.0				
3		TS				5.4	8.8				8.6	16.0
4	TS			11.9	7.1				9.1	4.9		
5			11.1					14.0				
6		2.3				4.5	5.9				6.0	4.7
7	5.6			7.7	6.9				14.5	7.9		
8			14.9					10.0				
9		6.1				6.2	6.3				15.5	7.0
10	TS			4.1	5.0				6.9	9.7		
11			6.7					6.6				
12		3.9				7.5	7.5				8.1	5.1
13	8.2			9.6	5.2				5.8	8.9		
14			8.8					7.7				
15		8.9				12.5	10.0				12.1	9.8
16	6.2			7.7	9.1				5.1	4.5		
17			12.1					5.9				
18		4.2				15.2	5.0				5.3	4.9
19	10.6			6.5	5.2				3.0	8.9		
20			6.3					5.6				
21		9.2				5.3	5.8				9.9	4.0
22	3.1			6.6	10.2				5.2	8.6		
23			4.9					10.6				
24		9.5				5.3	11.6				AN	6.1
25	8.9			5.3	8.1				9.2	6.4		
26			9.8					13.0				
27		6.5				5.4	16.0				AN	7.0
28	4.8			7.9	7.8				6.8	3.7		
29			6.1					4.7				
30						AG	15.2				AN	7.9
31	7.1				6.9					6.0		
NO.:	9	8	10	10	11	9	10	10	10	11	7	10
MAX:	10.6	9.5	14.9	11.9	10.2	15.2	16.0	14.0	14.5	9.7	15.5	16.0
MEAN:	6.78	6.33	8.33	7.08	7.22	7.48	9.21	8.91	7.43	7.16	9.36	7.25

ANNUAL OBSERVATIONS: 115 ANNUAL MEAN: 7.69 ANNUAL MAX: 16.0

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

QUALIFIER CODES:

Qualifier Code	Qualifier Description	Qualifier Type
2	Operational Deviation.	QA
5	Outlier.	QA
AD	Shelter Storm Damage.	NULL
AF	Scheduled but not Collected.	NULL
AG	Sample Time out of Limits.	NULL
AN	Machine Malfunction.	NULL
AO	Bad Weather.	NULL
AS	Poor Quality Assurance Results.	NULL
BE	Building/Site Repair.	NULL
BJ	Operator Error.	NULL
IA	African Dust.	INFORM
TS	Holding Time Or Transport Temperature Is Out Of Specs.	NULL
TT	Transport Temperaure is Out of Specs.	QA

Note: Qualifier codes with regional concurrence are shown in upper case,
and those without regional concurrence are shown in lower case.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

User ID: GCURVIN

RAW DATA REPORT

Report Request ID: 2032753 Report Code: AMP350 Jul. 11, 2022

GEOGRAPHIC SELECTIONS

Tribal Code	State	County	Site	Parameter	POC	City	AQCR	UAR	CBSA	CSA	EPA Region
	01	101	1002		1						

PROTOCOL SELECTIONS

Parameter Classification	Parameter	Method	Duration
CRITERIA	81102		

AGENCY SELECTIONS

Al Dept Of Env Mgt

SELECTED OPTIONS

Option Type	Option Value
INCLUDE NULLS	YES
DAILY STATISTICS	MAXIMUM
UNITS	STANDARD
RAW DATA EVENTS	INCLUDE EVENTS
MERGE PDF FILES	YES
AGENCY ROLE	PQAO

SORT ORDER

Order	Column
1	STATE_CODE
2	COUNTY_CODE
3	SITE_ID
4	PARAMETER_CODE
5	POC

DATE CRITERIA

Start Date	End Date
2019 01 01	2021 12 31

APPLICABLE STANDARDS

Standard Description
PM10 24-hour 2006

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
RAW DATA REPORT

Jul. 11, 2022

(81102) PM10 Total 0-10um STP

SITE ID: 01-101-1002 POC: 1
COUNTY: (101) Montgomery
CITY: (51000) Montgomery
SITE ADDRESS: 1350 COLISEUM BLVD, MONTGOMERY, ALABAMA
SITE COMMENTS: OZONE, PM10, PM2.5 & BAM2.5 MONITORS ARE LOCATED AT THE MOMS SITE
MONITOR COMMENTS:

STATE: (01) Alabama
AQCR: (002) COLUMBUS-PHENIX CITY
URBANIZED AREA: (5240) MONTGOMERY, AL
LAND USE: COMMERCIAL
LOCATION SETTING: SUBURBAN

CAS NUMBER:
LATITUDE: 32.4128110009
LONGITUDE: -86.263394
UTM ZONE:
UTM NORTHING:
UTM EASTING:
ELEVATION-MSL: 76.2
PROBE HEIGHT: 4

SUPPORT AGENCY: (0013) Al Dept Of Env Mgt
MONITOR TYPE: SLAMS
COLLECTION AND ANALYSIS METHOD: (127) R - P Co Partisol Model 2025 Gravi
PQAO: (0013) Al Dept Of Env Mgt

REPORT FOR: 2019

DURATION: 24 HOUR
UNITS: Micrograms/cubic meter (25 C)
MIN DETECTABLE: 4

Day	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1								16				
2		11				22	18					
3	7			20	17							
4			TS									
5											22	21
6									16	17		
7								19				
8		5				8	14					
9	4			10	10							
10			8									
11											17	4
12									24	72		
13								18				
14		11				14	29					
15	9			6	12							
16			AJ									
17											16	2
18									25	11		
19								15				
20		8				11	11					
21	6			7	14							
22			17									
23											7	2
24									22	16		
25								11				
26		20				8	17					
27	19			13	24							
28			14									
29											12	7
30									33	8		
31								10				
NO.:	5	5	3	5	5	5	5	6	5	5	5	5
MAX:	19.	20.	17.	20.	24.	22.	29.	19.	33.	72.	22.	21.
MEAN:	9.0	11.0	13.0	11.2	15.4	12.6	17.8	14.8	24.0	24.8	14.8	7.2

ANNUAL OBSERVATIONS: 59 ANNUAL MEAN: 14.7 ANNUAL MAX: 72.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

(81102) PM10 Total 0-10um STP

SITE ID: 01-101-1002 POC: 1
COUNTY: (101) Montgomery
CITY: (51000) Montgomery
SITE ADDRESS: 1350 COLISEUM BLVD, MONTGOMERY, ALABAMA
SITE COMMENTS: OZONE, PM10, PM2.5 & BAM2.5 MONITORS ARE LOCATED AT THE MOMS SITE
MONITOR COMMENTS:

STATE: (01) Alabama
AQCR: (002) COLUMBUS-PHENIX CITY
URBANIZED AREA: (5240) MONTGOMERY, AL
LAND USE: COMMERCIAL
LOCATION SETTING: SUBURBAN

CAS NUMBER:
LATITUDE: 32.4128110009
LONGITUDE: -86.263394
UTM ZONE:
UTM NORTHING:
UTM EASTING:
ELEVATION-MSL: 76.2
PROBE HEIGHT: 4

SUPPORT AGENCY: (0013) Al Dept Of Env Mgt
MONITOR TYPE: SLAMS
COLLECTION AND ANALYSIS METHOD: (127) R - P Co Partisol Model 2025 Gravi
PQAO: (0013) Al Dept Of Env Mgt

REPORT FOR: 2020

DURATION: 24 HOUR
UNITS: Micrograms/cubic meter (25 C)
MIN DETECTABLE: 4

MONTH

Day	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1								25				
2						15	15					
3		10		15 X	11							
4	5 TT		4									
5											19	10
6									16	21		
7								21				
8						12	13					
9		6		17 X	9 X							
10	16 TT		12									
11											9	18
12									12	16		
13								15				
14						15	AS					
15		9		7 X	17 X							
16	BJ		20 TT									
17											AN	14
18									13	14		
19								14				
20						18	AS					
21		5		12 X	10							
22	11		8 TT									
23											9	12
24									9	9		
25								22				
26						67 IA	11					
27		4		9	7							
28	11		19 TT									
29											8	15
30									15	8		
31								14 X				
NO.:	4	5	5	5	5	5	3	6	5	5	4	5
MAX:	16.	10.	20.	17.	17.	67.	15.	25.	16.	21.	19.	18.
MEAN:	10.8	6.8	12.6	12.0	10.8	25.4	13.0	18.5	13.0	13.6	11.3	13.8

ANNUAL OBSERVATIONS: 57 ANNUAL MEAN: 13.6 ANNUAL MAX: 67.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

(81102) PM10 Total 0-10um STP

SITE ID: 01-101-1002 POC: 1
COUNTY: (101) Montgomery
CITY: (51000) Montgomery
SITE ADDRESS: 1350 COLISEUM BLVD, MONTGOMERY, ALABAMA
SITE COMMENTS: OZONE, PM10, PM2.5 & BAM2.5 MONITORS ARE LOCATED AT THE MOMS SITE
MONITOR COMMENTS:

STATE: (01) Alabama
AQCR: (002) COLUMBUS-PHENIX CITY
URBANIZED AREA: (5240) MONTGOMERY, AL
LAND USE: COMMERCIAL
LOCATION SETTING: SUBURBAN

CAS NUMBER:
LATITUDE: 32.4128110009
LONGITUDE: -86.263394
UTM ZONE:
UTM NORTHING:
UTM EASTING:
ELEVATION-MSL: 76.2
PROBE HEIGHT: 4

SUPPORT AGENCY: (0013) Al Dept Of Env Mgt
MONITOR TYPE: SLAMS
COLLECTION AND ANALYSIS METHOD: (127) R - P Co Partisol Model 2025 Gravi
PQAO: (0013) Al Dept Of Env Mgt

REPORT FOR: 2021

DURATION: 24 HOUR
UNITS: Micrograms/cubic meter (25 C)
MIN DETECTABLE: 4

MONTH

Day	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
1									14	21		
2								22				
3		15				10	13					
4	9			15	12							
5			16									
6											9	8
7									14	BJ		
8								17				
9		7				11	11					
10	10			6	7							
11			22									
12											10	7
13									14	17		
14								11				
15		3				20	AN					
16	11			17	11							
17			16									
18											15	7
19									8	16		
20								8				
21		9				12	AN					
22	4			12	16							
23			19									
24											13	8
25									12	14		
26								21				
27		14				8	16					
28	5			20	14							
29			8									
30											18	10
31										8		
NO.:	5	5	5	5	5	5	3	5	5	5	5	5
MAX:	11.	15.	22.	20.	16.	20.	16.	22.	14.	21.	18.	10.
MEAN:	7.8	9.6	16.2	14.0	12.0	12.2	13.3	15.8	12.4	15.2	13.0	8.0

ANNUAL OBSERVATIONS: 58 ANNUAL MEAN: 12.4 ANNUAL MAX: 22.

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

QUALIFIER CODES:

Qualifier Code	Qualifier Description	Qualifier Type
AJ	Filter Damage.	NULL
AN	Machine Malfunction.	NULL
AS	Poor Quality Assurance Results.	NULL
BJ	Operator Error.	NULL
IA	African Dust.	INFORM
TS	Holding Time Or Transport Temperature Is Out Of Specs.	NULL
TT	Transport Temperaure is Out of Specs.	QA
X	Filter Temperature Difference or Average out of Spec.	QA

Note: Qualifier codes with regional concurrence are shown in upper case,
and those without regional concurrence are shown in lower case.

APPENDIX F. CLASS I FLM CORRESPONDENCE

Request for Applicability of Class I Area Modeling Analysis

Facility Name (Company Name)	Novelis
New Facility or Modification?	New Facility
Source Type/BART Applicability	
Project Location (County/State/ Lat. & Long. in decimal degrees)	Near Bay Minette, AL – (30.949875, -87.742128)

Application Contacts

Applicant		***Consultant***		***Air Agency Permit Engineer***	
Company	Novelis	Company	Trinity Consultants	Agency	Alabama Department of Environmental Management
Contact	Steven Royer	Contact	Justin Fickas	Contact	Jim Owen
Address	Novelis Inc 3560 Lenox Road, Suite 2000 Atlanta, GA 30326	Address	3495 Piedmont Rd NE, Building 10, Suite 905 Atlanta, GA 30305	Address	1400 Coliseum Boulevard Montgomery, AL 36110
Phone #	404-263-1948	Phone #	404-751-0228	Phone #	334-271-7911
Email	Steve.Royer@novelis.adityabirla.com	Email	jfickas@trinityconsultants.com	Email	JO@adem.alabama.gov

Briefly Describe the Proposed Project

Novelis plans for the construction and operation of a new integrated aluminum rolling mill at a greenfield site near the town of Bay Minette, Alabama.

Proposed Emissions and BACT

Criteria Pollutant	***Emissions***		***Emission Factor (AP-42, Stack Test, Other?)***	***Proposed BACT***
	Maximum hourly (lb/hr)	***Proposed Annual (tons/yr)***		
Nitrogen Oxides	195.87	857.91	AP-42/Design Data	Varies – application documentation can be obtained from ADEM
Sulfur Dioxide	0.67	2.94	AP-42/Design Data	Varies – application documentation can be obtained from ADEM
Particulate Matter	96.06	420.76	AP-42/Design Data	Varies – application documentation can be obtained from ADEM
Sulfuric Acid Mist	N/A	N/A	N/A	N/A

Proximity to U.S. Forest Service Class I Areas

Class I Area	Breton Wilderness		
Distance from Facility (km)	146.3	Q/D value = 8.76	