PSD AIR PERMIT APPLICATION
Modeling Report

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Apple Grove, WV Plant

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1. EXECUTIVE SUMMARY

Nucor Steel West Virginia, LLC (NSWV) in association with our air quality contractor, Trinity Consultants (Trinity), is pleased to submit this dispersion modeling report for the "as-designed" steel mill in the city of Apple Grove, West Virginia (NSWV). The original Prevention of Significant Deterioration (PSD) application for this greenfield steel mill was submitted to the West Virginia Department of Environmental Protection (WVDEP) in January 2022. A revision to the application was submitted in March 2022 and the resulting permit was issued May 5, 2022.

NSWV is submitting this modeling report as part of an as-designed air permitting reconciliation effort to ensure the air permit basis is fully reflective of the final engineering design of buildings, purchased equipment, utilities, and site layout and configuration being constructed in Apple Grove. As part of the as designed reconciliation permit application, the original dispersion modeling analyses was updated to account for any relevant source, building, or other site layout changes and final emissions calculations.

Like the original modeling, the estimated as-designed potential emissions exceed the PSD major thresholds for particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns (PM_{10}), particulate matter with an aerodynamic diameter of 2.5 microns ($PM_{2.5}$), volatile organic compounds (VOC), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen oxides (NO_X), lead, fluorides, and greenhouse gases (GHGs). The WVDEP has codified the federal PSD permitting requirements in Title 45 of the West Virginia Code of State Rules (45 CSR) Section 14 and has full authority to implement this program through its United States Environmental Protection Agency (U.S. EPA) authorized State Implementation Plan (SIP).

This modeling report outlines the methodologies that were used to conduct the air dispersion modeling analysis required under PSD permitting for NSWV consistent with 45 CSR 14-10. Air dispersion modeling is relied upon to demonstrate that NSWV complies with the applicable NAAQS and PSD Class II Increments for the pollutant(s) subject to PSD review.

With the submittal of the as-designed New Source Review 45 CSR14 (R14) application for this project, NSWV is providing electronic files associated with the PSD air dispersion modeling analysis of NSWV. NSWV is also including those files associated with importing terrain elevations, building downwash, meteorological data, and AERMOD. Additionally, with this PSD dispersion modeling report, NSWV is providing to WVDEP plots indicating the location of the facility fence line and facility layout.

NSWV is a major source with respect to the PSD and Title V operating permit programs. Under the New Source Review (NSR) program, NSWV is a major source for the following pollutants: carbon monoxide (CO), nitrogen oxides (NO_X), sulfur dioxide (SO_2), particulate matter less than or equal to ten microns (PM_{10}), particulate matter less than or equal to 2.5 microns ($PM_{2.5}$), volatile organic compounds (VOC), lead (Pb), and greenhouse gases (GHGs). NSWV has developed an NSR modeling analysis to demonstrate that NSWV will not cause or contribute to a violation of any ambient air quality standards for these pollutants. To this effect, modeling has been structured as an amendment to the dispersion modeling previously submitted for the facility. Dispersion models have additionally been revised to reflect updated regional source data, pollutant background concentrations, meteorological data, and final facility building design and grading. This report details the air quality analysis that was completed in support of the permit modification.

The area immediately surrounding the facility is designated as attainment for all applicable National Ambient Air Quality Standards (NAAQS) and is designated as Class II in terms of its PSD area classification.[1] As such, a Class II air quality analysis for PM_{10}, $PM_{2.5}$, CO, SO_2, NO_2, fluorides, and lead was conducted. Additionally, analyses were conducted for secondary $PM_{2.5}$ and ozone. Finally, the boundaries of four Class I areas (Otter Creek Wilderness, Dolly Sods Wilderness, James River Face Wilderness and Shenandoah National Park), are located within 300 kilometers (km) of NSWV. Therefore, a Class I SIL analysis was performed to assess the potential impact of NSWV on these Class I areas.

In summary, this air quality analysis demonstrates for the Class II area that emissions of the applicable pollutants from NSWV will not: 1) Cause or significantly contribute to a violation of the NAAQS; 2) Cause or significantly contribute to a violation of incremental standards; or 3) Cause any other adverse impacts to the surrounding area (i.e., impacts on soil and vegetation, visibility degradation, etc.). The methodologies discussed in this report are consistent with applicable guidance provided at both the state and federal level for PSD projects.

The results of the air quality analysis presented in this report can be summarized as follows:

- NSWV does not cause any ambient impacts of CO above the 1-hr Class II Significant Impact Level (SIL). Maximum ambient impacts of CO are estimated to be above the SIL for the 8-hr averaging period. NSWV does not cause or contribute to any exceedance of the 8-hr CO NAAQS.
- NSWV does not cause any ambient impacts of SO_2 above the 3-hr, 24-hr, and annual Class II SIL. Maximum ambient impacts of SO_2 are estimated to be above the SIL for the 1-hr averaging period. NSWV does not cause or contribute to any exceedance of the 1-hr SO_2 NAAQS. Impacts are also below all applicable Class II PSD Increments for SO_2.
- Maximum ambient impacts of NO_2 are estimated to be above the SILs for both the 1-hr and annual averaging periods. NSWV does not cause or contribute to any exceedance of the 1-hr or annual NO_2 NAAQS. Impacts are also below all applicable Class II PSD Increments for NO_2.
- Maximum ambient impacts of PM_{10} are estimated to be above the SILs for both the 24-hr and annual averaging periods. NSWV does not cause or contribute to any exceedance of the 24-hr PM_{10} NAAQS. Impacts are also below all applicable Class II PSD Increments for PM_{10}.
- Maximum ambient impacts of $PM_{2.5}$ are estimated to be above the SILs for both the 24-hr and annual averaging periods. NSWV does not cause or contribute to any exceedance of the 24-hr or annual $PM_{2.5}$ NAAQS. Impacts are also below all applicable Class II PSD Increments for $PM_{2.5}$. Note that all modeling analyses for $PM_{2.5}$ considered ambient impacts of secondary $PM_{2.5}$ from NO_X and SO_2 precursors.
- Maximum ambient impacts of lead are below the Rolling 3-Month Average NAAQS.
- Maximum ambient impacts of fluorides are marginally above the Significant Monitoring Concentration (SMC), but do not warrant pre-construction monitoring.
- Maximum ambient impacts of NSWV on the formation of ozone result in impacts below the NAAQS.
- NSWV does not cause any ambient impacts of NO_2, SO_2, $PM_{2.5}$, or PM_{10} above their respective Class I SILs.

NSWV is providing all relevant model input and output files associated with these air quality analyses to WVDEP.

[1] Attainment designations can be found at 40 CFR 81.349.

2. PSD MODELING PROCEDURES

The following sections detail the methods and models used to demonstrate that NSWV will not cause or contribute to a violation of either the NAAQS or the PSD Class I or Class II Increments. The dispersion modeling analyses were conducted in accordance with the following guidance documents:

- *EPA's Guideline on Air Quality Models,* 40 CFR 51, Appendix W (Published November 20, 2024), which West Virginia cites by reference in Section 10 of 45 CSR 14.[2]
- EPA's User's Guide for the AMS/EPA Regulatory Model – AERMOD, (November 2024)[3]
- EPA's AERMOD Implementation Guide (November 2024)[4]
- EPA's New Source Review Workshop Manual (Draft, October 1990)[5]
- EPA's Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier I Demonstration Tool (April 2019)[6]
  - EPA's Memorandum on the Clarification 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 (April 2024)[7]

Part C of Title I of the Clean Air Act, 42 U.S.C. §§7470-7492, is the statutory basis for the PSD program. EPA has codified PSD definitions, applicability, and requirements in 40 CFR Part 52.21. PSD is the component of the federal NSR permitting program that is applicable in areas that are are designated in attainment/unclassifiable of the NAAQS. Mason County, where the facility is located, is currently designated as "attainment" or "unclassifiable" for all criteria pollutants.[8]

2.1 Class II Dispersion Modeling Requirements

Because sources and emissions at NSWV are subject to the ambient air quality assessment requirements of the PSD program, modeling is required to meet specific objectives. Namely, modeling was used to demonstrate that emissions of CO, SO_2, NO_2, PM_{10}, $PM_{2.5}$, fluorides, and lead pollutants from NSWV 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

[2] 40 CFR 51, Appendix W, Guideline on Air Quality Models

[3] User's Guide for the AMS/EPA Regulatory Model (AERMOD), EPA-454/B-23-008, EPA, OAQPS, Research Triangle Park, NC, November 2024.

[4] EPA, *AERMOD Implementation Guide*, November 2024, available at https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_implementation_guide.pdf

[5] EPA, *New Source Review Workshop Manual*, Draft October 1990, available at http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf

[6] https://www.epa.gov/sites/default/files/2019-05/documents/merps2019.pdf

[7] https://www.epa.gov/sites/default/files/2020-09/documents/epa-454_r-19-003.pdf

[8] 40 CFR 81.349

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).

To facilitate this analysis (and allow it to be commensurate with the requirements to which the WVDEP adheres), dispersion modeling methodologies were followed consistent with EPA procedures specified in the *Guideline on Air Quality Models (Guideline)*.[9] The air dispersion modeling methodology employed is discussed in greater detail in Section 4.

NSWV has completed all dispersion modeling and air impact assessments required under the regulations for PSD. This includes all Class II area modeling analyses as required. Additionally, Class I area screening techniques were used to demonstrate that more detailed regional scale modeling was not needed. Class I area screening techniques implemented included the use of the so-called Q/D analysis for the Air Quality Related Value (AQRV) demonstration, and an AERMOD analysis with receptors positioned at the extent of the nearfield analysis (50 km) for the Class I PSD Increment demonstration.

For the Class II analyses, the various stages of modeling that were performed were dependent on compliance observed at each step. The modeling steps which were followed are outlined below:

- Step 1 - Determined if ambient air quality impacts of the sources were greater than or less than the SILs on a per pollutant and per averaging time basis. Table 2-1 shows the applicable SILs and other important criteria pollutant thresholds for CO, SO_2, NO_2, PM_{10}, $PM_{2.5}$, fluorides, and lead. Note that NSWV did not model any alternative operating or start-up/shutdown scenarios.

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[9] 40 CFR 51, Appendix W, *Guideline on Air Quality Models*, and 45 CSR 14-10

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

Pollutant	Averaging Period	PSD SIL (µg/m³)	Primary NAAQS (µg/m³)	Secondary NAAQS (µg/m³)	Class II PSD Increment[1] (µg/m³)	Significant Monitoring Concentration (µg/m³)
CO	1-hour	2,000	40,000 (35 ppm)[2]	--	--	--
	8-hour	500	10,000 (9 ppm)[2]	--	--	575
SO_2	1-hour	7.8	196 (75 ppb)	--	--	--
	3-hour	25	--	--	512	--
	24-hour	5	--	--	91	13
	Annual	1	--	26(10 ppb)	20	--
NO_2	1-hour	7.5[3]	188 (100 ppb)[4]	--	--	--
	Annual	1	100 (53 ppb)[5]	100 (53 ppb)	25	14
PM_{10}	24-hour	5	150[6]	150	30	10
	Annual	--	--[7]	--	17[7]	--
$PM_{2.5}$	24-hour	1.2[8]	35[9]	35	9	4[11]
	Annual	0.13[8]	9[10]	15[10]	4	--
Lead	3-month rolling	--	0.15	0.15	--	0.1
Fluorides	24-hour	--	--	--	--	0.25

1. All short-term PSD Increments are not to be exceeded more than once per year.
2. Only a primary standard, not to be exceeded more than once per year.
3. No 1-hour NO_2 SIL has been promulgated by EPA. An interim SIL of 7.5 µg/m³ (4 ppb) was selected based on the EPA Office of Air Quality Planning and Standards Memorandum from Ms. Anna Marie Wood to Regional Air Division Directors titled *General Guidance for Implementing the 1-hour NO_2 National Ambient Air Quality Standard in Prevention of Significant Deterioration Permits, Including an Interim 1-hour NO_2 Significant Impact Level* (June 28, 2010).[10]
4. Only a primary standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average concentrations.
5. Annual arithmetic average.
6. Not to be exceeded more than three times in 3 consecutive years.
7. The EPA revoked the annual PM_{10} NAAQS in 2006, but the annual PM_{10} Class II PSD Increment remains in effect.
8. U.S. EPA Supplement to the Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program, April 2024.
9. The 3-year average of the 98th percentile 24-hour average concentrations.
10. U.S. EPA published a final rule (89 FR 16202), with an effective date of May 6, 2024, that reduced the primary annual $PM_{2.5}$ NAAQS from 12 µg/m³ to 9 µg/m³ and retained the secondary annual $PM_{2.5}$ NAAQS at 15 µg/m³. Both the primary and secondary standards are expressed as the 3-year average of the annual arithmetic average concentration.
11. On January 22, 2013, the U.S. DC Court of Appeals vacated the $PM_{2.5}$ SMC of 4 µg/m³.

- Step 2 - Performed NAAQS dispersion modeling where air modeling impacts were greater than the SILs (in Step 1) to estimate the NAAQS impacts of the facility sources and regional inventory sources on a combined basis. The screening distance for assessing nearby regional inventory sources was based on

[10] https://www.epa.gov/sites/default/files/2015-07/documents/appwno2.pdf

the distances to the 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 were also added to the total impacts of all sources. The modeled maximum 3-month rolling arithmetic mean concentration of lead were calculated using LEADPOST software developed by U.S. EPA. [11]

- Step 3 - Performed PSD increment modeling, where air modeling impacts were greater than the SILs (in Step 1) to estimate the PSD increment impacts of the facility sources as well as any regional inventory sources. The screening distance for assessing regional PSD increment consuming or expanding sources was based on the distances to NSWV's maximum concentrations and the expected area with the highest concentration gradient from NSWV's modeled sources; no PSD increment consuming or expanding sources were identified or included in the PSD increment modeling analyses.

- Step 4 – Prepared an "additional air impacts" analysis. This analysis used the results of the Significance Analysis modeling in Step 1 to compare ambient impacts to the secondary NAAQS. Incremental air quality impacts due to growth in the local infrastructure that may result from added employees and attendant industries was qualitatively evaluated. Finally, Class II area visibility impacts were evaluated on a screening basis using EPA's VISCREEN model.[12]

- Step 5 – Addressed the ozone and secondary $PM_{2.5}$ ambient impact analysis requirements by conducting a quantitative assessment of potential ozone impacts from NSWV. The quantitative assessment relied 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 and EPA's *Memorandum on the Clarification 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,* published April 2024.[13,14]

Modeling included all facility emission units at their potential to emit emission rates. Refer to Section 3.5 for additional details about the approach on how emergency engines (e.g., emergency generators) were modeled.

2.2 Background Concentrations

Ambient background monitoring concentrations are necessary for any required full NAAQS analysis for the facility. Nearby ambient background monitoring stations were reviewed, and monitors for CO, SO_2, NO_2, PM_{10}, $PM_{2.5}$, and ozone concentrations were selected on the basis of monitor sites with data for the required pollutants, proximity, and representativeness (based on similar land use and geographical setting). The following stations were chosen as appropriately representative ambient background monitoring stations for the pollutants indicated. The monitors selected are:

- $PM_{2.5}$ – Athens Site (AQS Site ID 39-009-0003)

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[11] LEADPOST Software, avialable at https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

[12] Note that CO and GHGs are not visibility affecting pollutants; therefore, the Class II area visibility analysis only addressed project emissions increase for NO_X and PM.

[13] https://www.epa.gov/sites/default/files/2020-09/documents/epa-454_r-19-003.pdf

[14] https://www.epa.gov/sites/default/files/2019-05/documents/merps2019.pdf

- Ozone – Huntington Site (AQS Site ID 54-011-0007)
- PM_{10} – Ironton Site (AQS Site ID 39-087-0012)
- NO_2 – Ashland Site (AQS Site ID 21-019-0017)
- SO_2 – Lakin DRR Site (AQS Site ID 54-053-0001)
- CO – Charleston Site (AQS Site ID 54-039-0020)
- Lead - None

Table 2-2 below summarizes the background concentrations used in the NAAQS analysis.

Table 2-2. Selected Background Concentrations

Pollutant	Averaging Period	Monitor	Background Concentration [15] (µg/m³)
SO_2	1-Hour	Lakin DRR (54-053-0001)	96.85
NO_2	1-Hour	Ashland (21-019-0017)	Varies
	Annual	Ashland (21-019-0017)	11.01
$PM_{2.5}$	24-Hour	Athens (39-009-0003)	15.0
	Annual	Athens (39-009-0003)	5.9
PM_{10}	24-Hour	Ironton (39-087-0012)	35.33
CO	8-Hour	Charleston (54-039-0020)	1,000
Lead	Rolling 3-Month Avg.	See Discussion Below	
Ozone	8-Hour	Huntington (54-011-0007)	62 ppb

2.2.1 $PM_{2.5}$ Background Monitor

For $PM_{2.5}$ consideration, candidate monitoring stations were evaluated within a 100-km radius of NSWV. Most of the monitors nearest to NSWV are located in a Core Based Statistical Area (CBSA). These monitors are located in or near urban areas, which means the monitors would capture many smaller sources of $PM_{2.5}$ emissions. Additionally, most are also located within close proximity (<15 km) to significant $PM_{2.5}$ emissions sources (Steel Dynamics, Hanging Rock Energy, John E Amos Power Plant, and/or Catlettsburg Refinery). For these reasons, these monitors would not be representative of the rural area around NSWV, in which there are little to no $PM_{2.5}$ emission sources within a 15-km radius other than the APG Polytech facility, which was explicitly modeled as a nearby source in the $PM_{2.5}$ modeling analyses.

Based on an assessment of the many factors affecting the candidate monitoring stations, NSWV will use the Athens, OH (Gifford) monitoring station (AQS Site ID 39-009-0003). The overall monitoring objective of the Athens monitoring station is regional scale background, which is appropriate for the rural area surrounding NSWV where all significant nearby sources (<15 km) are being explicitly modeled. Nearly every other candidate monitoring station has the objective of measuring population exposure or source oriented at an urban or neighborhood scale, which is more appropriate for determining background concentrations in those specific areas. Moreover, if the total emissions at varying distances (0 to 30 km) from NSWV are compared to the total emissions at varying distances from each candidate monitoring station, the most similar monitoring station is the Athens station.[16] Therefore, the Athens $PM_{2.5}$ monitoring station is the most representative of NSWV.

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[15] Values obtained from U.S. EPA AirData: https://www.epa.gov/outdoor-air-quality-data/monitor-values-report

[16] Refer to Appendix A of March 2025 Modeling Protocol for detailed review of nearby $PM_{2.5}$ monitoring stations.

Consistent with recent U.S. EPA guidance, NSWV has excluded atypical smoke events from the $PM_{2.5}$ design value calculations using U.S. EPA's Exceptional Events Design Value Tool.[17,18] Specifically, NSWV excluded all monitoring data flagged with wildfire, prescribed fire, structural fire, or fireworks data flags. There are no regularly occurring agricultural fires (e.g., sugarcane burning) that occur within a close enough proximity to the Athens monitor that would be expected to significantly impact monitored concentrations. As such, all smoke events near the Athens monitor would be expected to be "atypical" and not appropriate for inclusion in a background concentration, which should be representative of typical ambient air quality for the area. By excluding these smoke events, the annual $PM_{2.5}$ design value concentration changed from 6.1 $\mu g/m^3$ to 5.9 $\mu g/m^3$, and the 24-hour $PM_{2.5}$ design value concentration changed from 16 $\mu g/m^3$ to 15 $\mu g/m^3$.

2.2.2 SO_2 Background Monitor

For SO_2 consideration, the nearest monitors to NSWV are located in the CBSA of Point Pleasant, WV, between 27 and 35 km north of the site and within the vicinity of the Kyger Creek, Mountaineer, and Gavin Power Plants. The Lakin monitor (AQS Site ID 54-053-0001) is the most distant of the four SO_2 monitors located in the Point Pleasant CBSA. However, the Lakin monitor is a Data Requirements Rule (DRR) monitor, located to capture the maximum impacts from Gavin and Kyger Power Plants. The Lakin monitor is also the closest monitor to the Mountaineer Power Plant. Therefore, selection of the Lakin monitor as the SO_2 background monitor more than adequately captures any potential SO_2 impacts from these power plants in NSWV SO_2 modeling analysis.

2.2.3 NO_2 Background Monitor

For NO_2 consideration, the Ashland, KY monitor is the closest NO_2 monitor to NSWV, located approximately 46 km southwest. Therefore, NSWV has selected to use the Ashland monitoring station for both 1-hr and annual NO_2 background concentrations.

For the NO_2 1-hr averaging period, NSWV utilized diurnal and seasonal patterns of monitored concentrations to develop more refined "second tier" background concentrations, in accordance with EPA guidance.[19,20] NO_2 concentration values, varying by season and hour of day, were included in the AERMOD model for the NO_2 1-hr NAAQS. For any season and hour of day combinations for which there was insufficient quality assured data, NSWV substituted these values with the maximum of the adjacent hours within the same season. For example, if a daily calibration occurs at 2AM each day, such that there is insufficient data to determine a season and hour of day value for 2AM, then the maximum concentration recorded between the 1AM and 3AM values for the given season would be substituted for the 2AM value.

2.2.4 CO Background Monitor

For CO, the only ambient monitoring station within 150 km of NSWV is the Charleston monitor (AQS Site ID 54-039-0020) which is located in Kanawha County, WV. The Charleston monitor is located approximately 58 km southeast of NSWV in a suburb adjacent to downtown Charleston, WV. As such, the monitor is expected to be impacted by urban sources of CO emissions including mobile sources, residential heating, and nearby

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[17] U.S. EPA's Guidance on Developing Background Concentrations for Use in Modeling Demonstrations, November 2024, available at https://www.epa.gov/system/files/documents/2024-11/background-concentrations.pdf

[18] EPA's Exceptional Events Design Value Tool, https://www.epa.gov/air-quality-analysis/exceptional-events-design-value-tool

[19] https://www.epa.gov/sites/default/files/2015-07/documents/appwno2_2.pdf

[20] https://www.epa.gov/system/files/documents/2021-09/revised_draft_guidance_for_o3_pm25_permit_modeling.pdf

industrial facilities. Based on the 2020 National Emissions Inventory (NEI), Kanawha County reported annual CO emissions of 34,101 tons in 2020, and by comparison Mason County reported 5,708 tons of CO emissions in 2020. As such, selection of the Charleston monitor to establish a CO background concentration for NSWV is conservative.

2.2.5 PM_{10} Background Monitor

For PM_{10} consideration, the Ironton monitor was chosen, as it is the closest monitor to the facility, about 45 km southwest, and has a similar geographic location adjacent to the Ohio River.

2.2.6 Ozone Background Monitor

The Huntington site was chosen as the most representative monitor for ozone due to its proximity, about 35 km southwest, and similar geographic location to NSWV. It is the closest monitor to NSWV.

2.2.7 Lead Background Monitor

For lead consideration, the nearest monitors to NSWV are located in Marietta, OH (AQS Site ID 39-167-0008) and Columbus, OH (AQS Site ID 39-049-0040) approximately 104 km and 160 km away from NSWV, respectively. The design values for the Marietta monitor and Columbus monitor are 0.01 and 0.0 μg/m^3, respectively. Non-negligible lead emissions only occur from relatively few types of sources. Therefore, to account for the background concentration, NSWV has chosen to include relatively distant regional sources of lead in the NAAQS model in lieu of adding a background concentration. More specifically, lead emissions were included from the Gavin Power Plant and Kyger Creek Power Plant.

2.3 Ambient Monitoring Requirements

Under current U.S. EPA policies, the maximum impacts attributable to the emissions increases from a project must be assessed against significant monitoring concentrations to determine whether pre-construction monitoring should be considered. A pre-construction air quality analysis using continuous monitoring data can be required for pollutants subject to PSD review per 40 CFR § 52.21(m). The significant monitoring concentrations are provided in 40 CFR § 52.21(i)(5)(i) and are listed in Table 2-1. If either the predicted modeled impact from NSWV or the existing ambient concentration is less than the significant monitoring concentration, the permitting agency has the discretionary authority to exempt an applicant from pre-construction ambient monitoring.

The maximum estimated rolling 3-month average concentration for lead from the NAAQS analysis (see Table 6-2 for summary of results), which includes contributions from regional sources, is below the significant monitoring concentration of 0.1 μg/m^3. As such, NSWV is exempt from pre-construction ambient monitoring for lead.

When not exempt, an applicant may provide existing data representative of ambient air quality in the affected area or, if such data are not available, collect background air quality data. However, this requirement can be waived if representative background data have been collected and are available. To satisfy the PSD pre-construction monitoring requirements, NSWV proposes that existing monitoring data provide reasonable estimates of the background pollutant concentrations for the pollutants of concern. The representativeness of existing monitoring data was outlined further in Section 2.2. For this reason, NSWV believes that pre-construction monitoring is not required for NSWV and formally requests that WVDEP waive this requirement.

3. MODELED EMISSION SOURCES

All emission sources of criteria pollutants for which PSD is triggered, with the exception of VOC and NO_X as a precursor to ozone which are assessed in the ozone impacts analysis presented in Section 7.1, were evaluated in the Class II PSD air quality analyses. A list of all emission sources at NSWV is included in Appendix B – source designations, emission rates, and parameters are provided. The AERMOD dispersion model allows for emission points to be represented as point, area, or volume sources. The following subsections describe the source characterization and discharge parameters associated with each emissions source at NSWV.

3.1 Unobstructed Point Sources

For point sources with unobstructed vertical releases, it is appropriate to use actual stack parameters (i.e., height, diameter, discharge gas temperature, and gas exit velocity) in the modeling analyses. Appendix B provides the stack parameters for all emission sources represented as point sources.

3.2 Flare Sources

The two flares at NSWV (i.e., flares associated with Vacuum Tank Degasser #1 and #2) were modeled as point sources in accordance with the procedure outlined in Section 2.1.2 of the AERSCREEN User's Guide.[21]

3.3 Area Sources

Emissions sources modeled as area sources require the release height, the X dimension, the Y dimension, and the orientation angle to be specified as source parameters. These parameters vary depending on the area source's characteristics.

Fugitive emissions from material transfer from uncaptured scrap substitute to day bin, from day bin to belt conveyors, and from belt conveyors to extraction equipment, scrap cutting, slag processing, long term radial stacker, magnet, hopper piles, brick crushing, and various material recovery operations were included as area sources in the model. The parameters for these sources were calculated in accordance with the guidance provided in Section 3.3.2.4 of the AERMOD User's Guide.[22]

3.4 Volume Sources

Fugitive emissions sources are modeled as volume sources requiring the release height, initial lateral dimension, σ_{y0}, and initial vertical dimension, σ_{z0}, to be specified as source parameters. These parameters vary depending on the volume source's characteristics such as whether it is a surface-based or elevated source.

The volume sources included in this air dispersion modeling analysis include but are not limited to fugitive emissions from the facility roadways, material transfer, uncaptured scrap substitute, melt shop baghouse unloading, makeup air units, scrap and coil cutting baghouse, dust silo loadout, scrap handling, and material

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[21] https://gaftp.epa.gov/Air/aqmg/SCRAM/models/screening/aerscreen/aerscreen_userguide.pdf

[22] https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_userguide.pdf

stockpiles. The release parameters for these sources were calculated in accordance with the guidance provided in Section 3.3.2.2 of the AERMOD User's Guide.[22]

3.5 Emergency Equipment

Several emergency units (emergency generators) are operated at NSWV. These units were excluded from the 1-hr NO_2 and 1-hr SO_2 modeling analyses, because the frequency of maintenance and readiness testing for these emergency engines is intermittent. Available modeling guidance (e.g. March 1, 2011 Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hr NO_2 National Ambient Air Quality Standard) indicates that it would be inappropriate to model intermittent sources continuously. Given the short term and intermittent nature of operation of the emergency units, modeling of these units would have an inappropriate influence on modeled design concentrations for the 1-hr NO_2 and 1-hr SO_2 NAAQS, given their actual limited use and operations. Therefore, the emergency units were not included in any 1-hr NO_2 or 1-hr SO_2 modeling analyses for NSWV.

However, the emergency units were included within the CO, $PM_{2.5}$, and PM_{10} modeling analyses. Although NSWV anticipates the emergency units to generally be operated no more than one hour per day for maintenance purposes, NSWV conservatively modeled the emergency units at their peak hourly emission rate for all short-term (1-hr, 8-hr, 24-hr) averaging periods of the CO, $PM_{2.5}$, and PM_{10} modeling analyses. Annual emission rates took into consideration that operation for readiness testing and maintenance checks is limited to less than 100 hr/yr pursuant to the emergency engine operating requirements under applicable federal air regulations (e.g., 40 CFR 60 Subpart JJJJ).

3.6 Regional Source Inventory (Class II Modeling)

Dispersion modeling for the significance analysis was conducted for all NSWV sources using hourly or annual potential CO, SO_2, PM_{10}, $PM_{2.5}$, lead, and NO_X emission rates, where applicable, based on the averaging period of the underlying NAAQS or PSD Increment standard. As per PSD modeling requirements, for any off-site air concentration impact calculated that is greater than the SIL for a given pollutant, the radius of the significant impact area (SIA) was determined based on the extent to where the farthest receptor is located at which the SIL is exceeded. Thus, the SIA encompasses a circle centered on the facility with a radius extending out to either (1) the farthest location where the emissions of a pollutant causes a significant ambient impact [i.e., modeled impact above the SIL on a high-first-high (H1H) basis] or (2) a maximum distance of 50 km, whichever is less.[23]

Under EPA's previous guidance in Section IV.C.1 of the draft *New Source Review Manual* applicable to "deterministic" NAAQS, all sources within the SIA no matter how small or distant would be included in the regional inventory, and the remaining sources outside of the SIA but within 50 km would be assumed to potentially contribute to ground-level concentrations within the SIA and would be evaluated for possible inclusion in the NAAQS analysis.[24] For deterministic NAAQS like the annual NO_2 standard, this procedure is generally still valid and was used in cases where modeled impacts from the Significance Analysis exceed the SIL. The SIA for each pollutant and averaging period was determined and results are summarized in Table 6-1. Sources in the raw inventories provided by state agencies were first screened to remove sources located outside of the radius of impact (ROI) [i.e., the significant impact area (SIA) plus 50 km (or 10 km for 1-hour NO_2 and SO_2, as discussed below)]. The remaining sources within the ROI were then screened

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

[24] EPA, *New Source Review Workshop Manual*, Draft October 1990, available at http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf

based on an emissions (Q) over distance (d) screening technique called the "20D" procedure to identify small and distant sources that could be excluded from the NAAQS analysis because they were not anticipated to impact receptors in the SIA.[25]

For short-term probabilistic NAAQS like the 1-hour NO_2 and 1-hr SO_2 standards, this procedure often produces an inordinately large number of regional inventory sources due to larger SIA distances caused by peak hourly impacts during certain low frequency meteorological events. Recognizing the limitations of the NSR Manual procedure developed at a time when no probabilistic 1-hour NAAQS were in effect, EPA now recommends a different regional inventory screening procedure focusing primarily on the concentration gradient of the source and professional judgement by the dispersion modeler. As indicated in Appendix W, EPA states that "the number of nearby sources to be explicitly modeled in the air quality analysis is expected to be few except in unusual situations [and] in most cases, the few nearby sources are located within the first 10 to 20 km from the source(s) under consideration." As such, for 1-hour NO_2 and 1-hr SO_2 regional inventories, sources within SIA plus 10 km of NSWV were included in an initial regional inventory and then 20D screening is applied to arrive at final inventories.

SO_2, NO_X, CO, PM_{10} and $PM_{2.5}$ regional source inventories were compiled for the NAAQS and PSD Increment analyses. Source locations, stack parameters, annual operating hours, and emissions data were obtained from WVDEP, Ohio EPA (OEPA), Kentucky Division of Air Quality (KY DAQ), and/or file reviews of specific facilities. Where there were data gaps (e.g., missing stack parameters) or apparent errors in inventory data (e.g., stack exit velocities exceeding what would practically be expected), reasonable engineering estimation was utilized.

NSWV has evaluated whether any sources eliminated by the "20D" rule were in close enough proximity to one another that they could be considered a "cluster." GIS software was used to determine whether any group of sources within the ROI should be considered a cluster. Density-Based Spatial Clustering of Applications with Noise (DBSCAN) methodology, using a minimum cluster size of 2 and maximum spacing of 1 km, was used. Sixteen (16) clusters were identified that were within the maximum ROI across different pollutants and averaging periods. Table C-5 in Appendix C summarizes the aggregated Q/d values for these clusters. The sources within the cluster excluded from the inventory on the basis of their individual facility Q/d value were further evaluated for possible inclusion in the NAAQS/PSD Increment analyses if the aggregate Q/d for a cluster exceeded 20.

As indicated in Table C-5, Cluster #5 was the only cluster with a Q/d exceeding 20. Cluster #5 includes MPLX Terminal - Catlettsburg Refinery (Catlettsburg Refinery), which is a source selected for inclusion in the annual NO_2 NAAQS analysis. Given that without inclusion of the Catlettsburg Refinery in Cluster #5, the Q/d is below 20, the fact that Catlettsburg Refinery is included in the Annual NO_2 NAAQS analysis, and the distance from NSWV to the cluster is 49 km, NSWV determined that no other sources from this cluster warrant inclusion in the NAAQS analysis.

3.6.1 Missing & Erroneous Source Parameters

After completing the screening analysis, the remaining inventory sources were evaluated to determine whether any refinement to the data set was warranted or if the source could be removed from the inventory based on site-specific considerations. During the review of the regional source inventory, NSWV identified that source parameters for fugitive emissions were missing from the provided information. The following

[25] 57 FR 8079, March 6, 1992.

approach was used for missing fugitives data:

- For plantwide fugitive sources, a pseudo-point source was used with a stack diameter of 0.01 m and exit velocity of 0.01 m/s.
- Where no temperature information was available, ambient temperature was assumed for fugitive sources.
- Depending on the nature of fugitive emissions (e.g., coal piles vs. process fugitives/building fugitives), a stack height of 10 ft or 30 ft was used.

Data which appeared erroneous as presented in state emission inventories were additionally updated based on engineering judgement. For instance, a number of emergency engines were presented as having stack exit velocities in excess of 100 m/s, where these values were adjusted to a more practical 20 m/s for use in NSWV models.

3.6.2 Use of "Mitsubishi Method" for APG

The "Mitsubishi Method" was employed to demonstrate compliance for receptors located on the property of APG Polytech LLC (APG), which is located just north of NSWV.[26] In cases where total concentrations were shown to exceed NAAQS standards for receptors located on APG's property, more refined modeling was completed using the Mitsubishi Method. The Mitsubishi Method consisted of two separate models; in the first, modeled impacts from NSWV and all regional sources were determined at all receptor locations, excluding receptors that fall within APG's non-ambient air property. For receptors within APG's non-ambient air property, a separate model was executed where APG's emission sources were excluded from the regional source inventory. This methodology allowed for contributions from APG's sources to be subtracted from total concentrations where appropriate, because compliance with ambient air quality standards is not required for emissions from facilities within their own ambient air boundary.

The Mitsubishi Method was applied for the NO_2 1-hr, $PM_{2.5}$ 24-hr and $PM_{2.5}$ Annual NAAQS models.

3.6.3 Increment Consuming Regional Sources

Actual emissions from PSD major sources that commenced construction after the major source baseline date[27] and actual emission increases at any stationary source occurring after the minor source baseline date must be included in the increment analysis. Given that NSWV is the first major PSD source in the region, the minor source baseline date has not been established yet and the only potential emissions that would need to be evaluated in the increment analysis are any actual emissions from PSD major sources in the area that are not part of the baseline.

NSWV has reviewed the 2022 and 2023 Emission Inventories provided by WVDEP, the 2021 and 2022 Emission Inventories downloaded from Ohio EPA's website, and the 2021 and 2022 Emission Inventories from the Kentucky Division for Air Quality to identify potential PSD major sources in the region. [28] Table 3-1 below summarizes the sources that were within the maximum ROI (i.e., SIA + 50 or 10 km as discussed in Section 3.6) for all pollutants and averaging periods.

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[26] U.S. EPA Memorandum from Robert D. Bauman (Chief SO2/Particulate Matter Programs Branch) to Gerald Fontenot (Chief Air Programs Branch, Region VI), *Ambient Air,* October 17, 1989

[27] January 6, 1975 for PM_{10} and SO_2, February 8, 1988 for NO_2, and October 20, 2010 for $PM_{2.5}$.

[28] https://epa.ohio.gov/divisions-and-offices/air-pollution-control/reports-and-data/download-eis-data-and-reports

Table 3-1. List of Potential Sources for Inclusions in Increment Analysis

State	Source Name	Construction Date [29]
WV	Mountaineer Power Plant	1974
WV	Appalachian Power Company – John E Amos Plant	1971-1973
OH	Kyger Creek Power Plant	1950s
OH	General James M. Gavin Power Plant	1974
KY	MPLX Terminals LLC - Catlettsburg Refining	1965-2017

As indicated in Table 3-1, with the exception of the Catlettsburg Refinery all of the potential sources commenced construction prior to the earliest major source baseline date (i.e., 1975 for PM_{10} and SO_2) and therefore are already included in the baseline concentration. The Catlettsburg Refinery was selected for inclusion in the Annual NO_2 NAAQS analysis due to the annual average NO_2 emissions from Catlettsburg Refinery exceeding "20D". However, after omitting those sources modified/constructed prior to the NO_2 major source baseline date (February 1988), the Q/d for the facility is approximately 13 tpy/km. As such, the Catlettsburg Refinery does not pass the "20D" screening criteria and would not warrant inclusion in the Annual NO_2 PSD Increment analysis. Therefore, no regional sources were included in the increment analyses.

[29] Construction dates were extracted from publicly available information and/or existing permits.

4. AIR DISPERSION MODELING METHODOLOGY

This section describes the modeling procedures and data resources utilized in the setup of the Class II Area air quality modeling analyses. The techniques utilized are consistent with current EPA guidance.

4.1 Model Selection – AERMOD

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 NSWV. In general, the air dispersion modeling analyses were conducted in accordance with applicable EPA guidance documents, including the following:

- EPA's *Guideline on Air Quality Models,* 40 CFR Part 51, Appendix W (Published November 20, 2024), which West Virginia cites by reference in Section 10 of 45 CSR 14.
- EPA 's AERMOD Implementation Guide (November 2024)
- EPA's User's Guide for the AMS/EPA Regulatory Model – AERMOD (November 2024)
- EPA's New Source Review Workshop Manual (Draft, October 1990)

Given these guidance documents and typical modeling practices, NSWV used the EPA-recommended AERMOD Model. AERMOD is the default model for evaluating impacts attributable to industrial facilities in the near-field (i.e., source receptor distances of less than 50 km), and was promulgated in December 2005 as the preferred model for use by industrial sources in this type of air quality analysis.[30]

The latest version (v24142) of the AERMOD modeling system, released in November 2024, was used to estimate maximum ground-level concentrations in all analyses. AERMOD is a refined, steady-state, multiple source, Gaussian dispersion model. The AERMOD modeling system is composed of three modular components: AERMAP, the terrain preprocessor; AERMET, the meteorological preprocessor; and AERMOD, the dispersion and post-processing module.

AERMAP (v24142) is the terrain pre-processor, which is used to import terrain elevations and generate the receptor hill height scale data used by AERMOD to drive advanced terrain processing algorithms. National Elevation Dataset (NED) data available from the United States Geological Survey (USGS) are utilized to interpolate surveyed elevations onto user specified receptor, building, and source locations where site-specific (i.e., site surveys, GPS analyses, etc.) elevation data are not available.

AERMET (v24142) generates a separate surface file and vertical profile file to pass meteorological observations and turbulence parameters to AERMOD. AERMET meteorological data are refined for a particular analysis based on the choice of micrometeorological parameters that are linked to the land use and land cover (LULC) around the meteorological site shown to be representative of the application site.

NSWV used the BREEZE®-AERMOD software, developed by Trinity Consultants, to assist in developing the model input files for AERMOD. This software program incorporates the most recent versions of AERMOD (dated 24142), AERMET (dated 24142), AERMINUTE (dated 15272) and AERMAP (dated 24142).

[30] 40 CFR Part 51, Appendix W, *Guideline on Air Quality Models*, Appendix A.1 AMS/EPA Regulatory Model (AERMOD).

4.2 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 annual 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) was 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 the latest version of 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 were 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.

NSWV used a Tier 2 NO_2 modeling approach (ARM2), using all regulatory-approved default settings, for all NO_2 modeling (SIL, NAAQS, and PSD Increment).

4.3 Rural/Urban Option Selection in AERMOD

For any dispersion modeling exercise, the classification of the area surrounding the 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 is urban or rural.

The first method discussed in Section 5.1 of the *AERMOD Implementation Guide* (also referring therein to Section 7.2.1.1 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. However, EPA cautions against the use of the "land use" technique for sources close to a body of water because the water body may result in a predominately rural land use classification despite being located in an urban area. If necessary, the second recommended urban/rural classification method in Appendix W Section 7.2.1.1.b is the Population Density Procedure. This technique evaluates the total population density within 3-kilometers of a source. If the population density is greater than 750 people per square kilometer, then EPA recommends the use of urban dispersion coefficients.

Of the two methods, the land use procedure is considered more definitive. The land use within the total area circumscribed by a 3-km radius circle around the facility was classified using the land use typing scheme proposed by Auer. If land use types 23 (Developed, Medium Intensity), or 24 (Developed, High Intensity) account for 50% or more of the circumscribed area, urban dispersion coefficients should be used; otherwise, rural dispersion coefficients are appropriate.

AERSURFACE (v24142) was used for the extraction of the land-use values in the domain. The results of the land use analysis evaluation are described herein. Each USGS NLCD 2021 land use class was compared to the most appropriate Auer land use category to quantify the total urban and rural area.

Table 4-1 summarizes the results of this land use analysis. As approximately 95.2% of the area can be classified as rural, rural dispersion coefficients were used. AERSURFACE files, land cover files, etc. utilized in this urban versus rural assessment will be provided to WVDEP.

Table 4-1. Summary of Land Use Analysis

Category ID	Category Description	Percent	Dispersion Class
11	Open Water	7.6%	Rural
21	Developed, Open Space	2.6%	Rural
22	Developed, Low Intensity	3.9%	Rural
23	Developed, Medium Intensity	2.9%	Urban
24	Developed, High Intensity	1.8%	Urban
31	Barren Land	0.1%	Rural
41	Deciduous Forest	48.4%	Rural
42	Evergreen Forest	0.0%	Rural
43	Mixed Forest	1.9%	Rural
52	Shrub/Scrub	1.2%	Rural
71	Grassland/Herbaceous	0.4%	Rural
81	Pasture/Hay	18.5%	Rural
82	Cultivated Crops	9.5%	Rural
90	Woody Wetlands	0.9%	Rural
95	Emergent Herbaceous Wetlands	0.0%	Rural
	Total	**100%**	
	Urban	**4.8%**	
	Rural	**95.2%**	

4.4 Building Downwash Analysis

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 were evaluated in terms of their proximity to nearby structures.

In accordance with recent AERMOD updates, 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 were calculated using the U.S. EPA-sanctioned Building Profile Input Program (BPIP-PRIME), version 04274 and used in the AERMOD Model.[31] 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 to improve prediction of ambient impacts in building cavities and wake regions.[32]

A GEP analysis of all modeled point sources in relation to each building was 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, was 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 NSWV are less than or equal to 65 meters tall and therefore meet the requirements of GEP. Credit for the entire actual height of each stack was used in this modeling analysis.

BPIP input, output, and summary files which include all building dimensions and information included within the model, will be provided to WVDEP.

4.5 Elevated Terrain

Terrain elevations were considered in the modeling analysis. The elevations of receptors, buildings, and sources refined the modeling impacts between the sources at one elevation and receptor locations at various other elevations at the fence line and beyond. This was accomplished through the use of the AERMOD terrain preprocessor, called AERMAP (latest version 24142), which generates base elevations above mean sea level of sources, buildings, and/or receptors as specified by the user. For this analysis, AERMAP was not used for the majority of source and building base elevations, as common base elevations equivalent to NSWV final grade levels were alternatively used. For all receptors, AERMAP determined the base elevation of each, as well as an effective hill height scale that determined 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 select sources, terrain elevations for receptors, and other regional source base elevations input to the model were 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).[33] The NED data extended well beyond the extent of the modeled receptor grids to properly calculate the receptor elevations and hill-height scales.

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[31] Earth Tech, Inc., Addendum to the ISC3 User's Guide, The PRIME Plume Rise and Building Downwash Model, November 1997, http://www.epa.gov/scram001/7thconf/iscprime/useguide.pdf.

[32] 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.

[33] U.S. Geological Survey, USGS 3D Elevation Program (3DEP), accessed May 21, 2023 at https://apps.nationalmap.gov/downloader/#/

4.6 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 was accomplished using the AERMET processor (Version 24142) along with nearby sets of National Weather Service (NWS) data from surface and upper air stations. The AERSURFACE program (Version 24142) was used to generate the three critical parameters used in AERMET, namely, albedo, Bowen Ratio (ratio of sensible heat to latent heat), and the surface roughness. Values for those land use parameters were tabulated for both the meteorological data site and NSWV to confirm that the airport NWS stations are reasonably representative of the site.

As discussed in greater detail in this section, NSWV utilized five years' (2020-2024) worth of surface data from the Huntington Tri-State Airport (KHTS, WBAN #3860) and five years' worth of upper air data from the Pittsburgh International Airport (KPIT, WBAN# 94823).

4.6.1 Meteorological Data Selection

For NSWV's Apple Grove, WV location, the closest surface meteorological data station is the Huntington Tri-State Airport (KHTS, WBAN #3860) located about 46 kilometers to the southeast. Given the location of the project site, there are very few representative meteorological data options available. Figure 4-1 and Figure 4-2 present aerial images of the immediate area surrounding the airport station and NSWV, respectively.

Figure 4-1. Aerial Image of Huntington Airport

Figure 4-2. Aerial Image of NSWV Location

As shown, both sites are located in rural areas in rolling terrain. Table 4-2 presents a comparison of the albedo, Bowen ratio and surface roughness for each location.

Table 4-2. Comparison of Land Use Parameters – Huntington vs. NSWV

	Huntington Airport			NSWV Mill			Percent Difference[1]		
Sector	**Albedo**	**Bowen Ratio**	**Surface Roughness**	**Albedo**	**Bowen Ratio**	**Surface Roughness**	**Albedo**	**Bowen Ratio**	**Surface Roughness**
(degrees)	**(unitless)**	**(unitless)**	**(m)**	**(unitless)**	**(unitless)**	**(m)**	**(%)**	**(%)**	**(%)**
0-30	0.160	0.690	0.130	0.160	0.630	0.111	0%	-10%	-17%
30-60	0.160	0.690	0.301	0.160	0.630	0.112	0%	-10%	-169%
60-90	0.160	0.690	0.157	0.160	0.630	0.104	0%	-10%	-51%
90-120	0.160	0.690	0.157	0.160	0.630	0.109	0%	-10%	-44%
120-150	0.160	0.690	0.451	0.160	0.630	0.115	0%	-10%	-292%
150-180	0.160	0.690	0.368	0.160	0.630	0.121	0%	-10%	-204%
180-210	0.160	0.690	0.153	0.160	0.630	0.108	0%	-10%	-42%
210-240	0.160	0.690	0.235	0.160	0.630	0.026	0%	-10%	-804%
240-270	0.160	0.690	0.265	0.160	0.630	0.024	0%	-10%	-1004%
270-300	0.160	0.690	0.133	0.160	0.630	0.028	0%	-10%	-375%
300-330	0.160	0.690	0.074	0.160	0.630	0.146	0%	-10%	49%
330-360	0.160	0.690	0.099	0.160	0.630	0.109	0%	-10%	9%
All	**0.160**	**0.690**	**0.210**	**0.160**	**0.630**	**0.093**	**0%**	**-10%**	**-245%**

[1] Percent Difference [(Facility-NWS)/Facility] compares the average of the overall albedo, Bowen ratio, and surface roughness values for the Huntington Airport to NSWV.

The albedo and Bowen ratio are very comparable at both sites. There are some sectors where the surface roughness varies between the two locations, which is almost always the case when comparing greenfield industrial sites to airports. The Huntington airport has forested areas within the 1-km surface roughness evaluation radius which is driving the average values up. In the case of the project site, the surface roughness based on the 2021 NLCD data is an underestimate since the as-built site has numerous buildings and roughness elements. As such, the site has surface roughness similar to Huntington airport.

In order to evaluate the potential impact of post-construction land use changes, NSWV used the ARCVIEW GIS program to modify the land use cells in the 2021 NLCD to reflect as-built land use types. The latest version of AERSURFACE utilizes three (3) types of land use files (land cover, impervious surface, and tree canopy). NSWV revised these files to reflect the post-construction land use parameters and then ran AERSURFACE again, using the modified land use files. Table 4-3 presents the surface characteristic comparison after construction of NSWV.

Table 4-3. Comparison of Land Use Parameters – Huntington vs. Modified NSWV

Sector	Huntington Airport			NSWV Mill			Percent Difference[1]		
	Albedo	Bowen Ratio	Surface Roughness	Albedo	Bowen Ratio	Surface Roughness	Albedo	Bowen Ratio	Surface Roughness
(degrees)	(unitless)	(unitless)	(m)	(unitless)	(unitless)	(m)	(%)	(%)	(%)
0-30	0.160	0.690	0.130	0.160	0.630	0.213	0%	-10%	39%
30-60	0.160	0.690	0.301	0.160	0.630	0.183	0%	-10%	-64%
60-90	0.160	0.690	0.157	0.160	0.630	0.185	0%	-10%	15%
90-120	0.160	0.690	0.157	0.160	0.630	0.158	0%	-10%	1%
120-150	0.160	0.690	0.451	0.160	0.630	0.230	0%	-10%	-96%
150-180	0.160	0.690	0.368	0.160	0.630	0.172	0%	-10%	-114%
180-210	0.160	0.690	0.153	0.160	0.630	0.108	0%	-10%	-42%
210-240	0.160	0.690	0.235	0.160	0.630	0.026	0%	-10%	-804%
240-270	0.160	0.690	0.265	0.160	0.630	0.024	0%	-10%	-1004%
270-300	0.160	0.690	0.133	0.160	0.630	0.031	0%	-10%	-329%
300-330	0.160	0.690	0.074	0.160	0.630	0.148	0%	-10%	50%
330-360	0.160	0.690	0.099	0.160	0.630	0.205	0%	-10%	52%
All	**0.160**	**0.690**	**0.210**	**0.160**	**0.630**	**0.140**	**0%**	**-10%**	**-191%**

[1] Percent Difference [(Facility-NWS)/Facility] compares the average of the overall albedo, Bowen ratio, and surface roughness values for the Huntington Airport to NSWV.

As shown in Table 4-3, the land use characteristics at the airport and facility are much more comparable when considering the changes due to construction, with the surface roughness values differing by less than 40% on average. Based on the above land use comparisons, NSWV believes the meteorological conditions at Huntington Tri-State Airport are representative of those expected at NSWV location.

To further supplement these land use comparisons, NSWV conducted a sensitivity analysis as referenced in Section 3.1.1 of the *AERMOD Implementation Guide*. The analysis included two sets of meteorological data for the site, the first incorporating the land use parameters for NSWV and the second using the land use parameters for the representative airport location. Using these sets of meteorological data, NSWV modeled representative emission sources (i.e., a volume source, a point source, an elevated point source) at NSWV for both short term and long-term averaging periods. NSWV compared these results to determine the significance of the differences in concentrations resulting from differences in the surface characteristics between NSWV and the nearby airport. NSWV validated the sensitivity analysis with WVDEP prior to conducting significance modeling and the results were provided in the permit application submitted to WVDEP in March 2022.

The most recent, full five years of meteorological data which was readily available at the time of the analysis was 2020-2024. These years were used in the air quality modeling analysis. The latest version of AERMET (version 24142) was used to incorporate 1-minute ASOS wind data using EPA's AERMINUTE (version 15272) meteorological data preprocessor. Standard surface NWS data were obtained from the index of published data sets available from the National Climatic Data Center (NCDC) for the appropriate years.[34] The site utilized upper air data from Pittsburgh International Airport (KPIT, WBAN #94823). Those upper air data were be obtained from the National Oceanic and Atmospheric Administration NOAA/ESRL Radiosonde

[34] ftp://ftp.ncdc.noaa.gov/pub/data/noaa/

Database[35] and the one-minute/five-minute wind speed and wind direction data for the same surface station from NCDC.[36]

For unknown reasons, ASOS 1-minute and 5-minute meteorological data were unavailable at the KHTS station during the period of January 2020 through March 2020. However, the KHTS station continued to report Integrated Surface Hourly Data (ISHD) over the same period. Despite the significant number of missing 1-minute and 5-minute data points, the overall data availability over the 5-year modeling period (2020-2024) was over 98.5% and as such the KHTS station remained the most representative station for NSWV modeling analyses.

Because the meteorology generated by AERMET relies on the land surface in the vicinity of the NWS surface site, land cover/land use data (National Land Cover Data, NLCD) was determined from that available from the United States Geological Survey through the MRLC Consortium viewer platform.[37] The AERSURFACE program (Version 24142) was used to generate the three critical parameters used in AERMET, namely, albedo, Bowen Ratio (ratio of sensible heat to latent heat), and the surface roughness parameter. These were based on wet, dry, and average moisture conditions as determined by comparing the seasonal rainfall amounts to the 30-year averages and using the upper and lower 30th percentiles of average rainfall based on 1993-2024 data for the nearest recording NWS site. In the AERSURFACE program there are two processing options called ARID and SNOW. These options can be used when the meteorological data station is located in an arid region and/or when there is continuous snow cover at a meteorological data station, respectively. The KHTS station is located in an ecoregion described by EPA as "Appalachian Forest" and thus the ARID option was not used in AERSURFACE. To assess snow cover, snow depth data was retrieved from the KHTS station for 2020-2024. During that period, the maximum number of days with more than trace amounts of snow was 10 during a calendar month. Specifically, this maximum number of days occurred in January 2022. As such, there were no calendar months with snow cover greater than 50% of the time during the modeled period and the SNOW option in AERSURFACE was not used.[38]

A minimum threshold wind speed of 0.5 m/s (the lowest wind speed that was allowed in the generated meteorological data set) was implemented in AERMET, as suggested in Section 4.6.2.2 of the latest *AERMET User's Guide*.[39] All hours with wind speeds below this value were treated as "calm" in AERMOD.

4.7 Coordinate System

In all modeling analyses conducted by NSWV, the location of emission sources, structures, and receptors were 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 NSWV modeling analysis is based on North American Datum 1983 (NAD 83).

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[35] http://www.esrl.noaa.gov/raobs/

[36] ftp://ftp.ncdc.noaa.gov/pub/data/asos-onemin

[37] http://www.mrlc.gov/viewerjs/

[38] Refer to Section 3.2.8 of the *User's Guide for AERSURFACE Tool, EPA-454/B-24-003*, U.S. EPA, Research Triangle Park, NC, November 2024

[39] EPA, *User's Guide for the AERMOD Meteorological Preprocessor (AERMET)*, EPA-454/B-24-004, U.S. Environmental Protection Agency, Research Triangle Park, NC, November 2024.

UTM coordinates for this analysis all reside within UTM Zone 17, which served as the reference point for all data as well as all regional receptors and sources.

4.8 Receptor Grids

For the Class II air dispersion modeling analyses, ground-level concentrations were calculated from the fence line out to either 20 km for the 1-hour CO, 8-hour CO, 3-hour SO_2, 24-hour SO_2, annual SO_2, annual NO_2, annual PM_{10}, 24-hour PM_{10}, annual $PM_{2.5}$, 24-hour $PM_{2.5}$, and Rolling 3-Month Average Lead analyses or 50 km for the 1-hour NO_2 and SO_2 analyses using a series of nested receptor grids. These receptors were used in the Significance analysis, in the PSD increment modeling, and in the overall NAAQS modeling. The following nested grids were used to determine the extent of significance:

- **Fence Line Grid:** "Fence line" grid consisting of evenly-spaced receptors 50 meters apart placed along the main property boundary of the facility,
- **Fine Cartesian Grid:** A "fine" grid containing 100-meter spaced receptors extending approximately 3 km from the center of the property and beyond the fence line,
- **Medium Cartesian Grid:** A "medium" grid containing 500-meter spaced receptors extending from 3 km to 10 km from the center of the facility, exclusive of receptors on the fine grid,
- **Coarse Cartesian Grid:** A "coarse grid" containing 1,000-meter spaced receptors extending from 10 km to 30 km from the center of the facility, exclusive of receptors on the fine and medium grids, and
- **Very Coarse Cartesian Grid:** A "very coarse grid" containing 2,500-meter spaced receptors extending from 30 km to 50 km from the center of the facility, exclusive of receptors on the fine, medium, and coarse grids.

This configuration and extent captured the area of maximum modeled concentrations. For all pollutants, maximum modeled concentrations were identified in an area with a receptor density less than or equal to 100-meters. As such, no refinements to the proposed receptor grid were necessary to ensure that maximum concentrations were appropriately captured. Concentration plots depicting the maximum modeled concentrations and surrounding impacts are presented in Appendix A and show the location of the maximum impact for each pollutant and averaging period from the SIL analyses.

The full NAAQS and PSD increment analyses were conducted using only receptor locations at which impacts calculated for the facility sources (including secondary impacts for $PM_{2.5}$ as discussed in Section 7.2) exceed the SIL for the respective pollutant and averaging time. As compliance with the PSD increment analysis and NAAQS is only required in areas regulated as "ambient air," in developing the receptor grid for the modeling analysis, NSWV excluded all company owned property to which general public access is restricted because it is fenced or access is otherwise restricted, and thus, is not considered "ambient air."

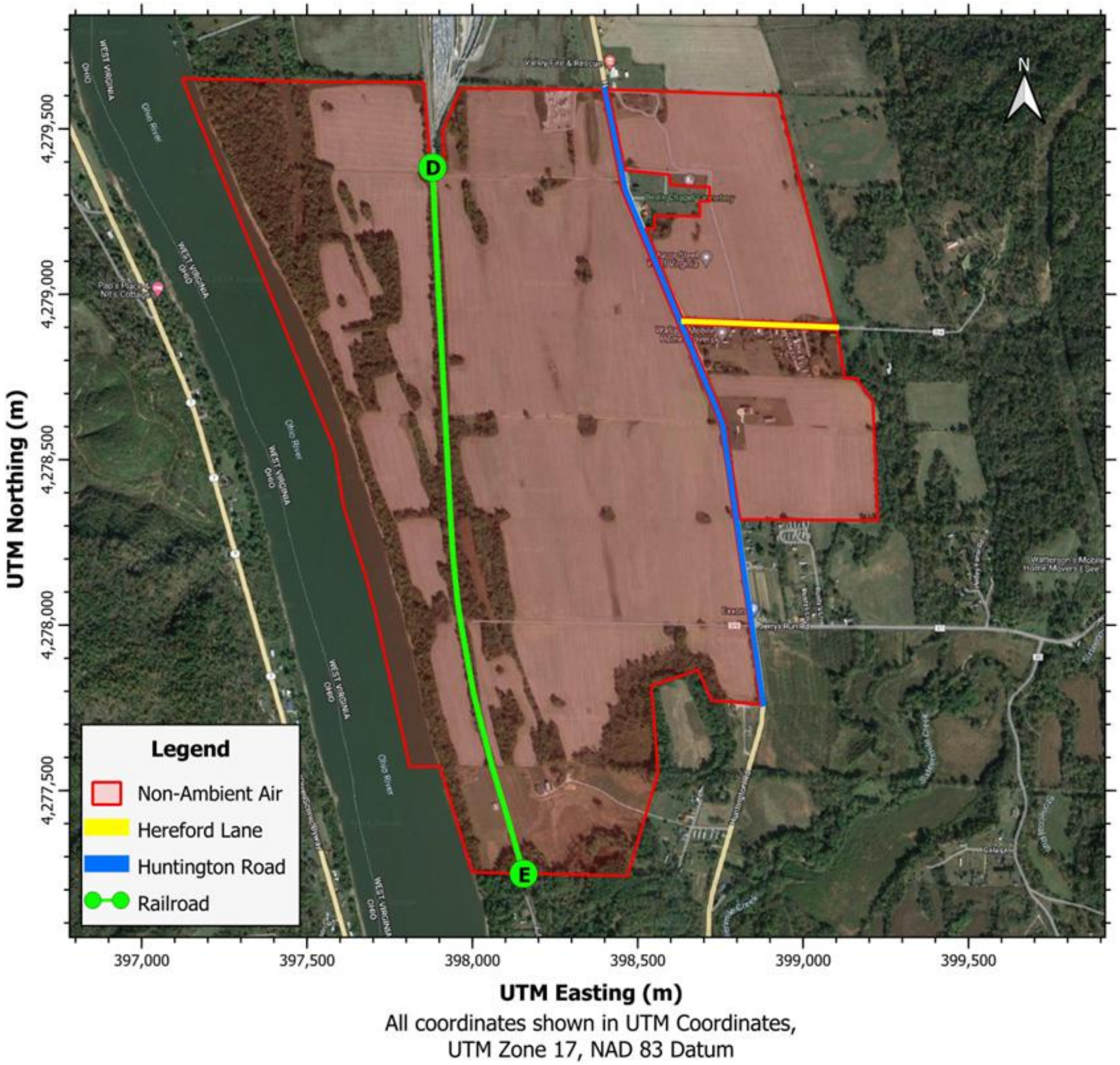
Figure 4-3 displays the property boundaries for NSWV. At NSWV, a main railroad line (entry/exit points labeled "D" and "E") passes through the center of the property. NSWV notes that railroad tracks and rights-of-way are private property and access by the general public is considered trespassing per W. Va. Code § 61-3B-3. This rule states, "It is an unlawful trespass for any person to knowingly, and without being authorized, licensed or invited, to enter or remain on any property, other than a structure or conveyance, as to which notice against entering or remaining is either given by actual communication to such person or by posting, fencing or cultivation."

While barges are docked at scrap and DRI barge unloading locations, a minimum distance of 100 ft is to be maintained for any vessel traveling in the river. As such, the closest receptors are placed 100 ft away from these operations.

NSWV restricts general public access via physical fencing, signage at all entry and exit points, remote monitoring (e.g., 24-hour video surveillance), and NSWV personnel trained to restrict general access. All areas east of Huntington Road (as indicated in Figure 4-3) have fencing installed to ensure public access is restricted, while a mix of fencing and natural barriers (e.g., river) are relied upon to help ensure public access is precluded on the main property west of Huntington Road. Additionally, remote monitoring provides NSWV constant surveillance of all facility access points and NSWV personnel will respond immediately to any potential trespassing incidents. Furthermore, NSWV intends to establish routine security patrols to allow passageway to authorized personnel while monitoring and further deterring unauthorized general public access at all entry and exit points. Through these security measures, NSWV precludes general public access and minimize all transient access to the facility property. Therefore, NSWV has excluded receptors from the industrial plant roadways and main line railroads that cross the facility property.

Of note, both the electrical substation on the north side of the property and the water treatment and future wastewater treatment facilities on the south side of the of the property are owned and operated by other parties (i.e., Appalachian Power and the Mason County Public Service District, respectively). However, these are unmanned properties where workers are only needed in the event of routine maintenance or emergency repairs. Both of these areas are restricted to public access via fencing. Additionally, NSWV is working with both parties to ensure access to these properties is restricted. As such, NSWV has included these properties in the non-ambient air boundary as depicted in Figure 4-3.

Figure 4-3. Property Boundaries for NSWV



5. CLASS I AREA DISPERSION MODELING ANALYSIS

There are four Class I areas located within approximately 300 km of NSWV: Otter Creek Wilderness, Dolly Sods Wilderness, Shenandoah National Park and James River Face Wilderness. The closest Class I area is Otter Creek Wilderness, located approximately 220 km from NSWV (east-northeast of Apple Grove). 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.

5.1 Class I AQRVs

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

Table 5-1. Class I Q/D Analysis [a]

Class I Area	NSWV Emissions (tpy)[a]					Distance to Class I Area (km)	Q/D (tpy/km)	Q/D >10?
	NO_X	SO_2	H_2SO_4	PM_{10}[b]	SUM			
Otter Creek Wilderness	1,000	396.0	--	404.1	**1,800**	220	8.18	No
Dolly Sods Wilderness						240	7.50	No
James River Face Wilderness						262	6.87	No
Shenandoah National Park						302	5.96	No

a. The calculated annual emissions include the sum of all SO_2, NO_X, and PM_{10} emitting equipment that can operate simultaneously at the plant and assumes 8,760 hours of operation. Emission rates take into consideration batch operations which are inherently restricted and cannot routinely achieve peak hourly emission rates on a daily basis. Only 100 hours of emergency generator maintenance and testing is authorized under NSPS JJJJ and as such those are the only hours included in the emissions totals.

b. Includes filterable PM_{10} only, in alignment with precedent from recent AQRV waiver approvals, for the EAF baghouses and conservatively includes total PM_{10} for other emission units.

Although the emission rates used to calculate Q are conservatively based on continuous operation (8,760 hours per year), this approach does not reflect the actual operating conditions at NSWV. NSWV operates a range of batch processes that cannot realistically be run simultaneously and continuously for a significant duration. These operations are often staggered, interdependent, or subject to production scheduling constraints, resulting in significantly lower actual emission rates at any given time. Consequently, the likelihood of all emission sources contributing concurrently to ambient impacts is low. Regardless, the FLM's AQRV Work Group (FLAG) guidance states that a Q/D value of ten (10) or less indicates that AQRV analyses are generally not required.[40] As shown in Table 5-1, the Q/D calculations for each Class I area are less than the Q/D threshold established by the *FLAG 2010* document. Accordingly, no refined AQRV modeling was performed.

[40] National Park Service, U.S. Department of the Interior, Federal Land Mangers' Air Quality Related Values Work Group (FLAG), Phase I Report–Revised (2010), National Resource Report NPS/NRPC/NRR_2010/232, October 2010.

5.2 Class I Significance Analysis

In addition to the AQRV analysis, NSWV has evaluated PSD Increment consumption at the affected Class I areas. NSWV performed this evaluation using a screening methodology that is commonly applied. This methodology relies on the same Significance analysis model input parameters applied for the Class II area assessments. Modeling in AERMOD was performed by placing an arc of receptors at a distance of 50 km from the fenceline of the facility in the direction each Class I area within 300 km, to demonstrate that impacts are below the Class I SILs. The Class I SILs relevant to the project are presented in Table 5-2. The $PM_{2.5}$ Class I Area SIL cited in Table 5-2 are referenced from EPA's "Supplement to the Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program " (April 2024).

Table 5-2. Class I PSD SILs

Pollutant	Averaging Period	Class I SIL (µg/m^3)
NO_2	1-Hour	NA
	Annual	0.10
PM_{10}	24-Hour	0.32
	Annual	0.16
$PM_{2.5}$	24-Hour	0.27
	Annual	0.03
SO_2	1-Hour	NA
	3-Hour	1.00
	24-Hour	0.20
	Annual	0.10

A Class I area significance analysis was conducted. The results of the significance analysis are provided in Table 5-3. Secondary impacts for $PM_{2.5}$ from precursor pollutants, as discussed in Section 7.2, were evaluated as part of this analysis and included in the results shown.

All pollutants triggering PSD review for which there is an established PSD Class I SIL/Increment were evaluated and as shown, all of the modeled impacts were below their respective Class I SILs. Note that this analysis is very conservative in that modeled impacts are evaluated at a distance of 50 km from NSWV, while the closest Class I area is 220 km away.

Table 5-3. Class I Significance Results

Pollutant	Averaging Period	SIL (µg/m^3)	Modeled Concentration (µg/m^3)	Secondary Impact [a] (µg/m^3)	Total Concentration (µg/m^3)	Exceeds SIL?
PM_{10}	24-hr	0.32	0.325	--	0.325	**Yes**
	Annual	0.16	0.022	--	0.022	No
$PM_{2.5}$	24-hr	0.27	0.210	0.028	0.238	No
	Annual	0.03	0.019	0.001	0.020	No
NO_2	Annual	0.10	0.026	--	0.026	No
SO_2	3-hr	1.00	0.679	--	0.679	No
	24-hr	0.20	0.183	--	0.183	No
	Annual	0.10	0.009	--	0.009	No

a. Secondary impact based on MERP analysis. Refer to Section 7.2 for detailed discussion.

Note that due to terrain effects in AERMOD at distances near the intended application range of 50km, the steady-state Gaussian dispersion assumptions become less valid. As an alternative to the overly conservative modeled screening approach using AERMOD, there is a second level assessment outlined in EPA's latest MERPs guidance document.[41] Table 5-4 below (taken from Table 1 of that guidance document), provides primary $PM_{2.5}$ impacts using the hypothetical source photochemical modeling that was originally used in support of the secondary $PM_{2.5}$ MERP framework. This approach is still considered conservative since the primary $PM_{2.5}$ modeling was conducted without any plume-depleting processes enabled in the photochemical model.

Table 5-4. Primary $PM_{2.5}$ Impacts for Hypothetical Source Photochemical Modeling

$PM_{2.5}$ Emission Rate (tpy)	Distance from source (km)	Highest Daily Average Concentration (µg/m3) tall stack	Highest Daily Average Concentration (µg/m3) surface release	Highest Annual Average Concentration (µg/m3) tall stack	Highest Annual Average Concentration (µg/m3) surface release
100	300	0.0117	0.0123	0.0008	0.0009
100	200	0.0223	0.0212	0.0016	0.0015
100	100	0.0537	0.0445	0.007	0.0049
150	300	0.018	0.0184	0.0012	0.0013
150	200	0.0328	0.0311	0.0024	0.0022
150	100	0.0807	0.0632	0.0102	0.0073
500	300	0.061	0.0625	0.0044	0.0045
500	200	0.1167	0.1095	0.0087	0.0078
500	100	0.2717	0.2536	0.0379	0.0238
1000	300	0.1186	0.1217	0.0087	0.0089
1000	200	0.23	0.2161	0.0175	0.0157
1000	100	0.5445	0.5009	0.0731	0.0477

NSWV confirmed that the values tabulated in Table 5-4 above conservatively represent the worst-case impacts from any of the modeled hypothetical sources.[42] In addition to the primary impacts discussed above, an applicant must consider secondarily formed $PM_{2.5}$ from project emissions of NO_x and SO_2. In this analysis, the project emissions increases are multiplied by the ratio of the modeled concentrations to the modeled emission rates for a hypothetical source to estimate project related secondary $PM_{2.5}$ concentrations. Since the Class I areas are more than 50km distant, the distance-dependent data for hypothetical sources was obtained from EPA's MERPs View Qlik website.[43] Table 7-4 presents the secondary $PM_{2.5}$ impacts expected at the nearest Class I area (Otter Creek Wilderness).

[41] https://www.epa.gov/sites/default/files/2020-09/documents/epa-454_r-19-003.pdf

[42] Email from George Bridgers (USEPA) to Jonathan Hill (Trinity) on December 12, 2024.

[43] www.epa.gov/scram/merps-view-qlik

The values shown in Table 7-4 were then added to the primary $PM_{2.5}$ impacts estimated from the data in Table 5-4 assuming a project emissions increase of 817.90 tpy for PM_{10} and 765.92 tpy for $PM_{2.5}$. Since the emissions increase is coming from tall, buoyant stacks, the 1000 tpy tall stack results at a 200 km distance were scaled up to the project increase of 817.90 tpy for PM_{10} and 765.92 tpy for $PM_{2.5}$. As discussed previously, the closest Class I area is 220 km so the 200 km data were selected as the closest datapoint, no more distant than the Class I area. Table 5-5 presents the results for the Class I PM_{10} and $PM_{2.5}$ SIL analyses.

Table 5-5. Class I PM_{10} and $PM_{2.5}$ SIL Results

Pollutant	Averaging Period	SIL (µg/m³)	Primary Impact [a] (µg/m³)	Secondary Impact [b] (µg/m³)	Cumulative Impact (µg/m³)	Exceeds SIL?
PM_{10}	24-hr	0.320	0.188	--	0.188	No
	Annual	0.160	0.014	--	0.014	No
$PM_{2.5}$	24-hr	0.270	0.176	0.028	0.205	No
	Annual	0.030	0.013	0.001	0.014	No

[a] Calculated for project increase of 817.90 tpy for PM_{10} and 765.92 tpy for $PM_{2.5}$, based on Clarification on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM2.5 under the PSD Permitting Program - Table 1, Extrapolated from 1000 tpy tall stack results at 200 km.

[b] Secondary impact based on MERP analysis. Refer to Section 7.2 for detailed discussion.

As shown above, the SIL results are well below their respective Class I SIL thresholds and as such, NSWV does not cause or contribute to any violation of a Class I PM_{10} or $PM_{2.5}$ Increment threshold.

6. CLASS II AREA DISPERSION MODELING ANALYSIS

This section summarizes the results of the Class II Area modeling analyses. As discussed in Section 2, the Class II Area modeling analysis is conducted in three principal steps: 1) the Significance Analysis, 2) the NAAQS Analysis, and 3) the PSD Class II Increment Analysis. The following subsections present dispersion modeling results from each of the three components of the Class II Area modeling analysis.

6.1 Class II Significance Impact Analysis Results

As discussed in Section 2, the SIL analysis was conducted to determine if refined NAAQS and Class II Increment modeling analyses would be required. The results of the SIL analysis are presented in Table 6-1. Secondary impacts for $PM_{2.5}$ from precursor pollutants, as discussed in Section 7.2, were evaluated as part of this analysis and included in the results shown.

As shown in Table 6-1, the maximum modeled impacts were above the SILs for all pollutants and averaging periods, with the exception of 1-hr CO and 3-hr/24-hr/Annual SO_2. Accordingly, cumulative NAAQS and incremental analyses were conducted for CO, $PM_{2.5}$, PM_{10}, SO_2, and NO_2.

Table 6-1. Class II Significance Results

Pollutant	Averaging Period	SIL (µg/m³)	Modeled Concentration (µg/m³)	Secondary Impact [a] (µg/m³)	Total Concentration (µg/m³)	Exceed SIL?	SIA (km)
PM_{10}	24-hr	5	33.359	--	**33.359**	**Yes**	3.54
	Annual	1	6.080	--	**6.080**	**Yes**	2.38
$PM_{2.5}$	24-hr	1.2	8.203	0.081	**8.284**	**Yes**	7.50
	Annual	0.13	2.945	0.003	**2.948**	**Yes**	10.77
CO	1-hr	2,000	1798.033	--	1798.033	No	--
	8-hr	500	537.688	--	**537.688**	**Yes**	0.50
NO_2	1-hr	7.5	139.635	--	**139.635**	**Yes**	36.06
	Annual	1	12.175	--	**12.175**	**Yes**	3.81
SO_2	1-hr	7.8	11.996	--	**11.996**	**Yes**	2.86
	3-hr	25	9.949	--	9.949	No	--
	24-hr	5	3.790	--	3.790	No	--
	Annual	1	0.389	--	0.389	No	--

a. Secondary impact based on MERP analysis. Refer to Section 7.2 for detailed discussion.

6.2 Class II NAAQS Analysis

The NAAQS analysis for CO, NO_2, SO_2, lead, PM_{10}, and $PM_{2.5}$ was conducted using the approach described in Section 2. Emissions and stack parameter data are provided for NSWV in Appendix B, and for regional sources in Appendix C. The results of the NAAQS analysis are presented in Table 6-2. Secondary impacts for $PM_{2.5}$ from precursor pollutants, as discussed in Section 7.2, were evaluated as part of this analysis and included in the results shown. Additionally, as described in Section 3.6.2, NSWV utilized the "Mitsubishi Method" for the 1-hr NO_2, 24-hr $PM_{2.5}$ and Annual $PM_{2.5}$ NAAQS analyses, where the results shown represent the maximum impacts determined when utilizing this method.

The modeling results presented in Table 6-2 demonstrate that the NAAQS will not be exceeded in the region surrounding the facility for any pollutant or averaging period.

Table 6-2. Class II NAAQS Analysis Results

Pollutant	Averaging Period	Modeled Concentration (μg/m³)	Background Concentration [a] (μg/m³)	Secondary Impact [b] (μg/m³)	Total Concentration (μg/m³)	NAAQS (μg/m³)	Exceeds NAAQS?
PM_{10}	24-hr	41.253	35.333	--	76.586	150	No
$PM_{2.5}$	24-hr	8.334	14.700	0.081	23.116	35	No
	Annual	3.062	5.907	0.003	8.972	9	No
NO_2	1-hr	159.732	Incl. in Model	--	159.732	188	No
	Annual	32.727	11.006	--	43.733	100	No
SO_2	1-hr	9.859	96.851	--	106.710	196	No
CO	8-hr	399.739	1000	--	1399.739	10,000	No
Lead	Rolling 3-Month Avg.	0.001	--	--	0.001	0.15	No

a. Refer to Section 2.2 for detailed discussion of selected background concentrations.
b. Secondary impact based on MERP analysis. Refer to Section 7.2 for detailed discussion.

6.3 Class II Increment Analysis

The Class II Increment analysis for NO_2, PM_{10}, and $PM_{2.5}$ was conducted using the approach described in Section 2. As described in Section 3.6.3, there are no existing increment consuming sources in the area. As such, only NSWV sources were modeled in the Class II Increment analysis. The results of the increment analysis are detailed in Table 6-3. Secondary impacts for $PM_{2.5}$ from precursor pollutants, as discussed in Section 7.2, were evaluated as part of this analysis and included in the results shown.

The modeling results presented in Table 6-3 demonstrate that the Class II increment standards will not be exceeded for any pollutant or averaging period.

Table 6-3. Class II Increment Analysis Results

Pollutant	Averaging Period	Cumulative Model Impact (μg/m³)	Secondary Impact [a] (μg/m³)	Total Concentration (μg/m³)	Class II PSD Increment (μg/m³)	Exceeds PSD Increment?
PM_{10}	24-hr	28.704	--	28.704	30	No
	Annual	6.080	--	6.080	17	No
$PM_{2.5}$	24-hr	8.565	0.081	8.646	9	No
	Annual	3.046	0.003	3.049	4	No
NO_2	Annual	12.175	--	12.175	25	No

a. Secondary impact based on MERP analysis. Refer to Section 7.2 for detailed discussion.

6.4 Class II SMC Analysis for Fluoride

PSD regulations establish an SMC for fluorides in 40 CFR 52.21(i)(5)(i)(H). As such, NSWV conducted a fluoride modeling analysis of NSWV for comparison against the SMC. As indicated in Table 6-4, the modeled fluoride impacts were slightly (<0.01 μg/m^3) above the SMC.

West Virginia regulations do not establish ambient air quality standards for fluorides. Regardless, in consultation with WVDEQ, NSWV pursued a cumulative impacts analysis for fluorides. NSWV requested an emissions inventory of all fluoride emitting sources in Mason County, WV from WVDEQ.[44] Similarly, NSWV reviewed Ohio EPA's 2022 emission inventory for Gallia County, OH. In both instances the only fluoride emissions included in the inventories were hydrogen fluoride emissions. However, only fluoride compounds other than hydrogen fluoride are PSD pollutants, since hydrogen fluoride is a hazardous air pollutant (HAP) and was removed from PSD applicability by the 1990 Clean Air Act Amendment. As such, there were no nearby sources of fluorides appropriate for inclusion in NSWV fluoride modeling analysis. Additionally, NSWV reviewed the ambient air quality monitoring networks for West Virginia, Ohio, and Kentucky to establish a background concentration for the modeling analysis. However, no active or representative fluoride ambient air quality monitors were identified.

While the maximum modeled concentration of fluorides from NSWV was slightly above the SMC threshold, the minimal margin above the SMC suggests that the potential impact is not substantial enough to warrant site specific monitoring. Moreover, the SMC was only exceeded at two receptors located along the ambient air boundary for NSWV. For these reasons, NSWV believes that pre-construction monitoring should not be required for NSWV and formally requests that WVDEP waive this requirement.

Table 6-4. Fluoride Modeling Analysis Results

Pollutant	Averaging Period	Modeled Concentration (μg/m^3)	Significant Monitoring Concentration (μg/m^3)	SMC Exceeded?
Fluorides	24-hr	0.258	0.250	Yes

[44] Refer to email communication from Ms. Nicole Ernest (WVDEP) to Ms. Melissa Hatfield-Atkinson (Trinity) on March 21, 2025.

7. SECONDARY POLLUTANT FORMATION

Secondary pollutant formation is required to be addressed in the PSD review process. When precursor emissions for ozone (VOC and NO_X) and/or $PM_{2.5}$ (SO_2 and NO_X) trigger PSD review, ozone and secondary $PM_{2.5}$ ambient impacts must be reviewed. Elevated ground-level ozone concentrations are the result of photochemical reactions among various chemical species. These reactions are more likely to occur under certain ambient conditions (e.g., high ground-level temperatures, light winds, and sunny conditions). The chemical species that contribute to ozone formation, referred to as ozone precursors, include NO_X and VOC emissions from both anthropogenic (e.g., mobile and stationary sources) and natural sources (e.g., vegetation).

7.1 Ozone

The latest version of the *Guideline* recommends the use of Model Emissions Rate for Precursors (MERPs)[45,46] 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 the level of increased ozone concentrations expected to occur due to precursor emissions. In other words, the relationship between precursor emission rates and modeled ozone or secondary $PM_{2.5}$ concentrations for representative, hypothetical sources are used to estimate the impact of project emissions increases. In this analysis, the project emissions increases are multiplied by the ratio of the modeled concentrations to the modeled emission rates for a hypothetical source to estimate project related ozone and secondary $PM_{2.5}$ concentrations. Data for hypothetical sources was obtained from EPA's MERPs View Qlik website.[47] The methodologies outlined in EPA's latest MERPs guidance document were used in this analysis.[46]

Hypothetical sources located within proximity of NSWV were identified using EPA's MERPs View Qlik website.[47] Nearby sources included Boyd County, Kentucky and Doddridge County, West Virginia. Both locations are found in the same air shed as Apple Grove and, as such, would be expected to be subject to similar atmospheric chemistry and secondary pollutant formation processes as the area surrounding NSWV.

The land use surrounding the Boyd County hypothetical source includes a number of larger industrial facilities, including the Catlettsburg Refinery. Emissions from regional sources were considered by EPA when performing photochemical modeling for MERPS; modeled impacts for the Boyd County source would have therefore been influenced by projected emissions from these facilities.[48] In comparison to the Boyd

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[45] *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*, available via:
https://www.epa.gov/sites/default/files/2019-05/documents/merps2019.pdf

[46] EPA's *Memorandum on the Clarification 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,* published April 2024, available via:
https://www.epa.gov/sites/default/files/2020-09/documents/epa-454_r-19-003.pdf

[47] www.epa.gov/scram/merps-view-qlik

[48] Refer to Section 3.2.1 of EPA's 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 indicates their photochemical modeling was

County hypothetical source, the area surrounding NSWV has fewer industrial sources. Industrial facilities which are present within proximity of NSWV have additionally reported a comparatively lower magnitude of emissions for precursor pollutants. The general land use and proximity of industrial sources to the Doddridge County hypothetical source (located approximately 150 km from Apple Grove) has therefore been determined to be more representative for NSWV and was used in the Tier-1 modeling analysis.

The available Doddridge County hypothetical source with emissions closest to source-wide emissions from NSWV was used. For NO_X, the taller stack option of the two available (i.e., 90 meters) was used. The majority of emissions of NO_X from NSWV are released from EAF baghouses which have release heights of 65 meters above ground level; the 90-meter hypothetical source is therefore understood to better represent the majority of NO_X emissions from the facility than the 10-meter hypothetical source. For VOC, there was only a 10-meter hypothetical source for Doddridge County; therefore, this hypothetical source was used.

Table 7-1 shows the selected MERPs values for the Doddridge County hypothetical source, the calculated ozone MERPs, project emissions increases of NO_X and VOC, and the estimated ozone impact associated with NSWV. In Table 7-2 the calculated MERPs concentrations are added to the background ozone concentration taken from the Huntington monitor (54-011-0007), which demonstrates compliance with the Ozone 8-hour NAAQS.

Table 7-1. Ozone SIL Analysis

Averaging Period	**Precursor**	**Modeled Hypo. Source** (tpy)	**Modeled Impact from Hypo. Source** (ppb)	**Facility Emissions** (tpy)	**Secondary Impact** (ppb)
8-Hr	NOx	1,000	3.313	1000.31	3.314
8-Hr	VOC	500	0.097	424.91	0.082
				Total:	**3.396**

Table 7-2. Ozone NAAQS Analysis

Averaging Period	**Pollutant**	**Ozone Project Impact** (ppb)	**Ozone Background Conc.[a]** (ppb)	**Cumulative Ozone Impact** (ppb)	**NAAQS** (ppb)
8-hour	Ozone	3.40	62	**65.4**	**70**

[a] Three-year average for 2021-2023 of the annual 4th highest daily maximum 8-hour concentrations measured at the Huntington, KY monitor (54-011-0007).

7.2 Secondary $PM_{2.5}$

$PM_{2.5}$ 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

"consistent with the approach described in Baker et al., 2016", which included "baseline emissions" from anthropogenic sources from the 2011 National Emissions Inventory.

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, NSWV has prepared a site-specific secondary $PM_{2.5}$ impact assessment to comprehensively demonstrate precursor emissions from the project will not cause or contribute to a violation of the $PM_{2.5}$ NAAQS or PSD increment standards.

Hypothetical sources located within proximity of NSWV were identified using EPA's MERPs View Qlik website. Nearby sources included Boyd County, Kentucky and Doddridge County, West Virginia. Both locations are found in the same air shed as Apple Grove and, as such, would be expected to be subject to similar atmospheric chemistry and secondary pollutant formation processes as the area surrounding NSWV.

The land use surrounding the Boyd County hypothetical source includes a number of larger industrial facilities, including the Catlettsburg Refinery. Emissions from regional sources were considered by EPA when performing photochemical modeling for MERPS; modeled impacts for the Boyd County source would have therefore been influenced by projected emissions from these facilities.[49] In comparison to the Boyd County hypothetical source, the area surrounding NSWV has fewer industrial sources. Industrial facilities which are present within proximity of NSWV have additionally reported a comparatively lower magnitude of emissions for precursor pollutants. The general land use and proximity of industrial sources to the Doddridge County hypothetical source (located approximately 150 km from Apple Grove) has therefore been determined to be more representative for NSWV and was used in the Tier-1 modeling analysis.

The available Doddridge County hypothetical source with emissions closest to source-wide emissions from NSWV was used. For NO_X and SO_2 the taller stack option of the two available (i.e., 90 meters) was used. The majority of NO_X and SO_2 from NSWV are emitted from EAF baghouses which have release heights of 65 meters above ground level; the 90-meter hypothetical source is therefore understood to better represent the majority of NO_X and SO_2 emissions from the facility than the 10-meter hypothetical source.

Table 7-3 shows the selected near-field MERPs values for the Doddridge County hypothetical source, the calculated $PM_{2.5}$ MERPs, project emissions increases of NO_X and SO_2, and estimated $PM_{2.5}$ impacts associated with the project. Secondary $PM_{2.5}$ concentrations determined from the near-field MERPs analysis were evaluated as part of the Class II dispersion modeling analysis and are included in the results presented in Section 6.

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[49] Refer to Section 3.2.1 of EPA's 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 indicates their photochemical modeling was "consistent with the approach described in Baker et al., 2016", which included "baseline emissions" from anthropogenic sources from the 2011 National Emissions Inventory.

Table 7-3. $PM_{2.5}$ MERPs Analysis – Near-Field

Averaging Period	Precursor	Modeled Hypo. Source (tpy)	Modeled Impact from Hypo. Source (μg/m^3)	Facility Emissions (tpy)	Secondary Impact (μg/m^3)
24-Hr	NOx	1,000	0.037	1000.31	0.037
24-Hr	SO2	500	0.056	396.04	0.044
				24-HR Total Secondary PM2.5:	**0.081**
Annual	NOx	1,000	0.001	1000.31	0.0013
Annual	SO2	500	0.002	396.04	0.0017
				Annual Total Secondary PM2.5:	**0.0031**

The closest Class I area to NSWV (Otter Creek Wilderness) is located approximately 220 km from NSWV. Table 7-4 shows the selected MERPs values for the Doddridge County hypothetical source at a distance of 220 km. Also shown are the calculated $PM_{2.5}$ MERPs, project emissions increases of NO_X and SO_2, and the estimated Class I $PM_{2.5}$ impact associated with the project when assessed at this distance. Secondary $PM_{2.5}$ concentrations, determined at a distance of 220 km from the facility, were evaluated as part of the Class I dispersion modeling and are included in the results of the Class I significance analysis presented in Section 5.2.

Table 7-4. $PM_{2.5}$ MERPs Analysis – Class I

Averaging Period	Precursor	Modeled Hypo. Source (tpy)	Modeled Impact from Hypo. Source (μg/m^3)	Facility Emissions (tpy)	Secondary Impact (μg/m^3)
24-Hr	NOx	1,000	0.021	1000.31	0.0211
24-Hr	SO2	500	0.009	396.04	0.0073
				24-HR Total Secondary PM2.5:	**0.028**
Annual	NOx	1,000	0.0005	1000.31	0.0005
Annual	SO2	500	0.0004	396.04	0.0003
				Annual Total Secondary PM2.5:	**0.0008**

8. ADDITIONAL IMPACTS ANALYSIS

Three additional impacts analyses are 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.

8.1 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. NSWV is expected to increase full-time employment after the construction phase of the project is completed. However, NSWV is anticipated to have a limited growth impact on Mason County, WV with the potential to contribute to adverse air quality impacts for the PSD triggering pollutants with an applicable NAAQS or PSD Increment (i.e., SO_2, PM_{10}, $PM_{2.5}$, CO, NO_X). Many of the workers to be hired for the facility construction and operations already reside and conduct business in the region surrounding NSWV, and thus are not expected to cause significant 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.

Furthermore, the installation of the plant is not expected to significantly contribute to substantial residential or commercial growth that would cause quantifiable air quality impacts. For non-NSWV industrial growth, the affected sources would be covered under their own Clean Air Act permitting processes to address potential air quality impacts of the PSD-triggering for NSWV's project. Finally, the existing ambient air quality within the region surrounding NSWV can readily accommodate any additional direct or indirect growth which may occur from NSWV without this project-associated growth causing or contributing to violations of the NAAQS or PSD increment. In reviewing the past several years of ambient background concentrations, ambient air quality has been steady or gradually improved. Therefore, NSWV would not expect any growth attributable to NSWV to cause quantifiable air quality impacts.

8.2 Soil and Vegetation Analysis

The EPA developed the secondary NAAQS (shown in Table 2-1) to represent levels that provide protection for public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. As a general rule, if ambient concentrations from a PSD project are found to be less than the secondary NAAQS, emissions from that project will not result in harmful effects to either soil or vegetation.[50]

NSWV has demonstrated compliance with the secondary NAAQS by complying with the SILs for CO (1-hr) and SO_2 (24-hr and Annual) and with the NAAQS for PM_{10} (24-hr), $PM_{2.5}$ (24-hr and annual), NO_2 (annual), and ozone (8-hr). This indicates that NSWV will not cause or contribute to adverse impacts on soils, vegetation, and animals.

[50] U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, New Source Review Workshop Manual, Research Triangle Park, North Carolina, October 1990.

8.3 Plume Visibility Analysis

This additional impacts analysis also addresses impacts on visibility at a potentially sensitive Class II area resulting from any coherent emission plumes from sources at NSWV associated with the project. To demonstrate that local visibility impairment does not result from operation of NSWV, NSWV is using the EPA VISCREEN Model following the guidelines published in the *Workbook for Plume Visual Impact Screening and Analysis* to assess potential plume impairment.[51] The primary variables that affect whether a plume is visible or not at a certain location are (1) quantity of emissions, (2) type of emissions, (3) relative location of source and observer, and (4) the background visibility range. The VISCREEN model is designed to determine whether a plume from a facility may be visible from a given vantage point using these four variables to determine the level of impact. One potentially sensitive Class II area was chosen to address visibility impairment, namely Beech Fork State Park located approximately 40 km to the south southwest of NSWV. Beech Fork State Park is the closest state park to NSWV with primarily recreational, outdoor attractions. Because potential NO_X and PM_{10} emissions from NSWV trigger PSD review, all VISCREEN visibility affecting pollutants emitted by NSWV were considered in the analysis. Direct emissions of primary NO_2, Soot, and Primary SO_4 were treated as zero emissions (the VISCREEN default) due to either their accounting elsewhere (NO_X) or due to the nature of the source not producing measurable quantities of these pollutants.

Two levels of visibility screening are available in the VISCREEN Model. Level-1 is designed to provide a conservative estimate of plume visual effects and Level-2 provides a more realistic estimate of visual effects based on more detailed information about the source, meteorology, and area of interest.

For views at the observer location selected, calculations are performed by the model for two assumed plume-viewing backgrounds: the horizon sky and a dark terrain object. VISCREEN assumes that the terrain object is black and located adjacent to the plume on the side of the centerline opposite the observer. The VISCREEN model output shows separate tables for inside and outside of the sensitive area. Each table contains several variables: theta, azi, distance, alpha, critical and actual plume ΔE, and critical and actual plume contrast. These variables are defined as:

1. *Theta* - Scattering angle (the angle between direction solar radiation and the line of sight). If the observer is looking directly at the sun, theta equals zero degrees. If the observer is looking away from the sun, theta equals 180 degrees.
2. *Azi* - The azimuthal angle between the line connecting the observer and the line of sight.
3. *Alpha* - The vertical angle between the line of sight and the plume centerline.
4. *ΔE* - Used to characterize the perceptibility of a plume on the basis of the color difference between the plume and a viewing background. A ΔE less than 2.0 signifies that the plume is not perceptible.
5. *Contrast* - The contrast at a given wavelength of two colored objects such as plume/sky or plume/terrain. A value less 0.05 signifies that the plume is not perceptible by contrast or color.

The analysis is considered satisfactory if ΔE and Green Contrast are less than critical screening values of 2.0 and 0.05, respectively. Note that these thresholds are applied in this analysis, even though screening criteria are properly applied at Class I areas, not sensitive receptors located in Class II areas.

VISCREEN conducts four (4) tests of screening calculations. The first two tests refer to visual impacts caused by plume parcels located ***inside*** the boundaries of the given area. Tests of impacts inside the

[51] *Workbook for Plume Visual Impact Screening and Analysis (Revised)*, EPA-450/R-92-023, U.S. Environmental Protection Agency, Research Triangle Park, NC, October 1992.

boundary are used to determine visual impacts when integral vistas are not protected.[52] The last two tests are for plume parcels located ***outside*** the boundaries of the area. The tests of visual impacts outside the boundaries of Class I areas are only required if analyses for protected integral vistas are required. An integral vista is a view from a location inside a Class I area of landscape features located outside the boundaries of the Class I area.[53] There are no integral vistas of concern outside the state park evaluated in this analysis. Therefore, only the results for inside the boundaries of the area are evaluated. Note that the typical approach for establishing a minimum and maximum distance to the Class I area (i.e. the min/max distance along plume centerlines offset 11.25 degrees from the observer line) could not be used due to the limited size of Beech Fork State Park. As such, it was conservatively assumed that the minimum and maximum distances to Beech Fork State Park were the true minimum and maximum distances to the boundary of the park, rather than only the minimum and maximum distances where the park boundary intersects the plume centerlines.

For a Level 1 screening analysis using VISCREEN, default particulate size and density and worst-case meteorological conditions of F stability with a 1.0 m/s wind speed are used. These worst-case meteorological conditions are assumed to persist for up to 12 hours with a wind direction that would transport the plume directly adjacent to the observer causing the highest, most conservative level of loss of contrast (ΔE) and color obscuration. Direct particulate and NO_X emissions increases associated with NSWV were used as inputs to the model. PM_{10} emissions were used to represent direct particulate as PM_{10} has the highest, net emissions increase from among the available PM species (PM, PM_{10}, and $PM_{2.5}$).

The input parameters for the Level 2 VISCREEN analysis are the same as those used in the Level 1 analysis, except that the default worst-case meteorological conditions are updated to site specific meteorological conditions. A Level 2 VISCREEN analysis was performed for the project. The stability class in Level 2 screening remained the same as the default value in Level 1*, i.e.,* F (6), which represents stable atmospheric conditions. The default 1 m/s wind speed was updated to 3 m/s and the ozone background concentration was revised in accordance with Section 2.2. Remaining Level-2 input parameters were set to those values specified by the VISCREEN user's manual as listed in Table 8-1.[54] As directed in the *Workbook for Plume Visual Impact Screening and Analysis*, a background visual range of 20 km was used for the area where NSWV is located.

Table 8-1. Inputs to the VISCREEN Model for the Level-2 Visibility Impairment Analyses

Parameter	Input Value
Particulate Emission Rate	192.96 lb/hr
NO_X Emission Rate	350.35 lb/hr
Default VISCREEN primary NO_2, soot & H_2SO_4 Rate	0 lb/hr
Distance between NSWV & observer	39.10 km
Distance between NSWV & nearest Beech Fork SP boundary	39.10 km
Distance between NSWV & farthest Beech Fork SP boundary	43.20 km
Background ozone	0.06 ppm
Background visual range	20 km
Stability Class	F (6)

[52] Workbook for Plume Visual Impact Screening and Analysis, p. 27.

[53] *Ibid*.

[54] EPA OAQPS, Tutorial Package for the VISCREEN Model, Research Triangle Park, NC, June 1992.

As noted above, the Level 2 analysis is performed using representative meteorological data rather than worst-case meteorological data. NSWV utilized five years' (2020-2024) worth of surface data from the Huntington Tri-State Airport (KHTS, WBAN #3860) and upper air data from the Pittsburgh International Airport (KPIT, WBAN# 94823).

Following EPA guidance, a joint frequency distribution of occurrence of wind speed, flow vector, stability class, and time of day was prepared.[55] Each hour is categorized into four time periods of the day: 0:00 to 5:00, 6:00 to 11:00, 12:00 to 17:00, and 18:00 to 23:00. Periods of meteorological conditions for which the flow vector falls within the cardinal flow vector sector that contains the observer are used to determine the joint frequency distribution of meteorological categories. The centerline flow vector between NSWV and the location of interest at Beech Fork State Park is 22 degrees, which falls within the 360 degree to 22.5 degree sector.

For each of the meteorological categories, the dispersion capability is determined by evaluating the product of σy, σz, and u, where σy and σz are the Pasquill-Gifford horizontal and vertical diffusion coefficients for the given stability class and downwind (source to observer) distance, and u is the wind speed. The dispersion of the plume in the atmosphere increases with an increase in the product of $\sigma y \sigma z u$. The meteorological categories are then ranked in order of increasing $\sigma y \sigma z u$.

Each hour of observed meteorological data is analyzed. First, the flow vector for the given hour is tested to see if wind direction is from the facility toward Beech Fork State Park for that hour (within a sector of 18 to 26 degrees). If not, that hour of observed data is ignored. For hours with wind direction from the facility toward the park, a table of frequencies of occurrence of each meteorological category for each of the four time periods is produced.

For each meteorological category, if the transport time (the source-observer distance divided by the wind speed) is greater than twelve hours, it is ignored and the cumulative frequency is not increased.[56] If the transport time is less than twelve hours, then the time period having the highest frequency of occurrence for the given meteorological category is added to the cumulative frequency.

The meteorological category selected for use in VISCREEN is that which causes the cumulative frequency of occurrence to exceed one (1) percent and is the most restrictive.[57] This condition is chosen to be indicative of worst day plume visual impacts.

The Level 2 screening analysis demonstrated that the plume impairment values were below the Green Contrast critical screening value of 0.05 and ΔE critical screening value of 2.00. Since the Level 2 screening results indicate no adverse impact to visibility, therefore, no further analysis is required. The Level 2 VISCREEN results are shown in Table 8-2.

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[55]Workbook for Plume Visual Impact Screening and Analysis, p. 45.

[56]Workbook for Plume Visual Impact Screening and Analysis, p. 48.

[57]Workbook for Plume Visual Impact Screening and Analysis, p. 48.

Table 8-2. VISCREEN Model Level-2 Visibility Impairment Analysis for Beech Fork State Park

Background	Theta	Azimuthal	Distance (km)	Alpha	Delta E Criteria	Plume	Contrast Criteria	Plume
Inside Class II Area								
Sky	10	84	39.1	84	2.00	0.825	0.05	0.006
Sky	140	84	39.1	84	2.00	0.180	0.05	-0.005
Terrain	10	84	39.1	84	2.00	0.230	0.05	0.003
Terrain	140	84	39.1	84	2.00	0.051	0.05	0.002

APPENDIX A. SIGNIFICANCE ANALYSIS FIGURES

Figure A-1. $PM_{2.5}$ 24-Hr SIL Impacts

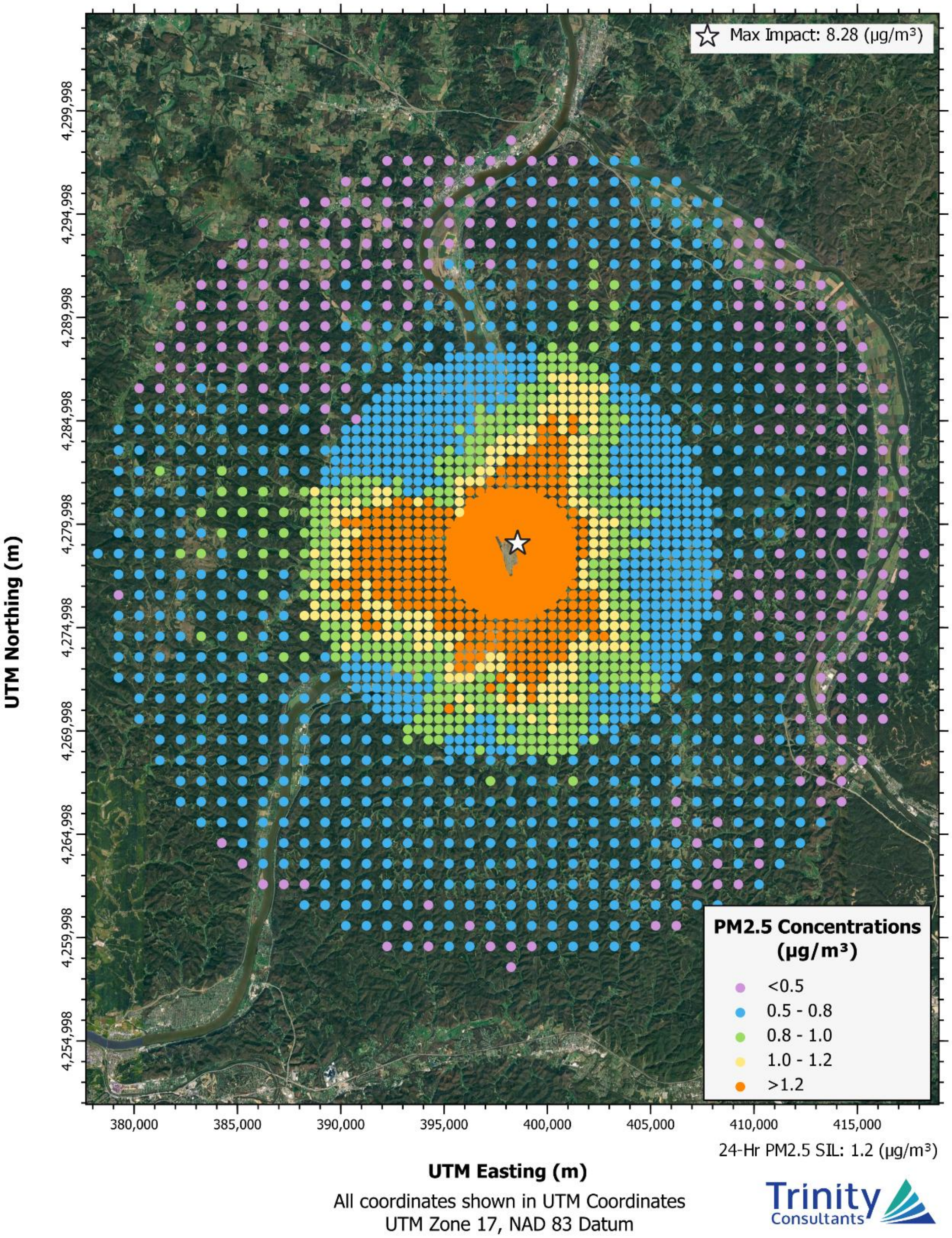
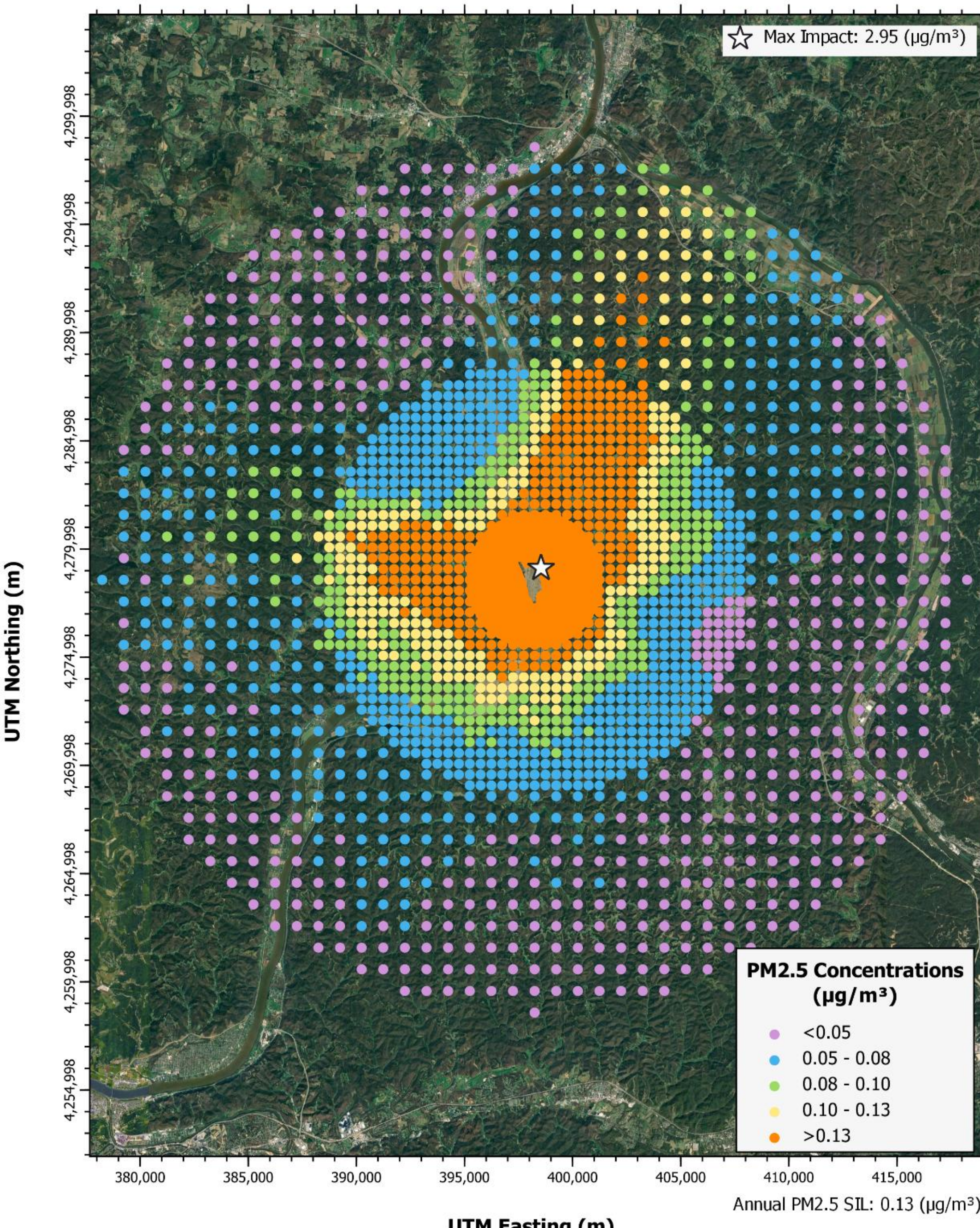


Figure A-2. $PM_{2.5}$ Annual SIL Impacts



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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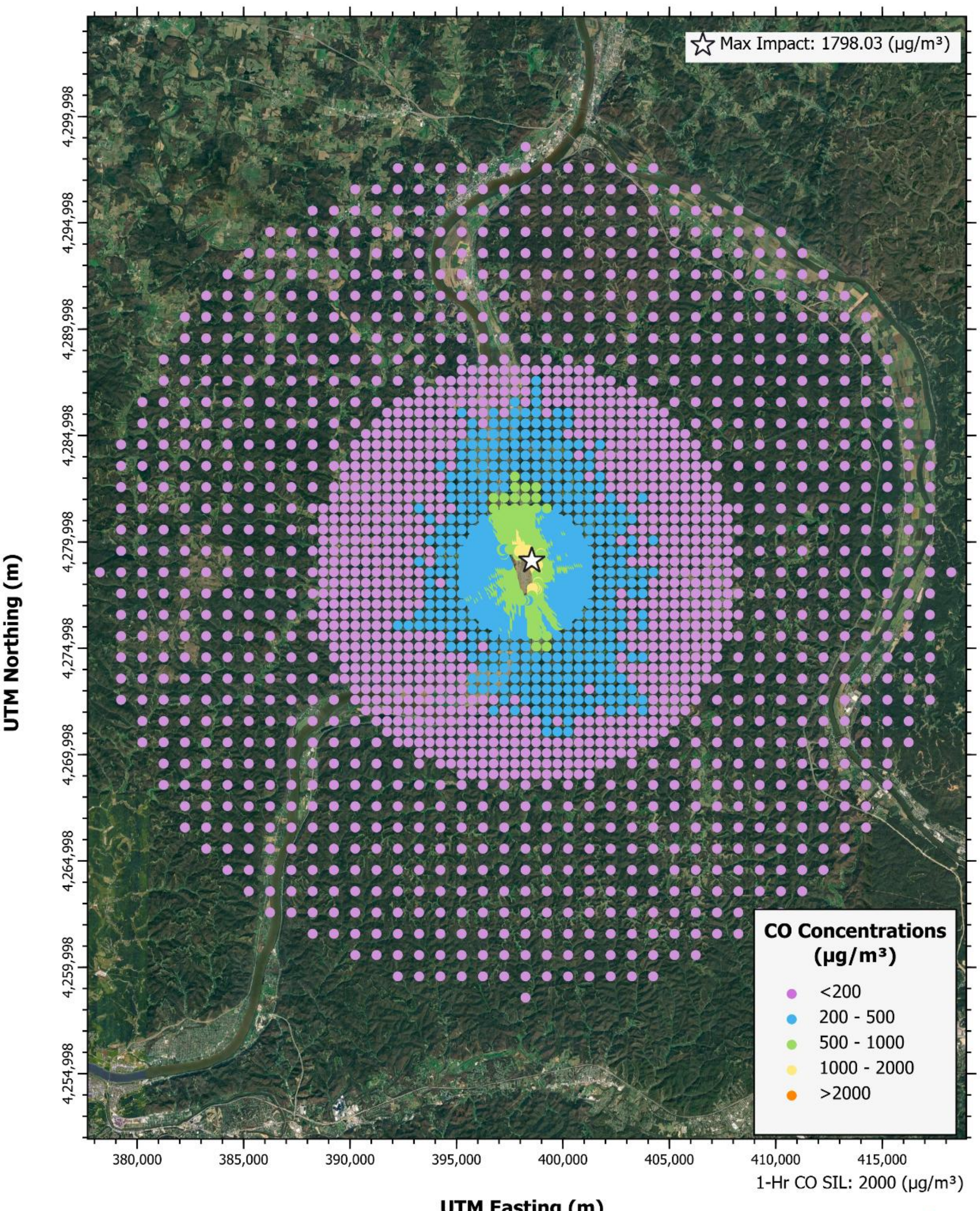
Figure A-3. CO 1-Hr SIL Impacts



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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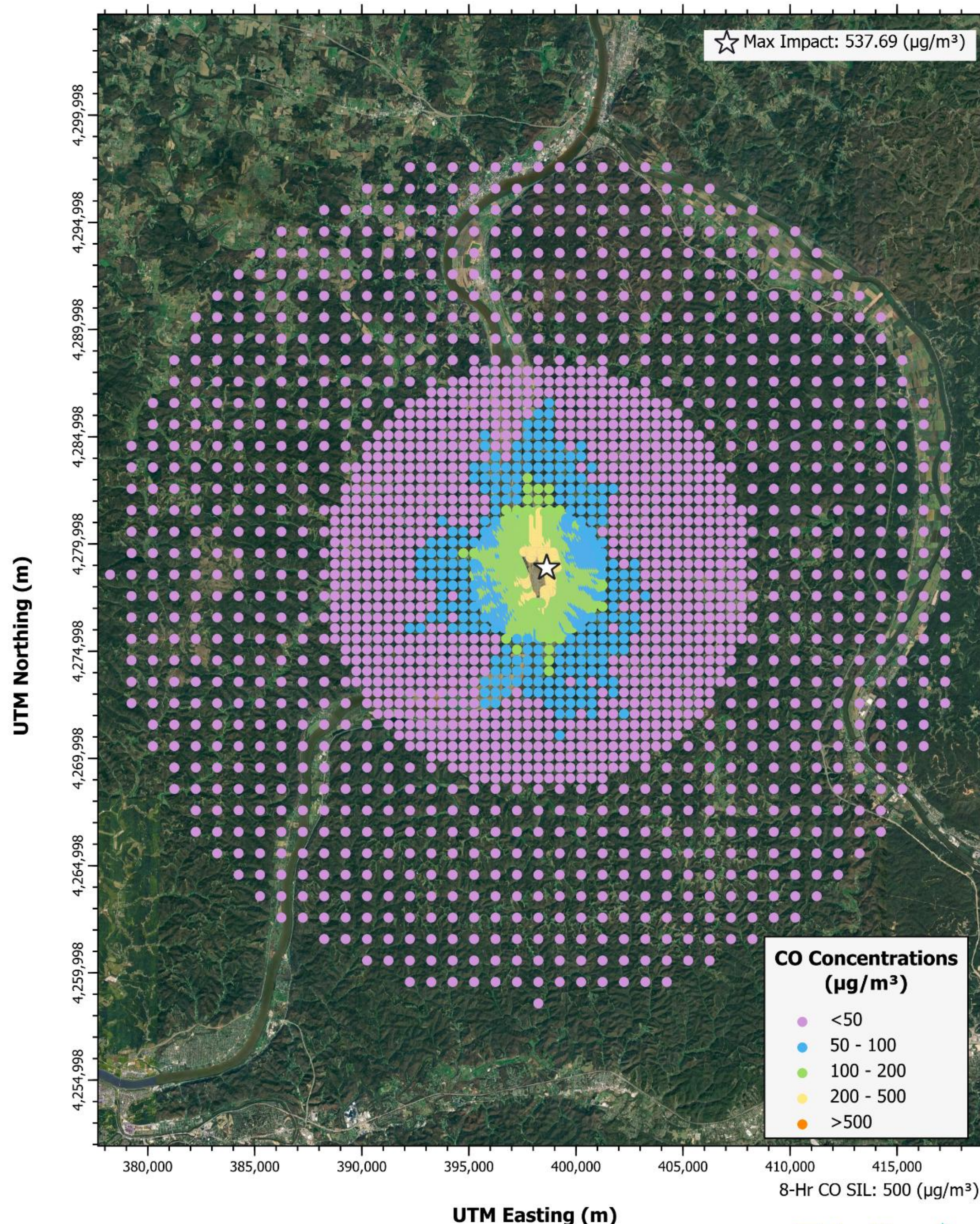
Figure A-4. CO 8-Hr SIL Impacts



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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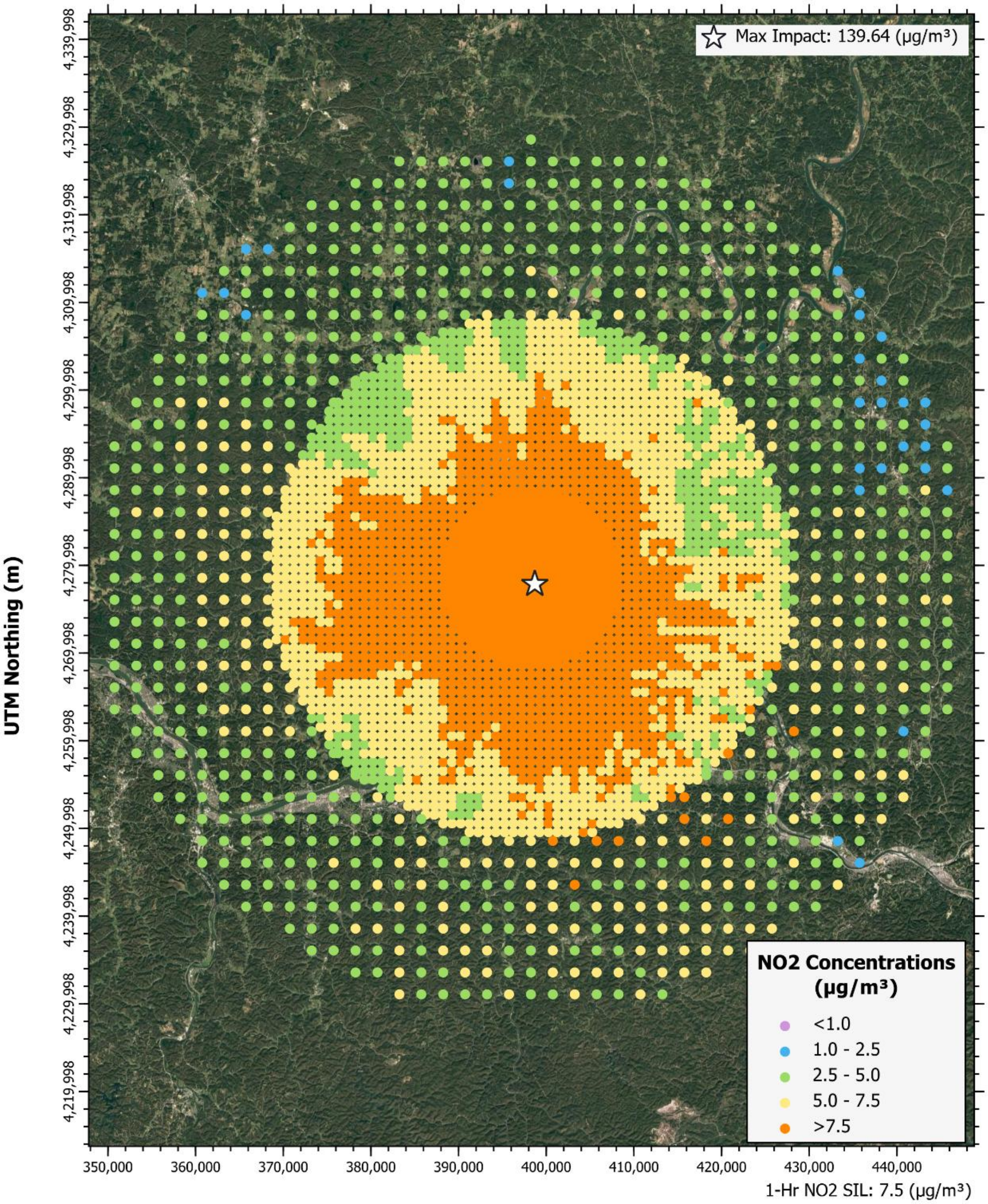
Figure A-5. NO_2 1-Hr SIL Impacts (Full Extent)



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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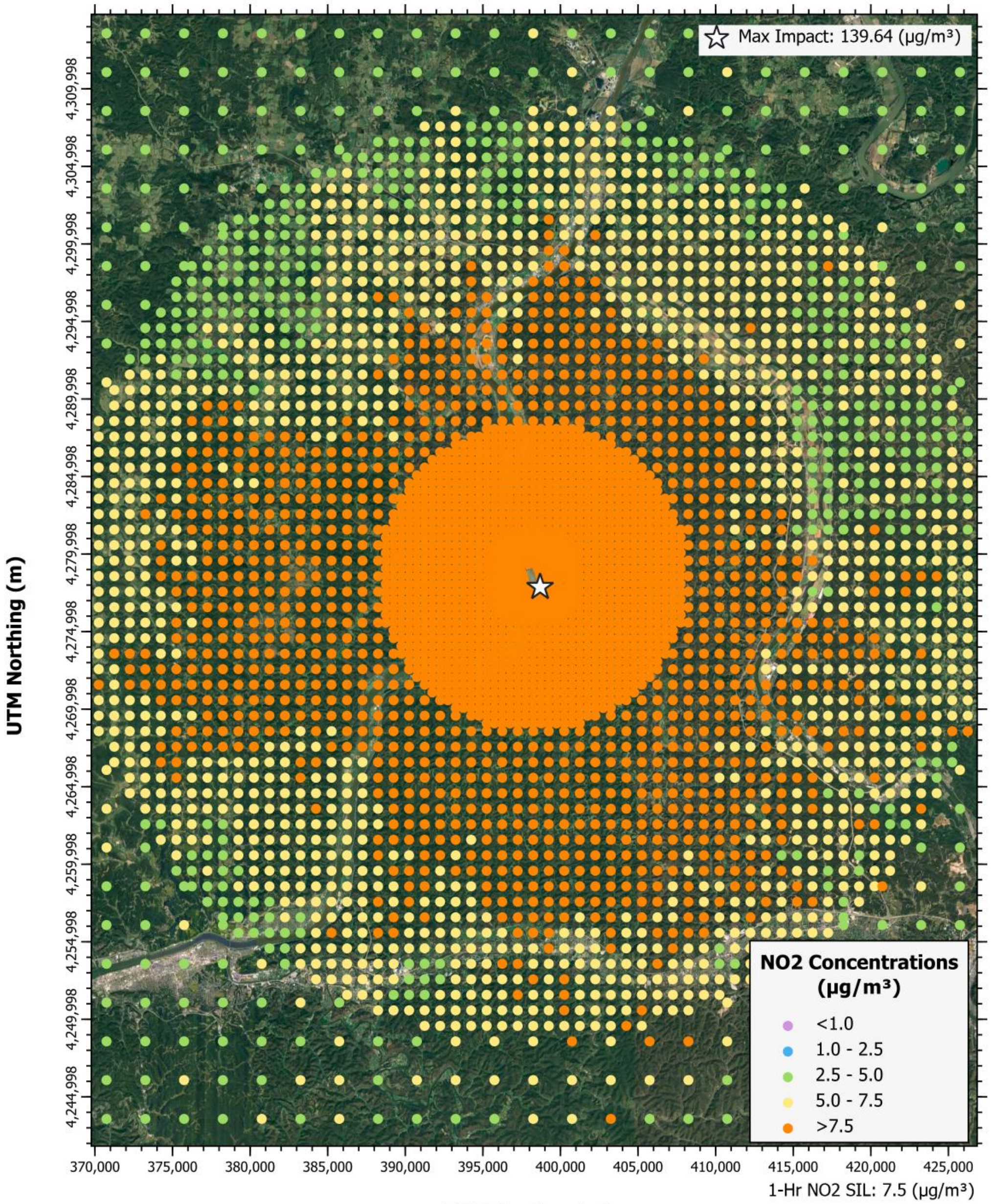
Figure A-6. NO_2 1-Hr SIL Impacts (Zoomed Extent)



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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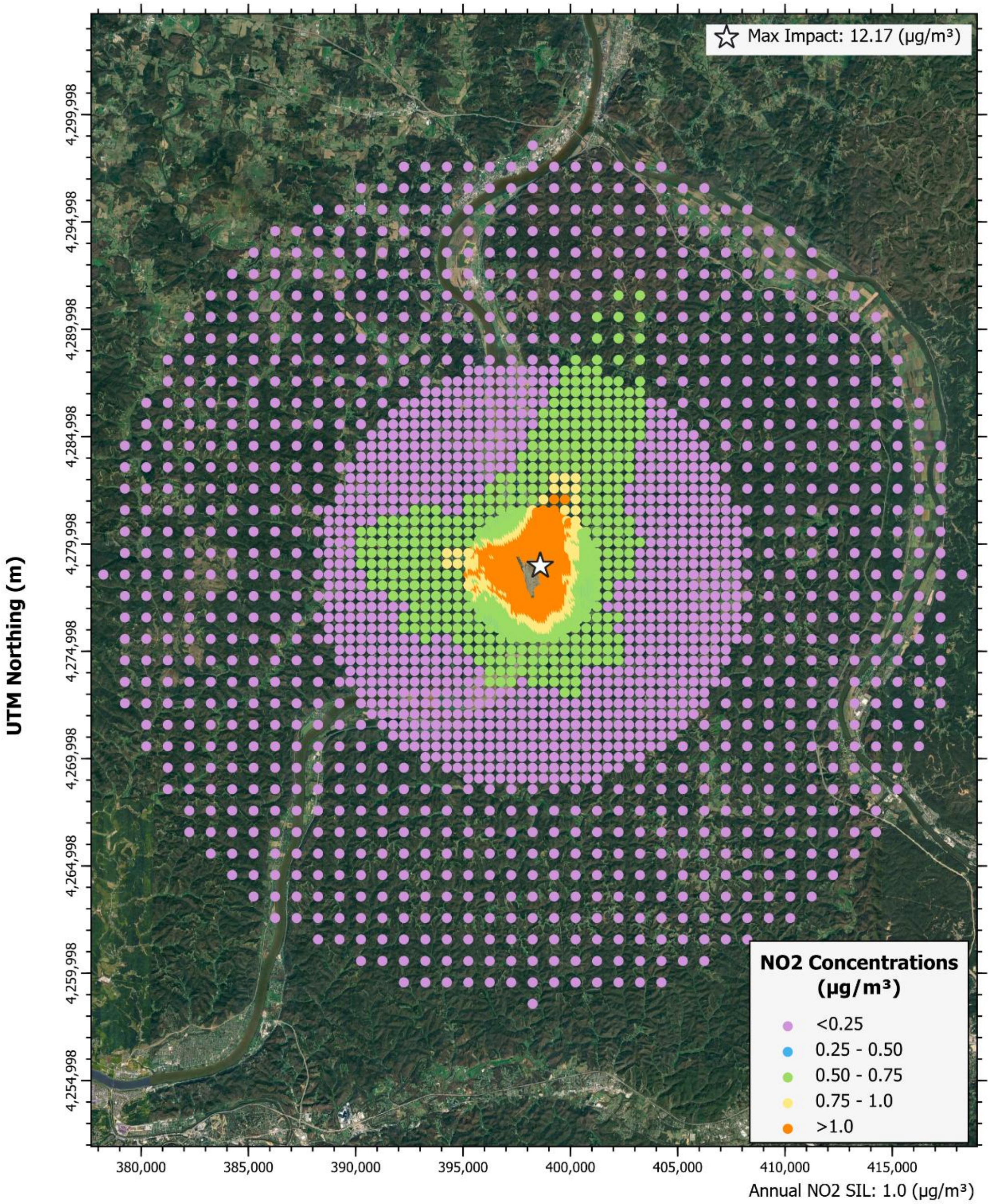
Figure A-7. NO_2 Annual SIL Impacts



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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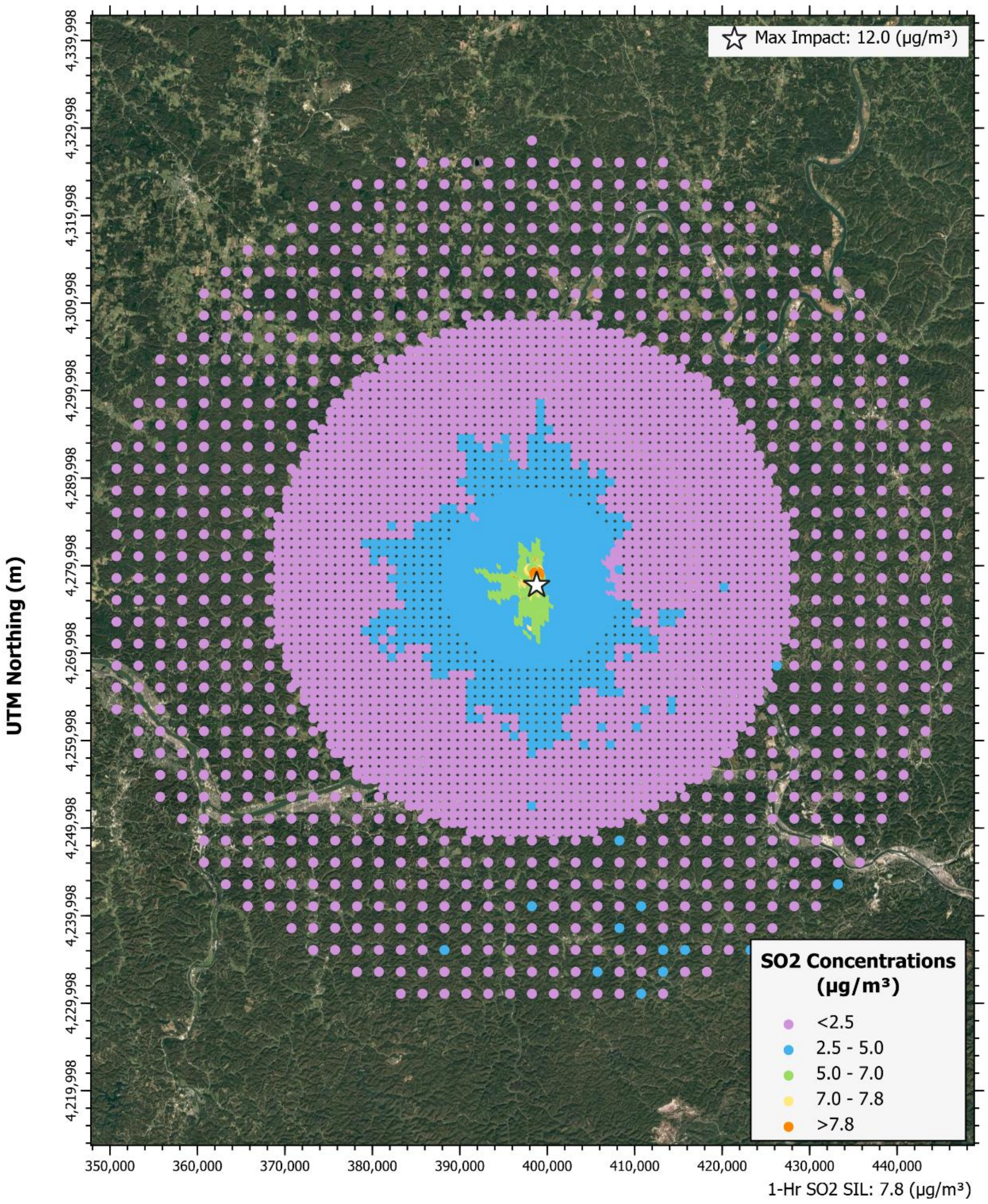
Figure A-8. SO_2 1-Hr SIL Impacts (Full Extent)



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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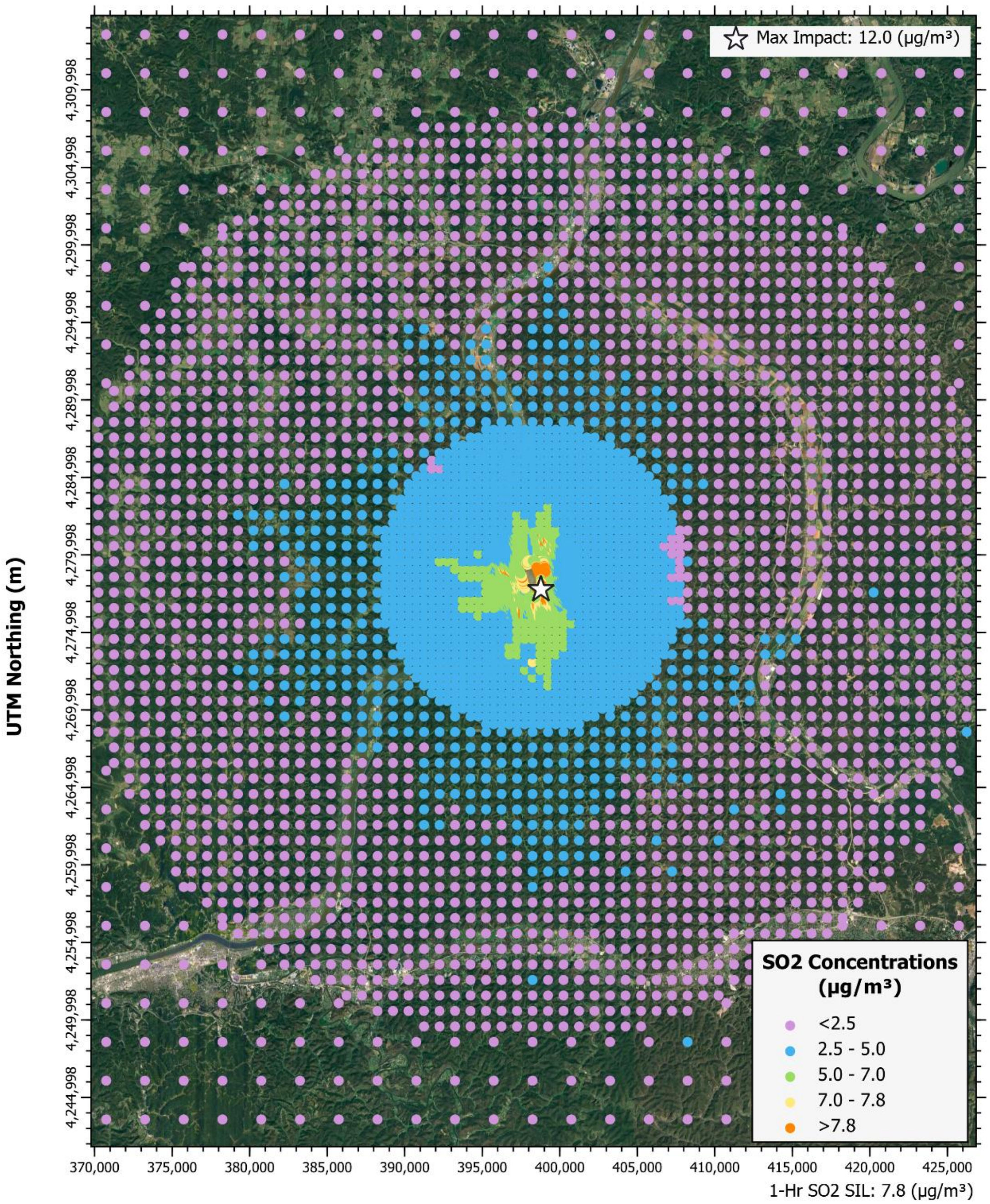
Figure A-9. SO_2 1-Hr SIL Impacts (Zoomed Extent)



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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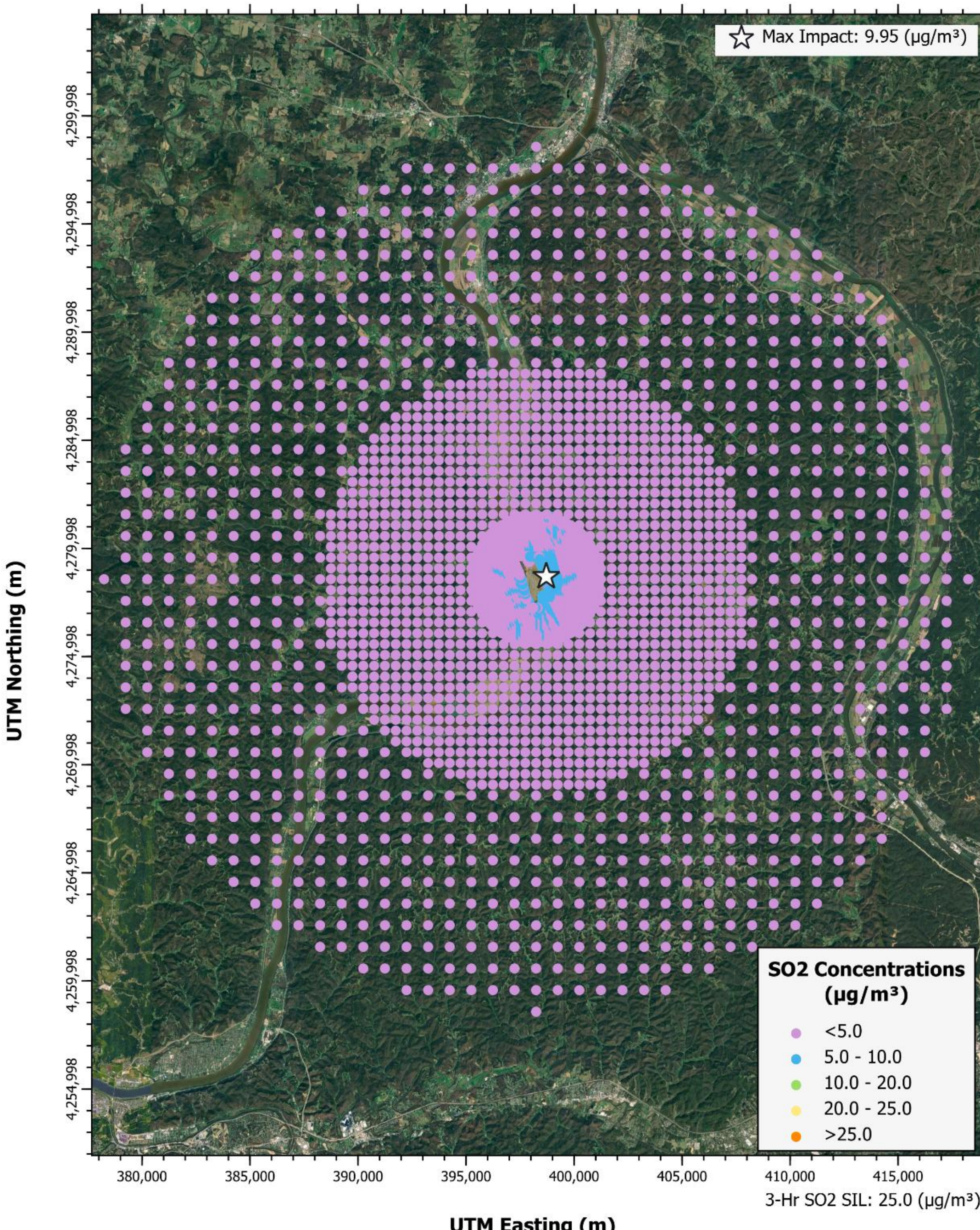
Figure A-10. SO_2 3-Hr SIL Impacts



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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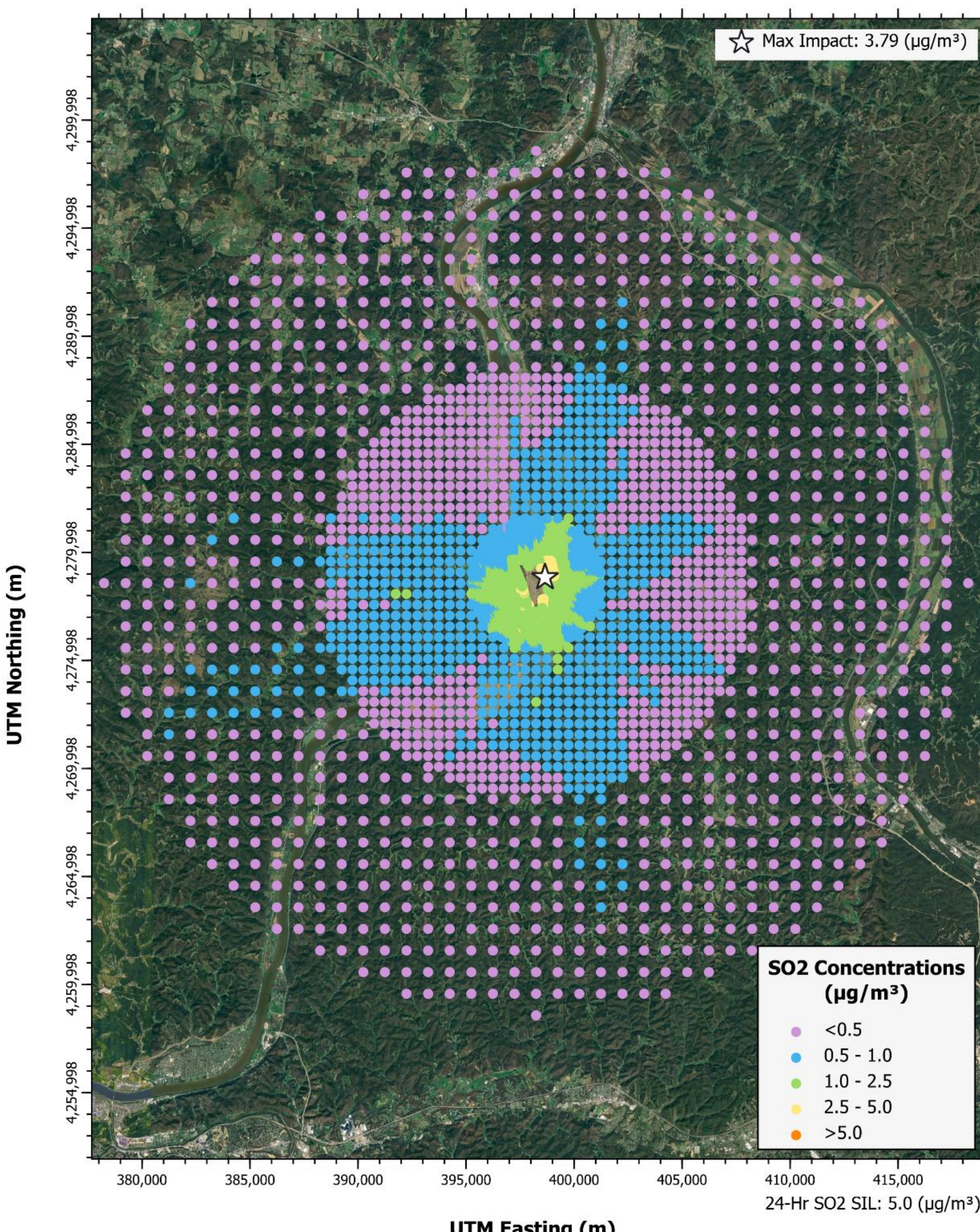
Figure A-11. SO_2 24-Hr SIL Impacts



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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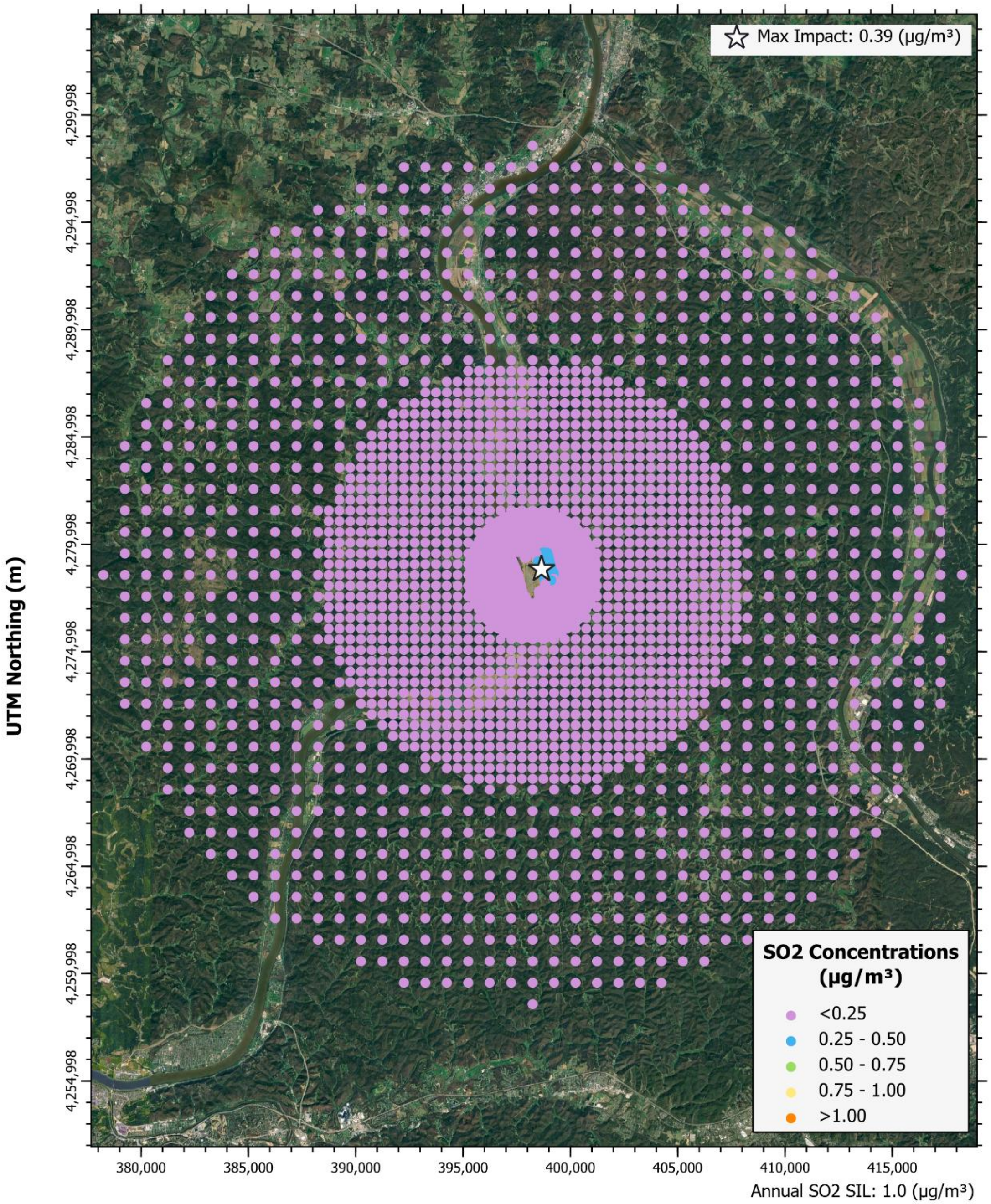
Figure A-12. SO_2 Annual SIL Impacts



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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Figure A-13. PM$_{10}$ 24-Hr SIL Impacts

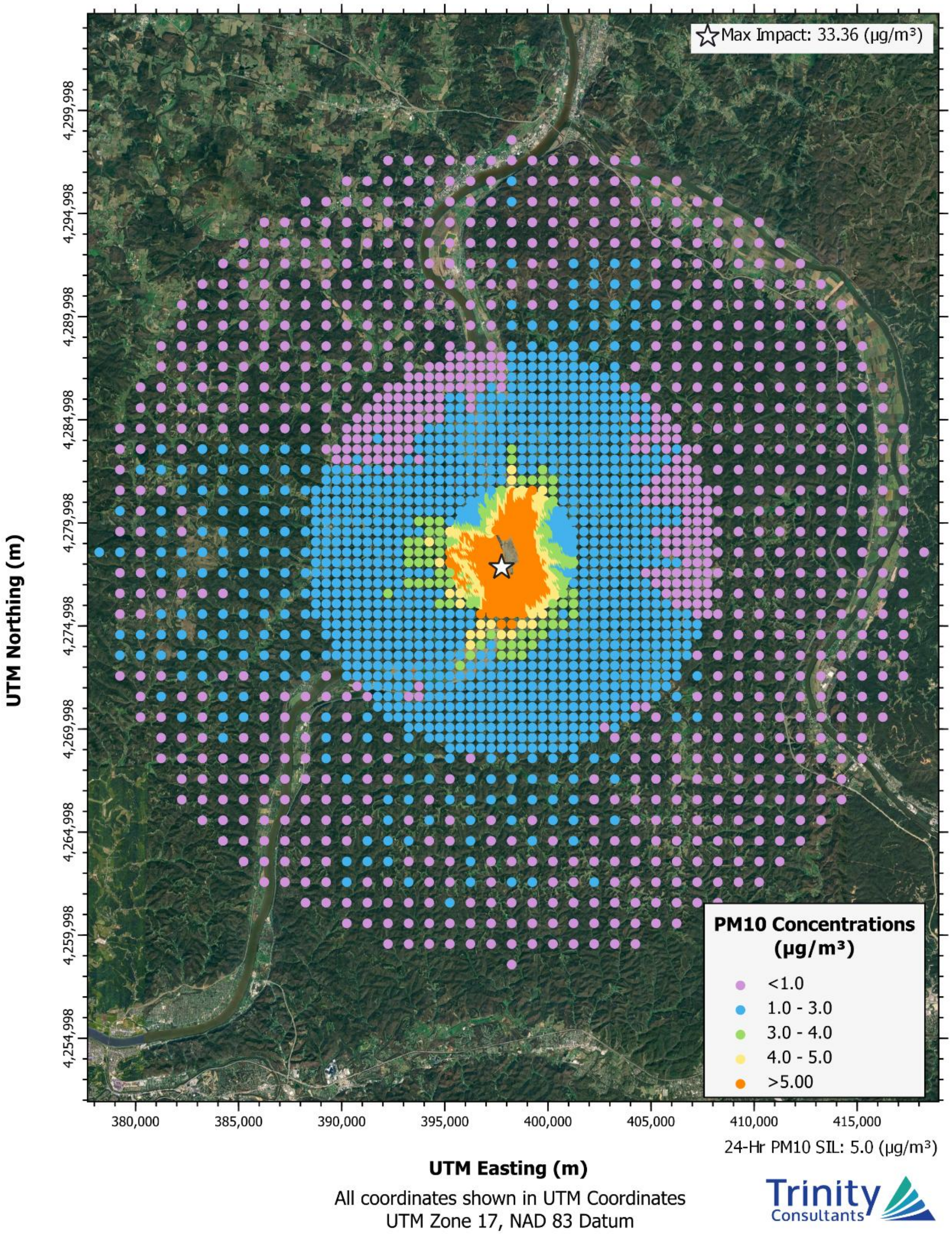

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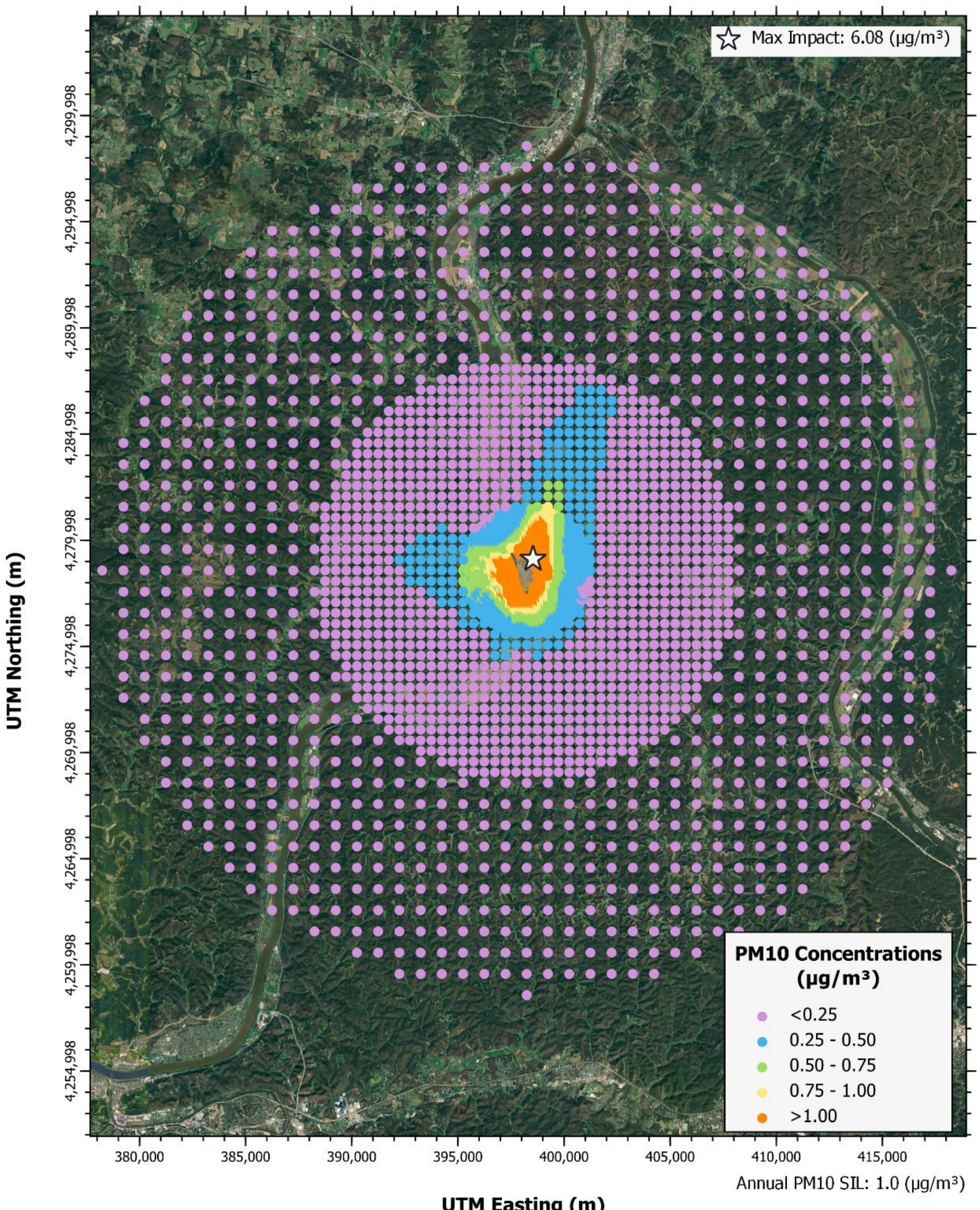
Figure A-14. PM_{10} Annual SIL Impacts



All coordinates shown in UTM Coordinates
UTM Zone 17, NAD 83 Datum

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APPENDIX B. NSWV SOURCE PARAMETERS

Table B-1. Modeled Source ID Index

Model ID	Description	Source Type
BHST1	Pulse Jet Fabric Filter Baghouse 1	Point
BHST2	Pulse Jet Fabric Filter Baghouse 2	Point
TMEOMVA and TMEOMVB	Temper Mill Electrostatic Oiler Re-Coiler Line Electrostatic Oiler	Point
NCT1A through NCT1-Cell E	Cooling Tower NCT1, Cells A-E	Point
CCT4A and CCT4B	Cooling Tower CCT4, Cells A-B	Point
NCT5A and NCT5B	Cooling Tower NCT5, Cells A-B	Point
CCT6A through CCT6C	Cooling Tower CCT6, Cells A-C	Point
LCT7A through LCT7C	Cooling Tower LCT7, Cells A-C	Point
NCT8A and NCT8B	Cooling Tower NCT8, Cells A-B	Point
ASPCTA through ASPCTE	Air Separation Plant Cooling Tower 7	Point
PLTCMBLR	PLTCM Boiler #1	Point
	PLTCM Boiler #2	Point
VTDST1	Vacuum Tank Degasser Flare 1	Point
VTDST2	Vacuum Tank Degasser Flare 2	Point
TFST1	Hot Mill Tunnel Furnace 1	Point
HMFUGA through HMFUGL	Hot Mill Matrix Vents	Point
PLST1	Pickling Line Mist Scrubber 1	Point
PKLSB	Pickle Line Scale Breaker Baghouse	Point
TCMST1	Tandem Cold Mill Mist Eliminator	Point
STMST1	Stand Alone Temper Mill	Point
CGL1_ST1	CGL1 - Cleaning Section & Galvanizing Line Boiler 1	Point
CGL2_ST1	CGL2 - Cleaning Section & Galvanizing Line Boiler 2	Point
GALVFN1	Galvanizing Furnace 1	Point
GALVFN2	Galvanizing Furnace 2	Point
CSP1	Caster Spray Vents-1 (Horizontal Release)	Point
CSP2	Caster Spray Vents-2 (Horizontal Release)	Point
BV003	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	Point
SUBSILO1	NBC01 normal belt conveyor to SBM01 day bin	Point
SUBSILO2	NBC01 normal belt conveyor to SBM02 day bin	Point
SUBSILO3	NBC01 normal belt conveyor to SBM03 day bin	Point
SUBSILO4	NBC01 normal belt conveyor to SBM04 day bin	Point
BV305	SBM01 day bin to NBC02 normal belt conveyor	Point
BV306	SBM02 day bin to NBC02 normal belt conveyor	Point
BV307	SBM03 day bin to NBC02 normal belt conveyor	Point
BV308	SBM04 day bin to NBC02 normal belt conveyor	Point
BV309	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	Point
BV310	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	Point
BV311	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	Point
BV312	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	Point
BV313	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	Point
BV314	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	Point
BV315	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	Point
BV316	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	Point
BV317	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	Point
CUTBH	Scrap and Coil Cutting Baghouse	Point
ASP	Water Bath Vaporizer	Point
CGL1MVA through CGL1MVE	Skin Pass Mill #1 Galvanizing Line 1 Electrostatic Oiler	Point
CGL2MVA through CGL2MVE	Skin Pass Mill #2 Galvanizing Line 2 Electrostatic Oiler	Point
EMGEN1	Emergency Generator 1	Point
EMGEN2	Emergency Generator 2	Point
EMGEN3	Emergency Generator 3	Point
EMGEN4	Emergency Generator 4	Point
EMGEN5	Emergency Generator 5	Point
EMGEN6	Emergency Generator 6	Point
EMGEN7	Emergency Generator 7	Point
EMGEN8	Emergency Generator 8	Point
EMGEN9	Emergency Generator 9	Point
EMGEN10	Emergency Generator 10	Point
EMGEN11	Emergency Generator 11	Point
EMGEN12	Emergency Generator 12	Point
EMGEN13	Emergency Generator 13	Point
EMGEN14	Emergency Generator 14	Point
EMGEN15	Emergency Generator 15	Point
EMGEN16	Emergency Generator 16	Point
EMGEN17	Emergency Generator 17	Point
EMGEN18	Emergency Generator 18	Point
EMGEN19	Emergency Generator 19	Point
EMGEN20	Emergency Generator 20	Point
EMGEN21	Emergency Generator 21	Point
EMGEN22	Emergency Generator 22	Point
EMGEN23	Emergency Generator 23	Point
EMGEN24	Emergency Generator 24	Point
EMGEN25	Emergency Generator 25	Point
EMGEN26	Emergency Generator 26	Point

Table B-1. Modeled Source ID Index

Model ID	Description	Source Type
EAFVF1	EAF Baghouse 1 Dust Silo	Point
EAFVF2	EAF Baghouse 2 Dust Silo	Point
MSMVA through MSMVF	Uncaptured Electric Arc Furnace Fugitives	Point
	Uncaptured Casting Fugitives	
	Ladle Dryer #1	
	Ladle Dryer #2	
	Ladle Dryer #3	
	Horizontal Ladle Preheater 1	
	Horizontal Ladle Preheater 2	
	Horizontal Ladle Preheater 3	
	Horizontal Ladle Preheater 4	
	Horizontal Ladle Preheater 5	
	Vertical Ladle Preheater 6	
	Vertical Ladle Preheater 7	
	Tundish Dryer 1	
	Tundish Dryer 2	
	Tundish Preheater 1	
	Tundish Preheater 2	
	Subentry Nozzle (SEN) Preheater 1	
	Subentry Nozzle (SEN) Preheater 2	
	Subentry Nozzle (SEN) Preheater Oven	
	RSC11 reversible shuttle belt conveyor to SBN11-SBN22 daily bins	
	EBC12 elevating belt conveyor to NBC12 normal belt conveyor	
	EBC13 elevating belt conveyor to NBC13 normal belt conveyor	
	RSC21 reversible shuttle belt conveyor to SBN31-58 bin extraction equipment	
	Uncaptured Electric Arc Furnace Fugitives (Indoor) - Raw Material Transfer	
	Melt Shop Interior Baghouse Dust Unloading (Indoor)	
GALFUGA through GALFUGF	Box Annealing Furnace #1	Point
	Box Annealing Furnace #2	
	Box Annealing Furnace #3	
	Box Annealing Furnace #4	
	Box Annealing Furnace #5	
	Box Annealing Furnace #6	
	Box Annealing Furnace #7	
	Box Annealing Furnace #8	
	Box Annealing Furnace #9	
	Box Annealing Furnace #10	
	Box Annealing Furnace #11	
	Box Annealing Furnace #12	
SUBSFUG	Uncaptured Scrap Substitute Day Bin Fugitives - Raw Material Transfer	Area
	SBM01-SBM02 day bins to NBC02 normal belt conveyor	
	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	
	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	
	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	
	WBC02 weighing belt conveyor to NBC13 for EAF #2 Feed	
	WBC01 weighing belt conveyor to NBC12 for EAF #1 Feed	
SLAGPORT	Portable Slag Processing, SLAG-BULK1-24	Area
	SP-OBM1 Magnet Pile	
	MAG HP Magnet Pile	
	SP-RS1 Radial Stacker Pile Duraberm	
	SP-RS2 Radial Stacker Pile Durabase	
	SP-RS1 Radial Stacker Pile 5 Small Chips	
	SP-RS2 Radial Stacker Pile 6 Big Chips	
	Long-Term Radial Stacker Pile Duraberm	
	Long-Term Radial Stacker Pile Durabase	
	Long-Term Radial Stacker Pile Small Chips	
	Long-Term Radial Stacker Pile Big Chips	
SLAGMRP	Metal Recovery & Mixed Aggregate Plant, SLAG-BULK25-47	Area
	GFH-MA Hopper Pile	
	CV-MA-RS2 Radial Stacker Pile	
	OBM-MA1 Magnet Pile	
	CV-MA-RS1 Radial Stacker Pile	
BRKCRSH	Brick Crushing	Area
SCRCUTNG	Scrap Cutting in Scrap Processing Area	Area
SLAGDROP	Slag Handling, Drop Ball Pit, SLAG-BULK48-52	Open Pit
EXBHUNLD	Melt Shop Exterior Baghouse Dust Unloading	Volume
SUBSUNL	Uncaptured Unloading Fugitives - Raw Material Transfer	Volume
SUBSDCK1	Crane Unloading Transfers to NBC01 normal belt conveyor	Volume
SUBSDCK2	Crane Unloading Transfers to NBC01 normal belt conveyor	Volume
SUBSDCK3	Crane Unloading Transfers to NBC01 normal belt conveyor	Volume
SUBSDCK4	Crane Unloading Transfers to NBC01 normal belt conveyor	Volume
SUBSDCK5	Crane Unloading Transfers to NBC01 normal belt conveyor	Volume
SUBSDCK6	Crane Unloading Transfers to NBC01 normal belt conveyor	Volume
SUBSILOF	Uncaptured Scrap Substitute Unloading Fugitives - Raw Material Transfer	Volume
CUTBHUNL	Scrap and Coil Cutting Baghouse	Volume
VF1UNLD	EAF Baghouse 1 Dust Silo Loadout	Volume
VF2UNLD	EAF Baghouse 2 Dust Silo Loadout	Volume
BULKMH	Uncaptured Lime/Carbon Fugitives - Raw Material Transfer	Volume
	Uncaptured EAF Unloading Fugitives - Raw Material Transfer	

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Appendix B: Source Parameters and Emission Rates

Table B-1. Modeled Source ID Index

<table>
<tr><th>Model ID</th><th>Description</th><th>Source Type</th></tr>
<tr><td rowspan="8">MAUWIPA through MAUWIPE</td><td>NG-Fired Makeup Air Unit, WIP Coil Storage Building</td><td rowspan="8">Volume</td></tr>
<tr><td>NG-Fired Makeup Air Unit, WIP Coil Storage Building</td></tr>
<tr><td>NG-Fired Makeup Air Unit, WIP Coil Storage Building</td></tr>
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<tr><td>NG-Fired Makeup Air Unit, WIP Coil Storage Building</td></tr>
<tr><td>NG-Fired Makeup Air Unit, WIP Coil Storage Building</td></tr>
<tr><td rowspan="8">MAUFGA through MAUFGC</td><td>NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building</td><td rowspan="8">Volume</td></tr>
<tr><td>NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building</td></tr>
<tr><td>NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building</td></tr>
<tr><td>NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building</td></tr>
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<tr><td>NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building</td></tr>
<tr><td>NG-Fired Makeup Air Unit, Finished Goods Coil Storage Building</td></tr>
<tr><td rowspan="3">MAUPLA through MAUPLC</td><td>NG-Fired Makeup Air Unit, PLTCM Bay</td><td rowspan="3">Volume</td></tr>
<tr><td>NG-Fired Makeup Air Unit, PLTCM Bay</td></tr>
<tr><td>Pickle Line Electrostatic Oiler</td></tr>
<tr><td rowspan="3">SCRPBRGE</td><td>Scrap Handling</td><td rowspan="3">Volume</td></tr>
<tr><td>Scrap Handling</td></tr>
<tr><td>Scrap Handling</td></tr>
<tr><td>SCRPHNDA through SCRPHNDC</td><td>Scrap Handling</td><td>Volume</td></tr>
<tr><td>SCRPSKPA through SCRPSKPC</td><td>Scrap Yard Stockpiles</td><td>Volume</td></tr>
<tr><td rowspan="12">ROAD1 through ROAD184</td><td>North Entry to P&O</td><td rowspan="12">Volume</td></tr>
<tr><td>North Entry to FG</td></tr>
<tr><td>North Entry to HB Yard</td></tr>
<tr><td>North Entry to Scrap Yard</td></tr>
<tr><td>North Entry to Alloy Storage</td></tr>
<tr><td>North Entry to EAF Bay</td></tr>
<tr><td>North Entry to Slag Bay</td></tr>
<tr><td>Scrap Yard to EAF Bay</td></tr>
<tr><td>South Port to Scrap Yard</td></tr>
<tr><td>South Port to HB Yard</td></tr>
<tr><td>South Port to FG</td></tr>
<tr><td>South Port to P&O</td></tr>
</table>

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Appendix B: Source Parameters and Emission Rates

Table B-2. Summary of Point Source Parameters

Point Sources

Emission Point ID	Description	UTM East (m)	UTM North (m)	Elevation (m)	Stack Height (ft)	Stack Temperature (F)	Stack Diameter (ft)	Flow rate (cfm)	Exit Velocity (fps)	Stack Height (m)	Stack Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
Melt Shop Complex													
BHST1	Pulse Jet Fabric Filter Baghouse 1	398,450.10	4,277,984.60	177.39	213.25	224.00	23.00	2,100,000	84.24	65.00	379.82	25.68	7.01
BHST2	Pulse Jet Fabric Filter Baghouse 2	398,374.00	4,277,953.50	177.39	213.25	224.00	23.00	2,100,000	84.24	65.00	379.82	25.68	7.01
EAFVF1	EAF Baghouse 1 Dust Silo	398,426.80	4,277,947.20	177.39	87.50	Ambient	0.47	500	48.00	26.67	-0.1	14.63	0.14
EAFVF2	EAF Baghouse 2 Dust Silo	398,416.80	4,277,942.90	177.39	87.50	Ambient	0.47	500	48.00	26.67	-0.1	14.63	0.14
MSMVA	Melt Shop Fugitives (Indoor), Matrix Vent	398,392.70	4,278,254.30	177.39	156.48	135.00	27.64	600,000	16.67	47.70	330.37	5.08	8.42
MSMVB	Melt Shop Fugitives (Indoor), Matrix Vent	398,397.20	4,278,256.20	177.39	156.48	135.00	27.64	600,000	16.67	47.70	330.37	5.08	8.42
MSMVC	Melt Shop Fugitives (Indoor), Matrix Vent	398,401.70	4,278,258.10	177.39	156.48	135.00	27.64	600,000	16.67	47.70	330.37	5.08	8.42
MSMVD	Melt Shop Fugitives (Indoor), Matrix Vent	398,406.30	4,278,260.00	177.39	156.48	135.00	27.64	600,000	16.67	47.70	330.37	5.08	8.42
MSMVE	Melt Shop Fugitives (Indoor), Matrix Vent	398,410.80	4,278,261.90	177.39	156.48	135.00	27.64	600,000	16.67	47.70	330.37	5.08	8.42
MSMVF	Melt Shop Fugitives (Indoor), Matrix Vent	398,415.30	4,278,263.80	177.39	156.48	135.00	27.64	600,000	16.67	47.70	330.37	5.08	8.42
CSP1	Caster Spray Vents-1 (Horizontal Release)	398391.60	4278278.20	177.39	165.50	135.00	6.30	121,154	64.78	50.44	330.37	19.74	1.92
CSP2	Caster Spray Vents-2 (Horizontal Release)	398404.10	4278283.70	177.39	159.00	135.00	7.90	242,308	82.39	48.46	330.37	25.11	2.41
Hot Mill Complex													
TFST1	Hot Mill Tunnel Furnace 1	398,334.20	4,278,317.70	177.39	196.83	1075.73	8.17	150,195	47.79	59.99	853.00	14.57	2.49
HMMVA	Hot Mill Fugitives (Indoor), Matrix Vent	398,327.20	4,278,464.10	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVB	Hot Mill Fugitives (Indoor), Matrix Vent	398,307.50	4,278,512.60	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVC	Hot Mill Fugitives (Indoor), Matrix Vent	398,318.20	4,278,486.50	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVD	Hot Mill Fugitives (Indoor), Matrix Vent	398,296.90	4,278,538.40	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVE	Hot Mill Fugitives (Indoor), Matrix Vent	398,287.40	4,278,561.40	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVF	Hot Mill Fugitives (Indoor), Matrix Vent	398,278.00	4,278,586.00	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVG	Hot Mill Fugitives (Indoor), Matrix Vent	398,310.40	4,278,470.40	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVH	Hot Mill Fugitives (Indoor), Matrix Vent	398,300.10	4,278,494.60	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVI	Hot Mill Fugitives (Indoor), Matrix Vent	398,289.90	4,278,520.70	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVJ	Hot Mill Fugitives (Indoor), Matrix Vent	398,280.50	4,278,543.70	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVK	Hot Mill Fugitives (Indoor), Matrix Vent	398,270.80	4,278,568.80	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
HMMVL	Hot Mill Fugitives (Indoor), Matrix Vent	398,260.80	4,278,593.20	177.39	102.78	150.00	22.57	340,000	14.17	31.33	338.71	4.32	6.88
Cold Mill Complex													
TCMST1	Tandem Cold Mill Mist Eliminator	398,147.60	4,279,080.30	177.39	213.25	115.00	8.20	275,175	86.80	65.00	319.26	26.46	2.50
CGL1_ST1	CGL1 - Cleaning Section & Galvanizing Line Boiler 1	398,277.60	4,279,037.90	177.39	152.00	190.40	2.00	16,862	89.46	46.33	361.15	27.27	0.61
CGL2_ST1	CGL2 - Cleaning Section & Galvanizing Line Boiler 2	398,329.20	4,279,086.90	177.39	95.00	190.40	2.00	16,862	89.46	28.96	361.15	27.27	0.61
CGL1MVA	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler	398,306.70	4,278,955.20	177.39	221.28	135.00	19.54	330,000	18.333	67.45	330.37	5.588	5.96
CGL1MVB	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler	398,309.10	4,278,949.40	177.39	221.28	135.00	19.54	330,000	18.333	67.45	330.37	5.588	5.96
CGL1MVC	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler	398,311.50	4,278,943.50	177.39	221.28	135.00	19.54	330,000	18.333	67.45	330.37	5.588	5.96
CGL1MVD	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler	398,313.60	4,278,937.30	177.39	221.28	135.00	19.54	330,000	18.333	67.45	330.37	5.588	5.96
CGL1MVE	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler	398,316.00	4,278,931.50	177.39	221.28	135.00	19.54	330,000	18.333	67.45	330.37	5.588	5.96
CGL2MVA	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler	398,353.00	4,278,941.40	177.39	172.08	135.00	19.54	337,500	18.750	52.45	330.37	5.715	5.96
CGL2MVB	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler	398,355.40	4,278,935.60	177.39	172.08	135.00	19.54	337,500	18.750	52.45	330.37	5.715	5.96
CGL2MVC	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler	398,357.80	4,278,929.70	177.39	172.08	135.00	19.54	337,500	18.750	52.45	330.37	5.715	5.96
CGL2MVD	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler	398,360.10	4,278,923.90	177.39	172.08	135.00	19.54	337,500	18.750	52.45	330.37	5.715	5.96
CGL2MVE	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler	398,362.50	4,278,918.10	177.39	172.08	135.00	19.54	337,500	18.750	52.45	330.37	5.715	5.96
STMST1	Stand Alone Temper Mill	398,258.20	4,278,889.30	177.39	114.83	90.00	3.28	26,320	51.89	35.00	305.37	15.82	1.00
PLST1	Pickling Line Mist Scrubber 1	398,201.00	4,278,813.00	177.39	147.64	343.00	2.70	24,983	72.54	45.00	445.93	22.11	0.82
PKLSB	Pickle Line Scale Breaker Baghouse	398,236.70	4,278,726.90	177.39	114.83	Ambient	4.60	51,683	51.83	35.00	-0.1	15.80	1.40
GALVFN1	Galvanizing Furnace 1	398,292.40	4,279,019.60	177.39	164.60	661.73	5.00	44,025	37.37	50.17	623.00	11.39	1.52
GALVFN2	Galvanizing Furnace 2	398,350.30	4,279,036.40	177.39	150.13	661.73	5.17	74,926	59.56	45.76	623.00	18.15	1.57
PLTCMB	PLTCM Main & Spare Boilers	398,221.70	4,278,773.20	177.39	70.00	307.00	3.75	35,833	54.07	21.34	425.93	16.48	1.14
TMEOMVA	Temper Mill & Recoiler Line Electrostatic Oilers, Matrix Vent	398,298.50	4,278,883.60	177.39	106.08	105.00	17.48	144,000	10.00	32.33	313.71	3.05	5.33
TMEOMVB	Temper Mill & Recoiler Line Electrostatic Oilers, Matrix Vent	398,302.90	4,278,872.40	177.39	106.08	105.00	17.48	144,000	10.00	32.33	313.71	3.05	5.33
GALVMVA	Box Annealing Furnaces, Matrix Vent	398,200.40	4,279,083.30	177.39	106.08	105.00	17.48	144,000	10.00	32.33	313.71	3.05	5.33
GALVMVB	Box Annealing Furnaces, Matrix Vent	398,209.30	4,279,061.80	177.39	106.08	105.00	17.48	144,000	10.00	32.33	313.71	3.05	5.33
GALVMVC	Box Annealing Furnaces, Matrix Vent	398,218.70	4,279,039.50	177.39	106.08	105.00	17.48	144,000	10.00	32.33	313.71	3.05	5.33
GALVMVD	Box Annealing Furnaces, Matrix Vent	398,228.00	4,279,015.90	177.39	106.08	105.00	17.48	144,000	10.00	32.33	313.71	3.05	5.33
GALVMVE	Box Annealing Furnaces, Matrix Vent	398,237.20	4,278,993.70	177.39	106.08	105.00	17.48	144,000	10.00	32.33	313.71	3.05	5.33
GALVMVF	Box Annealing Furnaces, Matrix Vent	398,243.00	4,278,980.60	177.39	106.08	105.00	17.48	144,000	10.00	32.33	313.71	3.05	5.33
Material Handling													
SCRCUTBH	Scrap and Coil Cutting Baghouse	398554.80	4278037.50	177.39	40.00	119.93	6.00	109,841	64.66	12.19	322.00	19.71	1.83
SUBSILO1	NBC01 normal belt conveyor to SBM01 day bin	398,251.60	4,277,778.90	177.39	89.00	Ambient	2.00	1,000	5.31	27.13	-0.1	1.62	0.61
SUBSILO2	NBC01 normal belt conveyor to SBM02 day bin	398,260.30	4,277,758.20	177.39	89.00	Ambient	2.00	1,000	5.31	27.13	-0.1	1.62	0.61
SUBSILO3	NBC01 normal belt conveyor to SBM03 day bin	398,267.80	4,277,738.30	177.39	89.00	Ambient	2.00	1,000	5.31	27.13	-0.1	1.62	0.61
SUBSILO4	NBC01 normal belt conveyor to SBM04 day bin	398,277.80	4,277,717.40	177.39	89.00	Ambient	2.00	1,000	5.31	27.13	-0.1	1.62	0.61
BV003	Dock Scrap Substitute Bin to NBC01 normal belt conveyor	398,264.60	4,277,748.20	177.39	89.00	Ambient	2.00	1,000	5.31	27.13	-0.1	1.62	0.61
BV305	SBM01 day bin to NBC02 normal belt conveyor	398,241.60	4,277,778.90	177.39	15.69	Ambient	0.75	1,000	37.73	4.78	-0.1	11.50	0.23
BV306	SBM02 day bin to NBC02 normal belt conveyor	398,250.30	4,277,755.50	177.39	15.69	Ambient	0.75	1,000	37.73	4.78	-0.1	11.50	0.23
BV307	SBM03 day bin to NBC02 normal belt conveyor	398,259.30	4,277,734.00	177.39	15.69	Ambient	0.75	1,000	37.73	4.78	-0.1	11.50	0.23
BV308	SBM04 day bin to NBC02 normal belt conveyor	398,269.70	4,277,712.40	177.39	15.69	Ambient	0.75	1,000	37.73	4.78	-0.1	11.50	0.23
BV309	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	398,183.70	4,277,942.40	177.39	45.73	Ambient	0.75	1,000	37.73	13.94	-0.1	11.50	0.23
BV310	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	398,116.50	4,278,103.10	177.39	75.77	Ambient	0.75	1,000	37.73	23.09	-0.1	11.50	0.23
BV311	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	398,122.50	4,278,105.20	177.39	75.77	Ambient	0.75	1,000	37.73	23.09	-0.1	11.50	0.23
BV312	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	398,119.10	4,278,095.30	177.39	75.77	Ambient	0.75	1,000	37.73	23.09	-0.1	11.50	0.23
BV313	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment	398,127.30	4,278,097.70	177.39	75.77	Ambient	0.75	1,000	37.73	23.09	-0.1	11.50	0.23
BV314	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	398,117.10	4,278,102.70	177.39	49.00	Ambient	0.75	1,000	37.73	14.94	-0.1	11.50	0.23
BV315	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	398,123.10	4,278,104.80	177.39	49.00	Ambient	0.75	1,000	37.73	14.94	-0.1	11.50	0.23
BV316	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor	398,119.40	4,278,094.90	177.39	49.00	Ambient	0.75	1,000	37.73	14.94	-0.1	11.50	0.23
BV317	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor	398,127.80	4,278,097.40	177.39	49.00	Ambient	0.75	1,000	37.73	14.94	-0.1	11.50	0.23

Table B-2. Summary of Point Source Parameters

Point Sources

Emission Point ID	Description	UTM East	UTM North	Elevation	Stack Height	Stack Temperature	Stack Diameter	Flow rate	Exit Velocity	Stack Height	Stack Temperature	Exit Velocity	Stack Diameter
		m	m	m	ft	F	ft	cfm	fps	m	K	m/s	m
SUBSDCK1	Crane Unloading Transfers to NBC01 normal belt conveyor	397,843.60	4,277,682.20	160.81	36.25	Ambient	1.00	280	5.94	11.05	-0.1	1.81	0.30
SUBSDCK2	Crane Unloading Transfers to NBC01 normal belt conveyor	397,844.70	4,277,678.40	160.81	36.25	Ambient	1.00	280	5.94	11.05	-0.1	1.81	0.30
SUBSDCK3	Crane Unloading Transfers to NBC01 normal belt conveyor	397,845.90	4,277,682.90	160.81	36.25	Ambient	1.00	280	5.94	11.05	-0.1	1.81	0.30
SUBSDCK4	Crane Unloading Transfers to NBC01 normal belt conveyor	397,847.00	4,277,679.20	160.81	36.25	Ambient	1.00	280	5.94	11.05	-0.1	1.81	0.30
SUBSDCK5	Crane Unloading Transfers to NBC01 normal belt conveyor	397,841.20	4,277,681.40	160.81	36.25	Ambient	1.00	280	5.94	11.05	-0.1	1.81	0.30
SUBSDCK6	Crane Unloading Transfers to NBC01 normal belt conveyor	397,842.50	4,277,677.50	160.81	36.25	Ambient	1.00	280	5.94	11.05	-0.1	1.81	0.30
Misc.													
NCT1A	NCT1-Cell A	398443.30	4278112.30	177.39	48.50	115.00	30.00	--	8.38	14.78	319.26	2.55	9.14
NCT1B	NCT1-Cell B	398456.70	4278117.80	177.39	48.50	115.00	30.00	--	8.38	14.78	319.26	2.55	9.14
NCT1C	NCT1-Cell C	398470.40	4278123.50	177.39	48.50	115.00	30.00	--	8.38	14.78	319.26	2.55	9.14
NCT1D	NCT1-Cell D	398484.00	4278129.10	177.39	48.50	115.00	30.00	--	8.38	14.78	319.26	2.55	9.14
NCT1E	NCT1-Cell E	398497.90	4278134.80	177.39	48.50	115.00	30.00	--	8.38	14.78	319.26	2.55	9.14
CCT4A	CCT4-Cell A	398466.30	4278501.60	177.39	40.50	115.00	26.00	--	7.19	12.34	319.26	2.19	7.92
CCT4B	CCT4-Cell B	398462.90	4278509.90	177.39	40.50	115.00	26.00	--	7.19	12.34	319.26	2.19	7.92
NCT5A	NCT5-Cell A	398431.70	4278589.40	177.39	41.00	115.00	30.00	--	8.47	12.50	319.26	2.58	9.14
NCT5B	NCT5-Cell B	398436.40	4278577.80	177.39	41.00	115.00	30.00	--	8.47	12.50	319.26	2.58	9.14
CCT6A	CCT6-Cell A	398458.20	4278526.70	177.39	44.50	115.00	30.00	--	9.14	13.56	319.26	2.79	9.14
CCT6B	CCT6-Cell B	398453.20	4278538.60	177.39	44.50	115.00	30.00	--	9.14	13.56	319.26	2.79	9.14
CCT6C	CCT6-Cell C	398448.30	4278550.50	177.39	44.50	115.00	30.00	--	9.14	13.56	319.26	2.79	9.14
LCT7A	LCT7-Cell A	398346.20	4278542.70	177.39	44.50	115.00	26.00	--	8.13	13.56	319.26	2.48	7.92
LCT7B	LCT7-Cell B	398357.70	4278547.60	177.39	44.50	115.00	26.00	--	8.13	13.56	319.26	2.48	7.92
LCT7C	LCT7-Cell C	398369.70	4278552.50	177.39	44.50	115.00	26.00	--	8.13	13.56	319.26	2.48	7.92
NCT8A	NCT8-Cell A	398211.10	4278881.70	177.39	37.50	115.00	26.00	--	6.62	11.43	319.26	2.02	7.92
NCT8B	NCT8-Cell B	398223.00	4278886.50	177.39	37.50	115.00	26.00	--	6.62	11.43	319.26	2.02	7.92
ASPCTA	Air Separation Plant Cooling Tower - Cell 1	399063.10	4278692.10	179.46	40.00	115.00	13.94	--	8.13	12.19	319.26	2.48	4.25
ASPCTB	Air Separation Plant Cooling Tower - Cell 2	399063.10	4278687.70	179.46	40.00	115.00	13.94	--	8.13	12.19	319.26	2.48	4.25
ASPCTC	Air Separation Plant Cooling Tower - Cell 3	399062.90	4278683.40	179.46	40.00	115.00	13.94	--	8.13	12.19	319.26	2.48	4.25
ASPCTD	Air Separation Plant Cooling Tower - Cell 4	399063.10	4278679.10	179.46	40.00	115.00	13.94	--	8.13	12.19	319.26	2.48	4.25
ASPCTE	Air Separation Plant Cooling Tower - Cell 5	399063.10	4278674.70	179.46	40.00	115.00	13.94	--	8.13	12.19	319.26	2.48	4.25
ASP1	Water Bath Vaporizer	399139.20	4278622.00	182.00	20.00	400.00	1.00	1,597	33.90	6.10	477.59	10.33	0.30
EMGEN1	Emergency Generator 1	398368.10	4279001.30	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN2	Emergency Generator 2	398369.00	4278999.00	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN3	Emergency Generator 3	398369.90	4278996.60	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN4	Emergency Generator 4	398370.80	4278994.30	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN5	Emergency Generator 5	398398.10	4278929.10	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN6	Emergency Generator 6	398399.00	4278926.80	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN7	Emergency Generator 7	398399.90	4278924.40	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN8	Emergency Generator 8	398400.80	4278922.10	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN9	Emergency Generator 9	398543.30	4278133.60	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN10	Emergency Generator 10	398545.70	4278134.50	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN11	Emergency Generator 11	398548.00	4278135.40	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN12	Emergency Generator 12	398550.30	4278136.30	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN13	Emergency Generator 13	398459.50	4278491.40	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN14	Emergency Generator 14	398462.50	4278492.70	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN15	Emergency Generator 15	398464.90	4278493.50	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN16	Emergency Generator 16	398467.50	4278494.60	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN17	Emergency Generator 17	398442.10	4278403.60	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN18	Emergency Generator 18	398443.00	4278401.30	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN19	Emergency Generator 19	398443.90	4278398.90	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN20	Emergency Generator 20	398444.80	4278396.60	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN21	Emergency Generator 21	398230.60	4278797.30	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN22	Emergency Generator 22	398231.50	4278795.00	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN23	Emergency Generator 23	398232.40	4278792.60	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN24	Emergency Generator 24	398233.30	4278790.30	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN25	Emergency Generator 25	399005.40	4278673.30	177.39	10.00	1380.00	1.00	3,186	67.61	3.05	1022.04	20.61	0.30
EMGEN26	Emergency Generator 26	398611.50	4278575.80	177.39	10.00	1380.00	0.83	2,198	67.16	3.05	1022.04	20.47	0.25

Notes:

All coordinates are Universal Transverse Mercator (UTM) coordinates based on North American Datum 1983 (NAD 83) and reside within UTM Zone 17.

Table B-3. Summary of Volume Source Parameters

Volume Sources

Emission Point ID	Description	Number of Sources	UTM East	UTM North	Elevation	Type of Volume Source	Length	Width	Volume Source Length	Vertical Dimension	Building Height	Release Height	Initial Lateral Dimension	Initial Vertical Dimension
			m	m	m		m	m	m	m	m	m	m	m
VF1UNLD	EAF Baghouse 1 Dust Silo Loadout	1	398,428.60	4,277,943.10	177.39	Elevated Source on or Adjacent to a Building	--	--	7.98	--	18.29	3.05	1.85	8.51
VF2UNLD	EAF Baghouse 2 Dust Silo Loadout	1	398,418.60	4,277,938.80	177.39	Elevated Source on or Adjacent to a Building	--	--	7.98	--	18.29	3.05	1.85	8.51
EXBHUNLD	Melt Shop Exterior Baghouse Dust Unloading	1	398,207.50	4,278,184.40	177.39	Elevated Source on or Adjacent to a Building	3.05	3.05	3.05	--	3.05	3.05	0.71	1.42
CUTBHUNL	Scrap and Coil Cutting Baghouse	1	398554.80	4278037.50	177.39	Elevated Source on or Adjacent to a Building	3.05	3.05	3.05	--	3.05	3.05	0.71	1.42
SUBSUNL	Uncaptured Unloading Fugitives - Raw Material Transfer	1	397,844.00	4,277,680.10	160.81	Surface Base	3.0	3.0	3.05	6.10	--	4.57	0.71	2.84
SUBSILOF	Uncaptured Scrap Substitute Unloading Fugitives - Raw Material Transfer	1	398,263.10	4,277,747.60	177.39	Elevated Source on or Adjacent to a Building	48	48	48.00	--	27.13	13.56	11.16	12.62
BULKMH	Uncaptured Material Handling Fugitives - LMF/EAF Feed (Material Handling System)	1	398,099.5	4,278,144.70	177.39	Elevated Source on or Adjacent to a Building	140	45	79.37	--	18.29	9.14	18.46	8.51
SCRPBRGE	Barge Scrap Unloading to Haul Trucks	1	397,868.30	4,277,848.80	164.44	Surface Base	--	--	3.05	2.74	--	3.66	0.71	1.28
SCRPHND	Scrap Material Handling (Pile Load/Unload in Scrap Yard)		398,039.90	4,278,039.50	177.39	Surface Base			4.27	3.05	--	1.52	0.99	1.42
SCRPHND	Scrap Material Handling (Pile Load/Unload in Scrap Yard)	3	398,091.90	4,277,894.20	177.39	Surface Base			4.27	3.05	--	1.52	0.99	1.42
SCRPHND	Scrap Material Handling (Pile Load/Unload in Scrap Yard)		398,131.30	4,277,748.00	177.39	Surface Base			4.27	3.05	--	1.52	0.99	1.42
SCRPSKP	Wind Erosion from Material Stockpile, Scrap Yard		398,039.90	4,278,039.50	177.39	Surface Base	240	240	240.49		--	4.572	55.929	4.253
SCRPSKP	Wind Erosion from Material Stockpile, Scrap Yard	3	398,091.90	4,277,894.20	177.39	Surface Base	240	240	240.49		--	4.572	55.929	4.253
SCRPSKP	Wind Erosion from Material Stockpile, Scrap Yard		398,131.30	4,277,748.00	177.39	Surface Base	240	240	240.49		--	4.572	55.929	4.253
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage		398024.90	4279091.60	177.39	Elevated Source on or Adjacent to a Building	--	--	73.26	--	18.59	9.30	34.07	8.65
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage		398091.10	4279118.50	177.39	Elevated Source on or Adjacent to a Building	--	--	73.26	--	18.59	9.30	34.07	8.65
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage	5	398157.30	4279145.40	177.39	Elevated Source on or Adjacent to a Building	--	--	73.26	--	18.59	9.30	34.07	8.65
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage		398223.40	4279172.30	177.39	Elevated Source on or Adjacent to a Building	--	--	73.26	--	18.59	9.30	34.07	8.65
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage		398289.50	4279199.20	177.39	Elevated Source on or Adjacent to a Building	--	--	73.26	--	18.59	9.30	34.07	8.65
MAUFG	NG-Fired Makeup Air Units, Finished Goods Coil Storage		398521.00	4278781.60	177.39	Elevated Source on or Adjacent to a Building	84.7	73.4	78.83	--	20.12	10.06	36.67	9.36
MAUFG	NG-Fired Makeup Air Units, Finished Goods Coil Storage	3	398454.40	4278754.40	177.39	Elevated Source on or Adjacent to a Building	84.7	73.4	78.83	--	20.12	10.06	36.67	9.36
MAUFG	NG-Fired Makeup Air Units, Finished Goods Coil Storage		398387.70	4278727.20	177.39	Elevated Source on or Adjacent to a Building	84.7	73.4	78.83	--	20.12	10.06	36.67	9.36
MAUPL	NG-Fired Makeup Air Units, PLTCM Bay - Pickle Line Electrostatic Oiler		398148.90	4278886.50	177.39	Elevated Source on or Adjacent to a Building	61.7	34.2	45.92	--	30.39	15.19	21.36	14.13
MAUPL	NG-Fired Makeup Air Units, PLTCM Bay - Pickle Line Electrostatic Oiler	3	398175.30	4278821.10	177.39	Elevated Source on or Adjacent to a Building	61.7	34.2	45.92	--	30.39	15.19	21.36	14.13
MAUPL	NG-Fired Makeup Air Units, PLTCM Bay - Pickle Line Electrostatic Oiler		398203.40	4278751.50	177.39	Elevated Source on or Adjacent to a Building	61.7	34.2	45.92	--	30.39	15.19	21.36	14.13

Notes:
All coordinates are Universal Transverse Mercator (UTM) coordinates based on North American Datum 1983 (NAD 83) and reside within UTM Zone 17.

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Appendix B: Source Parameters and Emission Rates

Table B-4. Summary of Area Source Parameters

Area Sources

Emission Point ID	Description	UTM East	UTM North	Elevation	Release Height	Length	Width	Angle	Initial Vertical Dimension
		m	m	m	m	m	m	degree	m
SUBSFUG	Uncaptured Scrap Substitute Day Bin Fugitives - Raw Material Transfer	398103.40	4278114.40	177.39	15.00	43.50	53.20	68.00	0.00
SCRCUTNG	Scrap Cutting NG Emissions	398513.50	4278056.30	177.39	0.91	14.50	66.10	90.00	0.00
SLAGMRP	Metal Recovery & Mixed Aggregate Plant Metal Recovery Plant - Scrap Stockpiles Metal Recovery Plant - Slag Stockpiles	398,166.20	4,278,007.90	177.39	10.00	111.60	55.50	66.10	0.00
SLAGPORT	Portable Slag Processing Material Stockpiles, Slag/DB Plant, Radial Stackers Material Stockpiles, Slag/DB Plant, Long-Term Material Stockpiles, Slag/Chip Plant, Radial Stackers Material Stockpiles, Slag/Chip Plant, Long-Term	398,271.30	4,277,841.70	177.39	10.00	107.60	147.70	69.20	0.00
BRKCRSH	Brick Crushing	398,810.60	4,279,011.10	182.37	10.00	63.60	63.60	90.00	0.00

Notes:
All coordinates are Universal Transverse Mercator (UTM) coordinates based on North American Datum 1983 (NAD 83) and reside within UTM Zone 17.

Table B-5. Summary of Open Pit Source Parameters and Emission Rates

Open Pit Sources

Emission Point ID	Description	UTM East	UTM North	Elevation	Length	Width	Angle	Pit Volume	Pit Area	Release Height	PM_{10}		$PM_{2.5}$		PM_{10}		$PM_{2.5}$	
		m	m	m	m	m		m^3	m^2	m	ST (lb/hr)	LT (tpy)	ST (lb/hr)	LT (tpy)	ST ($g/s\text{-}m^2$)	LT ($g/s\text{-}m^2$)	ST ($g/s\text{-}m^2$)	LT ($g/s\text{-}m^2$)
SLAGDROP	Slag Handling, Drop Ball Pit, SLAG-BULK48-52	398348.5	4277677	177.39	90	23	-21.4	10,350	2,070	0	1.26E-03	5.51E-03	2.64E-04	1.16E-03	7.662E-8	7.662E-8	1.609E-8	1.609E-8

Notes:
All coordinates are Universal Transverse Mercator (UTM) coordinates based on North American Datum 1983 (NAD 83) and reside within UTM Zone 17.

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Table B-6. Summary of Flare Parameters

Flare Sources

Emission Point ID	Description	UTM East	UTM North	Elevation	Heat Input	Heat Release	Heat Loss	Stack Height	Stack Temperature	Stack Diameter	Flow rate	Exit Velocity	Effective Stack Height	Stack Temperature	Exit Velocity	Stack Diameter
		m	m	m	(MMBtu/hr)	Cal/s	--	ft	F	ft	cfm	fps	m	K	m/s	m
Melt Shop Complex																
VTDST1	Vacuum Tank Degasser Flare 1	398,362.80	4,278,223.10	177.39	12.37	865885	0.55	173.80	1831.73	0.62	--	65.62	56.115	1273.00	20.00	0.19
VTDST2	Vacuum Tank Degasser Flare 2	398,271.30	4,278,185.30	177.39	12.37	865885	0.55	173.80	1831.73	0.62	--	65.62	56.115	1273.00	20.00	0.19

Notes:
Flare parameters were calculated in accordance with Section 2.1.2. of "AERSCREEN User's Guide, April 2021"

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Appendix B: Source Parameters and Emission Rates

Table B-7. Summary of Volume Source Parameters and Emission Rates For Roadways

Volume Sources

Emission Point ID	Description	Number of Volume Sources	Truck Width	Truck Height	Width of Plume	Top of Plume Height	Initial Lateral Dimension	Initial Vertical Dimension	Release Height	PM_{10}		$PM_{2.5}$		PM_{10}		$PM_{2.5}$	
			m	m	m	m	m	m	m	ST (lb/hr)	LT (tpy)	ST (lb/hr)	LT (tpy)	ST (g/s)	LT (g/s)	ST (g/s)	LT (g/s)
ROAD	Facility Roadways	184	3.0	3.0	27	5.10	12.39	2.37	2.55	0.01	0.04	0.00	0.01	1.220E-3	1.103E-3	2.995E-4	2.708E-4

Notes:
Typical haul truck width (3.0 m) and height (3.0 m) taken from U.S. EPA's Haul Road Workgroup Final Report (12/2011).

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Appendix B: Source Parameters and Emission Rates

Table B-8. Summary of Modeled Point Source and Flare Source Emission Rates

Point Sources

Emission Point ID	Description	Number of Sources	NO_2 ST (lb/hr)	NO_2 LT (tpy)	SO_2 ST (lb/hr)	SO_2 LT (tpy)	CO ST (lb/hr)	PM_{10} ST (lb/hr)	PM_{10} LT (tpy)	$PM_{2.5}$ ST (lb/hr)	$PM_{2.5}$ LT (tpy)	Lead LT (tpy)	Fluoride ST (lb/hr)	Fluoride LT (tpy)	NO_2 ST (g/s)	NO_2 LT (g/s)	SO_2 ST (g/s)	SO_2 LT (g/s)	CO ST (g/s)	PM_{10} ST (g/s)	PM_{10} LT (g/s)	$PM_{2.5}$ ST (g/s)	$PM_{2.5}$ LT (g/s)	Lead LT (g/s)	Fluorides ST(g/s)	Fluorides LT(g/s)
Melt Shop Complex																										
BHST1	Pulse Jet Fabric Filter Baghouse 1	1	111.72	327.18	63.84	186.96	537.32	72.24	316.42	72.24	316.42	0.35	0.93	2.73	14.076483	9.411869	8.043705	5.378211	67.701181	9.102380	9.102380	9.102380	9.102380	1.008E-02	1.173E-01	7.843E-02
BHST2	Pulse Jet Fabric Filter Baghouse 2	1	111.72	327.18	63.84	186.96	537.32	72.24	316.42	72.24	316.42	0.35	0.93	2.73	14.076483	9.411869	8.043705	5.378211	67.701181	9.102380	9.102380	9.102380	9.102380	1.008E-02	1.173E-01	7.843E-02
EAFVF1	EAF Baghouse 1 Dust Silo	1	--	--	--	--	--	0.04	0.16	0.04	0.16	--	--	--	--	--	--	--	--	4.674E-03	4.674E-03	4.674E-03	4.674E-03	--		
EAFVF2	EAF Baghouse 2 Dust Silo	1	--	--	--	--	--	0.04	0.16	0.04	0.16	--	--	--	--	--	--	--	--	4.674E-03	4.674E-03	4.674E-03	4.674E-03	--		
VTDST1	Vacuum Tank Degasser Flare 1	1	0.84	3.68	0.01	0.03	9.82	0.07	0.33	0.07	0.33	0.00	--	--	0.105899	0.105899	0.000916	0.000916	1.237182	9.422E-03	9.422E-03	9.422E-03	9.422E-03	7.634E-07		
VTDST2	Vacuum Tank Degasser Flare 2	1	0.84	3.68	0.01	0.03	9.82	0.07	0.33	0.07	0.33	0.00	--	--	0.105899	0.105899	0.000916	0.000916	1.237182	9.422E-03	9.422E-03	9.422E-03	9.422E-03	7.634E-07		
MSMV	Melt Shop Fugitives (Indoor), Matrix Vent	6	4.83	18.29	1.14	3.35	11.79	0.60	1.84	0.35	1.08	0.01	0.02	0.05	0.607986	0.526151	0.143241	0.096478	1.485059	7.583E-02	5.297E-02	4.431E-02	3.093E-02	1.787E-04	2.058E-03	1.376E-03
MSMV	Melt Shop Fugitives (Indoor), Matrix Vent		4.83	18.29	1.14	3.35	11.79	0.60	1.84	0.35	1.08	0.01	0.02	0.05	0.607986	0.526151	0.143241	0.096478	1.485059	7.583E-02	5.297E-02	4.431E-02	3.093E-02	1.787E-04	2.058E-03	1.376E-03
MSMV	Melt Shop Fugitives (Indoor), Matrix Vent		4.83	18.29	1.14	3.35	11.79	0.60	1.84	0.35	1.08	0.01	0.02	0.05	0.607986	0.526151	0.143241	0.096478	1.485059	7.583E-02	5.297E-02	4.431E-02	3.093E-02	1.787E-04	2.058E-03	1.376E-03
MSMV	Melt Shop Fugitives (Indoor), Matrix Vent		4.83	18.29	1.14	3.35	11.79	0.60	1.84	0.35	1.08	0.01	0.02	0.05	0.607986	0.526151	0.143241	0.096478	1.485059	7.583E-02	5.297E-02	4.431E-02	3.093E-02	1.787E-04	2.058E-03	1.376E-03
MSMV	Melt Shop Fugitives (Indoor), Matrix Vent		4.83	18.29	1.14	3.35	11.79	0.60	1.84	0.35	1.08	0.01	0.02	0.05	0.607986	0.526151	0.143241	0.096478	1.485059	7.583E-02	5.297E-02	4.431E-02	3.093E-02	1.787E-04	2.058E-03	1.376E-03
MSMV	Melt Shop Fugitives (Indoor), Matrix Vent		4.83	18.29	1.14	3.35	11.79	0.60	1.84	0.35	1.08	0.01	0.02	0.05	0.607986	0.526151	0.143241	0.096478	1.485059	7.583E-02	5.297E-02	4.431E-02	3.093E-02	1.787E-04	2.058E-03	1.376E-03
CSP1	Caster Spray Vents-1 (Horizontal Release)	1	--	--	--	--	--	3.66	16.02	2.15	9.40	--	0.28	1.23	--	--	--	--	--	4.609E-01	4.609E-01	2.705E-01	2.705E-01	--	3.533E-02	3.533E-02
CSP2	Caster Spray Vents-2 (Horizontal Release)	1	--	--	--	--	--	7.32	32.05	4.29	18.81	--	0.09	0.41	--	--	--	--	--	9.219E-01	9.219E-01	5.410E-01	5.410E-01	--	1.178E-02	1.178E-02
Hot Mill Complex																										
TFST1	Hot Mill Tunnel Furnace 1	1	17.50	76.65	0.15	0.64	20.59	0.13	0.56	0.11	0.46	5.37E-04	--	--	2.204963	2.204963	0.018529	0.018529	2.594074	1.606E-02	1.606E-02	1.328E-02	1.328E-02	1.544E-05		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent	12	--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
HMMV	Hot Mill Fugitives (Indoor), Matrix Vent		--	--	--	--	--	0.63	1.71	0.23	0.61	--	--	--	--	--	--	--	--	7.945E-02	4.908E-02	2.860E-02	1.767E-02	--		
Cold Mill Complex																										
TCMST1	Tandem Cold Mill Mist Eliminator	1	--	--	--	--	--	13.23	57.94	13.23	57.94	--	--	--	--	--	--	--	--	1.666675	1.666675	1.666675	1.666675	--		
CGL1_ST1	CGL1 - Cleaning Section & Galvanizing Line Boiler 1	1	0.34	1.47	0.00	0.02	0.55	0.27	1.17	0.27	1.17	0.00	--	--	4.221E-02	4.221E-02	4.966E-04	4.966E-04	6.952E-02	3.376E-02	3.376E-02	3.369E-02	3.369E-02	4.138E-07		
CGL2_ST1	CGL2 - Cleaning Section & Galvanizing Line Boiler 2	1	0.34	1.47	0.00	0.02	0.55	0.27	1.17	0.27	1.17	0.00	--	--	4.221E-02	4.221E-02	4.966E-04	4.966E-04	6.952E-02	3.376E-02	3.376E-02	3.369E-02	3.369E-02	4.138E-07		
CGL1MV	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler	5	--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
CGL1MV	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler		--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
CGL1MV	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler		--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
CGL1MV	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler		--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
CGL1MV	CGL1 Tower Matrix Vents - Skin Pass Mill 1/CGL1 Electrostatic Oiler		--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
CGL2MV	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler	5	--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
CGL2MV	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler		--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
CGL2MV	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler		--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
CGL2MV	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler		--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
CGL2MV	CGL2 Tower Matrix Vents - Skin Pass Mill 2/CGL2 Electrostatic Oiler		--	--	--	--	--	0.11	0.48	0.11	0.47	--	--	--	--	--	--	--	--	1.390E-02	1.390E-02	1.342E-02	1.342E-02	--		
STMST1	Stand Alone Temper Mill	1	--	--	--	--	--	0.44	1.93	0.44	1.93	--	--	--	--	--	--	--	--	5.556E-02	5.556E-02	5.556E-02	5.556E-02	--		
PLST1	Pickling Line Mist Scrubber 1	1	--	--	--	--	--	1.43	6.28	1.43	6.28	--	--	--	--	--	--	--	--	1.806E-01	1.806E-01	1.806E-01	1.806E-01	--		
PKLSB	Pickle Line Scale Breaker Baghouse	1	--	--	--	--	--	1.32	5.79	1.32	5.79	--	--	--	--	--	--	--	--	1.667E-01	1.667E-01	1.667E-01	1.667E-01	--		
GALVFN1	Galvanizing Furnace 1	1	5.13	22.47	0.04	0.19	6.04	0.04	0.16	0.03	0.14	1.57E-04	--	--	6.465E-01	6.465E-01	5.433E-03	5.433E-03	7.606E-01	4.708E-03	4.708E-03	3.893E-03	3.893E-03	4.527E-06		
GALVFN2	Galvanizing Furnace 2	1	5.59	24.47	0.05	0.21	6.57	0.04	0.18	0.03	0.15	1.71E-04	--	--	7.038E-01	7.038E-01	5.914E-03	5.914E-03	8.280E-01	5.126E-03	5.126E-03	4.239E-03	4.239E-03	4.929E-06		
PLTCMB	PLTCM Main & Spare Boilers	1	7.28	31.90	0.09	0.38	11.99	0.07	0.33	0.06	0.27	3.13E-04	--	--	9.175E-01	9.175E-01	1.079E-02	1.079E-02	1.511E+00	9.355E-03	9.355E-03	7.736E-03	7.736E-03	8.995E-06		
TMEOMV	Temper Mill & Recoiler Line Electrostatic Oilers, Matrix Vent	2	--	--	--	--	--	0.07	0.30	0.03	0.15	--	--	--	--	--	--	--	--	8.531E-03	8.531E-03	4.266E-03	4.266E-03	--		
TMEOMV	Temper Mill & Recoiler Line Electrostatic Oilers, Matrix Vent		--	--	--	--	--	0.07	0.30	0.03	0.15	--	--	--	--	--	--	--	--	8.531E-03	8.531E-03	4.266E-03	4.266E-03	--		
GALVMV	Box Annealing Furnaces, Matrix Vent	6	0.50	2.19	0.01	0.03	0.82	0.01	0.02	0.00	0.02	2.15E-05	--	--	6.300E-02	6.300E-02	7.412E-04	7.412E-04	1.038E-01	6.423E-04	6.423E-04	5.312E-04	5.312E-04	6.176E-07		
GALVMV	Box Annealing Furnaces, Matrix Vent		0.50	2.19	0.01	0.03	0.82	0.01	0.02	0.00	0.02	2.15E-05	--	--	6.300E-02	6.300E-02	7.412E-04	7.412E-04	1.038E-01	6.423E-04	6.423E-04	5.312E-04	5.312E-04	6.176E-07		
GALVMV	Box Annealing Furnaces, Matrix Vent		0.50	2.19	0.01	0.03	0.82	0.01	0.02	0.00	0.02	2.15E-05	--	--	6.300E-02	6.300E-02	7.412E-04	7.412E-04	1.038E-01	6.423E-04	6.423E-04	5.312E-04	5.312E-04	6.176E-07		
GALVMV	Box Annealing Furnaces, Matrix Vent		0.50	2.19	0.01	0.03	0.82	0.01	0.02	0.00	0.02	2.15E-05	--	--	6.300E-02	6.300E-02	7.412E-04	7.412E-04	1.038E-01	6.423E-04	6.423E-04	5.312E-04	5.312E-04	6.176E-07		
GALVMV	Box Annealing Furnaces, Matrix Vent		0.50	2.19	0.01	0.03	0.82	0.01	0.02	0.00	0.02	2.15E-05	--	--	6.300E-02	6.300E-02	7.412E-04	7.412E-04	1.038E-01	6.423E-04	6.423E-04	5.312E-04	5.312E-04	6.176E-07		
GALVMV	Box Annealing Furnaces, Matrix Vent		0.50	2.19	0.01	0.03	0.82	0.01	0.02	0.00	0.02	2.15E-05	--	--	6.300E-02	6.300E-02	7.412E-04	7.412E-04	1.038E-01	6.423E-04	6.423E-04	5.312E-04	5.312E-04	6.176E-07		
Material Handling																										
SCRCUTBH	Scrap and Coil Cutting Baghouse		--	--	--	--	--	0.86	3.75	0.86	3.75	--	--	--	--	--	--	--	--	1.080E-01	1.080E-01	1.080E-01	1.080E-01	--		
SUBSILO1	NBC01 normal belt conveyor to SBM01 day bin		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
SUBSILO2	NBC01 normal belt conveyor to SBM02 day bin		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
SUBSILO3	NBC01 normal belt conveyor to SBM03 day bin		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
SUBSILO4	NBC01 normal belt conveyor to SBM04 day bin		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV003	Dock Scrap Substitute Bin to NBC01 normal belt conveyor		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV305	SBM01 day bin to NBC02 normal belt conveyor		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV306	SBM02 day bin to NBC02 normal belt conveyor		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV307	SBM03 day bin to NBC02 normal belt conveyor		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV308	SBM04 day bin to NBC02 normal belt conveyor		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV309	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV310	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV311	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV312	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV313	NBC02 normal belt conveyor to SBN01-SBN04 bin extraction equipment		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV314	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV315	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV316	SBN01-SBN02 bin extraction equipment to WBC02 weighing belt conveyor		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
BV317	SBN03-SBN04 bin extraction equipment to WBC01 weighing belt conveyor		--	--	--	--	--	0.01	0.04	0.00	0.02	--	--	--	--	--	--	--	--	1.080E-03	1.080E-03	5.400E-04	5.400E-04	--		
SUBSDCK1	Crane Unloading Transfers to NBC01 normal belt conveyor		--	--	--	--	--	0.00	0.01	0.00	0.01	--	--	--	--	--	--	--	--	3.024E-04	3.024E-04	1.512E-04	1.512E-04	--		
SUBSDCK2	Crane Unloading Transfers to NBC01 normal belt conveyor		--	--	--	--	--	0.00	0.01	0.00	0.01	--	--	--	--	--	--	--	--	3.024E-04	3.024E-04	1.512E-04	1.512E-04	--		
SUBSDCK3	Crane Unloading Transfers to NBC01 normal belt conveyor		--	--	--	--	--	0.00	0.01	0.00	0.01	--	--	--	--	--	--	--	--	3.024E-04	3.024E-04	1.512E-04	1.512E-04	--		
SUBSDCK4	Crane Unloading Transfers to NBC01 normal belt conveyor		--	--	--	--	--	0.00	0.01	0.00	0.01	--	--	--	--	--	--	--	--	3.024E-04	3.024E-04	1.512E-04	1.512E-04	--		
SUBSDCK5	Crane Unloading Transfers to NBC01 normal belt conveyor		--	--	--	--	--	0.00	0.01	0.00	0.01	--	--	--	--	--	--	--	--	3.024E-04	3.024E-04	1.512E-04	1.512E-04	--		
SUBSDCK6	Crane Unloading Transfers to NBC01 normal belt conveyor		--	--	--	--	--	0.00	0.01	0.00	0.01	--	--	--	--	--	--	--	--	3.024E-04	3.024E-04	1.512E-04	1.512E-04	--		

Table B-8. Summary of Modeled Point Source and Flare Source Emission Rates

Point Sources

Emission Point ID	Description	Number of Sources	NO_2		SO_2		CO	PM_{10}		$PM_{2.5}$		Lead	Fluoride		NO_2		SO_2		CO	PM_{10}		$PM_{2.5}$		Lead	Fluorides	
			ST (lb/hr)	LT (tpy)	ST (lb/hr)	LT (tpy)	ST (lb/hr)	ST (lb/hr)	LT (tpy)	ST (lb/hr)	LT (tpy)	LT (tpy)	ST (lb/hr)	LT (tpy)	ST (g/s)	LT (g/s)	ST (g/s)	LT (g/s)	ST (g/s)	ST (g/s)	LT (g/s)	ST (g/s)	LT (g/s)	LT (g/s)	ST(g/s)	LT(g/s)
Misc.																										
NCT1	NCT1-Cell A		--	--	--	--	--	0.03	0.11	0.03	0.11	--	--	--	--	--	--	--	--	3.256E-03	3.256E-03	3.256E-03	3.256E-03	--		
NCT1	NCT1-Cell B		--	--	--	--	--	0.03	0.11	0.03	0.11	--	--	--	--	--	--	--	--	3.256E-03	3.256E-03	3.256E-03	3.256E-03	--		
NCT1	NCT1-Cell C	5	--	--	--	--	--	0.03	0.11	0.03	0.11	--	--	--	--	--	--	--	--	3.256E-03	3.256E-03	3.256E-03	3.256E-03	--		
NCT1	NCT1-Cell D		--	--	--	--	--	0.03	0.11	0.03	0.11	--	--	--	--	--	--	--	--	3.256E-03	3.256E-03	3.256E-03	3.256E-03	--		
NCT1	NCT1-Cell E		--	--	--	--	--	0.03	0.11	0.03	0.11	--	--	--	--	--	--	--	--	3.256E-03	3.256E-03	3.256E-03	3.256E-03	--		
CCT4	CCT4-Cell A	2	--	--	--	--	--	0.01	0.05	0.01	0.05	--	--	--	--	--	--	--	--	1.502E-03	1.502E-03	1.502E-03	1.502E-03	--		
CCT4	CCT4-Cell B		--	--	--	--	--	0.01	0.05	0.01	0.05	--	--	--	--	--	--	--	--	1.502E-03	1.502E-03	1.502E-03	1.502E-03	--		
NCT5	NCT5-Cell A	2	--	--	--	--	--	0.02	0.09	0.02	0.09	--	--	--	--	--	--	--	--	2.704E-03	2.704E-03	2.704E-03	2.704E-03	--		
NCT5	NCT5-Cell B		--	--	--	--	--	0.02	0.09	0.02	0.09	--	--	--	--	--	--	--	--	2.704E-03	2.704E-03	2.704E-03	2.704E-03	--		
CCT6	CCT6-Cell A		--	--	--	--	--	0.04	0.16	0.04	0.16	--	--	--	--	--	--	--	--	4.587E-03	4.587E-03	4.587E-03	4.587E-03	--		
CCT6	CCT6-Cell B	3	--	--	--	--	--	0.04	0.16	0.04	0.16	--	--	--	--	--	--	--	--	4.587E-03	4.587E-03	4.587E-03	4.587E-03	--		
CCT6	CCT6-Cell C		--	--	--	--	--	0.04	0.16	0.04	0.16	--	--	--	--	--	--	--	--	4.587E-03	4.587E-03	4.587E-03	4.587E-03	--		
LCT7	LCT7-Cell A		--	--	--	--	--	0.03	0.13	0.03	0.13	--	--	--	--	--	--	--	--	3.664E-03	3.664E-03	3.664E-03	3.664E-03	--		
LCT7	LCT7-Cell B	3	--	--	--	--	--	0.03	0.13	0.03	0.13	--	--	--	--	--	--	--	--	3.664E-03	3.664E-03	3.664E-03	3.664E-03	--		
LCT7	LCT7-Cell C		--	--	--	--	--	0.03	0.13	0.03	0.13	--	--	--	--	--	--	--	--	3.664E-03	3.664E-03	3.664E-03	3.664E-03	--		
NCT8	NCT8-Cell A	2	--	--	--	--	--	0.02	0.07	0.02	0.07	--	--	--	--	--	--	--	--	2.035E-03	2.035E-03	2.035E-03	2.035E-03	--		
NCT8	NCT8-Cell B		--	--	--	--	--	0.02	0.07	0.02	0.07	--	--	--	--	--	--	--	--	2.035E-03	2.035E-03	2.035E-03	2.035E-03	--		
ASPCT	Air Separation Plant Cooling Tower - Cell 1		--	--	--	--	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	--	--	1.018E-05	1.018E-05	1.018E-05	1.018E-05	--		
ASPCT	Air Separation Plant Cooling Tower - Cell 2		--	--	--	--	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	--	--	1.018E-05	1.018E-05	1.018E-05	1.018E-05	--		
ASPCT	Air Separation Plant Cooling Tower - Cell 3	5	--	--	--	--	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	--	--	1.018E-05	1.018E-05	1.018E-05	1.018E-05	--		
ASPCT	Air Separation Plant Cooling Tower - Cell 4		--	--	--	--	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	--	--	1.018E-05	1.018E-05	1.018E-05	1.018E-05	--		
ASPCT	Air Separation Plant Cooling Tower - Cell 5		--	--	--	--	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	--	--	1.018E-05	1.018E-05	1.018E-05	1.018E-05	--		
ASP1	Water Bath Vaporizer	1	4.65	20.37	0.03	0.12	3.83	0.02	0.10	0.02	0.09	9.98E-05	--	--	5.859E-01	5.859E-01	3.446E-03	3.446E-03	4.825E-01	2.987E-03	2.987E-03	2.470E-03	2.470E-03	2.872E-06		
EMGEN1	Emergency Generator 1	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN2	Emergency Generator 2	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN3	Emergency Generator 3	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN4	Emergency Generator 4	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN5	Emergency Generator 5	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN6	Emergency Generator 6	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN7	Emergency Generator 7	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN8	Emergency Generator 8	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN9	Emergency Generator 9	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN10	Emergency Generator 10	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN11	Emergency Generator 11	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN12	Emergency Generator 12	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN13	Emergency Generator 13	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN14	Emergency Generator 14	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN15	Emergency Generator 15	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN16	Emergency Generator 16	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN17	Emergency Generator 17	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN18	Emergency Generator 18	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN19	Emergency Generator 19	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN20	Emergency Generator 20	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN21	Emergency Generator 21	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN22	Emergency Generator 22	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN23	Emergency Generator 23	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN24	Emergency Generator 24	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN25	Emergency Generator 25	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		
EMGEN26	Emergency Generator 26	1	1.71	0.09	3.20E-03	1.60E-04	3.43	1.65E-03	8.27E-05	1.01E-03	5.07E-05	--	--	--	2.158E-01	2.464E-03	4.030E-04	4.600E-06	4.317E-01	2.083E-04	2.378E-06	1.277E-04	1.457E-06	--		

NSWV
PSD Air Quality Analysis Report
Appendix B: Source Parameters and Emission Rates

Table B-9. Summary of Modeled Volume Source Emission Rates

Volume Sources

Emission Point ID	Description	Number of Sources	NO_2		SO_2		CO	PM_{10}		$PM_{2.5}$		Lead	NO_2		SO_2		CO	PM_{10}		$PM_{2.5}$		Lead
			ST (lb/hr)	LT (tpy)	ST (lb/hr)	LT (tpy)	ST (lb/hr)	ST (lb/hr)	LT (tpy)	ST (lb/hr)	LT (tpy)	LT (tpy)	ST (g/s)	LT (g/s)	ST (g/s)	LT (g/s)	ST (g/s)	ST (g/s)	LT (g/s)	ST (g/s)	LT (g/s)	LT (g/s)
VF1UNLD	EAF Baghouse 1 Dust Silo Loadout	1	--	--	--	--	--	0.00	0.01	0.00	0.00	--	--	--	--	--	--	2.453E-4	2.453E-4	6.933E-5	6.933E-5	--
VF2UNLD	EAF Baghouse 2 Dust Silo Loadout	1	--	--	--	--	--	0.00	0.01	0.00	0.00	--	--	--	--	--	--	2.453E-4	2.453E-4	6.933E-5	6.933E-5	--
EXBHUNLD	Melt Shop Exterior Baghouse Dust Unloading	1	--	--	--	--	--	5.84E-06	2.56E-05	1.65E-06	7.23E-06	--	--	--	--	--	--	7.361E-7	7.361E-7	2.080E-7	2.080E-7	--
CUTBHUNL	Scrap and Coil Cutting Baghouse	1	--	--	--	--	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	2.911E-6	2.911E-6	8.225E-7	8.225E-7	--
SUBSUNL	Uncaptured Unloading Fugitives - Raw Material Transfer	1	--	--	--	--	--	0.04	0.34	0.01	0.10	--	--	--	--	--	--	5.174E-3	9.816E-3	1.462E-3	2.774E-3	--
SUBSILOF	Uncaptured Scrap Substitute Unloading Fugitives - Raw Material Transfer	1	--	--	--	--	--	0.18	0.56	0.05	0.16	--	--	--	--	--	--	2.207E-2	1.612E-2	6.238E-3	4.556E-3	--
BULKMH	Uncaptured Material Handling Fugitives - LMF/EAF Feed (Material Handling System)	1	--	--	--	--	--	0.08	0.04	0.02	0.01	--	--	--	--	--	--	1.008E-2	1.253E-3	2.849E-3	3.540E-4	--
SCRPBRGE	Barge Scrap Unloading to Haul Trucks	1	--	--	--	--	--	0.06	0.25	0.02	0.07	--	--	--	--	--	--	7.139E-3	7.139E-3	2.047E-3	2.047E-3	--
SCRPHND	Scrap Material Handling (Pile Load/Unload in Scrap Yard)		--	--	--	--	--	0.41	0.71	0.06	0.11	--	--	--	--	--	--	5.179E-2	2.055E-2	7.843E-3	3.112E-3	--
SCRPHND	Scrap Material Handling (Pile Load/Unload in Scrap Yard)	3	--	--	--	--	--	0.41	0.71	0.06	0.11	--	--	--	--	--	--	5.179E-2	2.055E-2	7.843E-3	3.112E-3	--
SCRPHND	Scrap Material Handling (Pile Load/Unload in Scrap Yard)		--	--	--	--	--	0.41	0.71	0.06	0.11	--	--	--	--	--	--	5.179E-2	2.055E-2	7.843E-3	3.112E-3	--
SCRPSKP	Wind Erosion from Material Stockpile, Scrap Yard		--	--	--	--	--	0.31	1.34	0.05	0.20	--	--	--	--	--	--	3.864E-2	3.864E-2	5.796E-3	5.796E-3	--
SCRPSKP	Wind Erosion from Material Stockpile, Scrap Yard	3	--	--	--	--	--	0.31	1.34	0.05	0.20	--	--	--	--	--	--	3.864E-2	3.864E-2	5.796E-3	5.796E-3	--
SCRPSKP	Wind Erosion from Material Stockpile, Scrap Yard		--	--	--	--	--	0.31	1.34	0.05	0.20	--	--	--	--	--	--	3.864E-2	3.864E-2	5.796E-3	5.796E-3	--
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage		0.64	2.80	0.00	0.02	0.53	0.00	0.01	0.00	0.01	1.37E-05	8.064E-2	8.064E-2	4.743E-4	4.743E-4	6.641E-2	4.111E-4	4.111E-4	3.399E-4	3.399E-4	3.953E-07
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage		0.64	2.80	0.00	0.02	0.53	0.00	0.01	0.00	0.01	1.37E-05	8.064E-2	8.064E-2	4.743E-4	4.743E-4	6.641E-2	4.111E-4	4.111E-4	3.399E-4	3.399E-4	3.953E-07
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage	5	0.64	2.80	0.00	0.02	0.53	0.00	0.01	0.00	0.01	1.37E-05	8.064E-2	8.064E-2	4.743E-4	4.743E-4	6.641E-2	4.111E-4	4.111E-4	3.399E-4	3.399E-4	3.953E-07
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage		0.64	2.80	0.00	0.02	0.53	0.00	0.01	0.00	0.01	1.37E-05	8.064E-2	8.064E-2	4.743E-4	4.743E-4	6.641E-2	4.111E-4	4.111E-4	3.399E-4	3.399E-4	3.953E-07
MAUWIP	NG-Fired Makeup Air Units, WIP Coil Storage and Full Hard Coil Storage		0.64	2.80	0.00	0.02	0.53	0.00	0.01	0.00	0.01	1.37E-05	8.064E-2	8.064E-2	4.743E-4	4.743E-4	6.641E-2	4.111E-4	4.111E-4	3.399E-4	3.399E-4	3.953E-07
MAUFG	NG-Fired Makeup Air Units, Finished Goods Coil Storage		1.07	4.67	0.01	0.03	0.88	0.01	0.02	0.00	0.02	2.29E-05	1.344E-1	1.344E-1	7.906E-4	7.906E-4	1.107E-1	6.852E-4	6.852E-4	5.666E-4	5.666E-4	6.588E-07
MAUFG	NG-Fired Makeup Air Units, Finished Goods Coil Storage	3	1.07	4.67	0.01	0.03	0.88	0.01	0.02	0.00	0.02	2.29E-05	1.344E-1	1.344E-1	7.906E-4	7.906E-4	1.107E-1	6.852E-4	6.852E-4	5.666E-4	5.666E-4	6.588E-07
MAUFG	NG-Fired Makeup Air Units, Finished Goods Coil Storage		1.07	4.67	0.01	0.03	0.88	0.01	0.02	0.00	0.02	2.29E-05	1.344E-1	1.344E-1	7.906E-4	7.906E-4	1.107E-1	6.852E-4	6.852E-4	5.666E-4	5.666E-4	6.588E-07
MAUPL	NG-Fired Makeup Air Units, PLTCM Bay - Pickle Line Electrostatic Oiler		0.27	1.17	0.00	0.01	0.22	0.02	0.07	0.01	0.04	5.73E-06	3.360E-2	3.360E-2	1.976E-4	1.976E-4	2.767E-2	1.948E-3	1.948E-3	1.030E-3	1.030E-3	1.647E-07
MAUPL	NG-Fired Makeup Air Units, PLTCM Bay - Pickle Line Electrostatic Oiler	3	0.27	1.17	0.00	0.01	0.22	0.02	0.07	0.01	0.04	5.73E-06	3.360E-2	3.360E-2	1.976E-4	1.976E-4	2.767E-2	1.948E-3	1.948E-3	1.030E-3	1.030E-3	1.647E-07
MAUPL	NG-Fired Makeup Air Units, PLTCM Bay - Pickle Line Electrostatic Oiler		0.27	1.17	0.00	0.01	0.22	0.02	0.07	0.01	0.04	5.73E-06	3.360E-2	3.360E-2	1.976E-4	1.976E-4	2.767E-2	1.948E-3	1.948E-3	1.030E-3	1.030E-3	1.647E-07

Table B-10. Summary of Modeled Area Source Emission Rates

Point Sources

Emission Point ID	Description	Source Area (m2)	NO_2		SO_2		CO	PM_{10}		$PM_{2.5}$		Lead	NO_2		SO_2		CO	PM_{10}		$PM_{2.5}$		Lead
			ST (lb/hr)	LT (tpy)	ST (lb/hr)	LT (tpy)	ST (lb/hr)	ST (lb/hr)	LT (tpy)	ST (lb/hr)	LT (tpy)	LT (tpy)	ST (g/s-m^2)	LT (g/s-m^2)	ST (g/s-m^2)	LT (g/s-m^2)	ST (g/s-m^2)	ST (g/s-m^2)	LT (g/s-m^2)	ST (g/s-m^2)	LT (g/s-m^2)	LT (g/s-m^2)
SUBSFUG	Uncaptured Scrap Substitute Day Bin Fugitives - Raw Material Transfer	2,314.20	--	--	--	--	--	0.05	0.20	0.01	0.06	--	--	--	--	--	--	2.545E-6	2.545E-6	7.193E-7	7.193E-7	--
SCRCUTNG	Scrap Cutting NG Emissions	958.45	0.72	3.15	0.00	0.02	0.59	0.00	0.02	0.00	0.01	1.55E-05	9.465E-5	9.465E-5	5.568E-7	5.568E-7	7.795E-5	4.825E-7	4.825E-7	3.990E-7	3.990E-7	4.640E-10
SLAGMRP	Metal Recovery & Mixed Aggregate Plant Metal Recovery Plant - Scrap Stockpiles Metal Recovery Plant - Slag Stockpiles	6,193.80	--	--	--	--	--	0.47	0.53	0.08	0.09	--	--	--	--	--	--	9.492E-6	2.473E-6	1.599E-6	4.087E-7	--
SLAGPORT	Portable Slag Processing Material Stockpiles, Slag/DB Plant, Radial Stackers Material Stockpiles, Slag/DB Plant, Long-Term Material Stockpiles, Slag/Chip Plant, Radial Stackers Material Stockpiles, Slag/Chip Plant, Long-Term	15,892.52	--	--	--	--	--	0.95	1.38	0.15	0.23	--	--	--	--	--	--	7.560E-6	2.505E-6	1.170E-6	4.176E-7	--
BRKCRSH	Brick Crushing	4,044.96	--	--	--	--	--	0.23	0.03	0.03	0.00	--	--	--	--	--	--	7.173E-6	1.965E-7	9.812E-7	2.688E-8	--

Table B-11. Summary of Modeled Buildings

Circular Buildings

Building ID	Building Description	UTM East	UTM North	Elevation	Height	Radius
		m	m	m	ft	ft
SUBS1	Scrap Substitute Silo #1	398,277.30	4,277,718.30	177.39	89.00	30.00
SUBS2	Scrap Substitute Silo #2	398,251.50	4,277,779.40	177.39	89.00	30.00
SUBS3	Scrap Substitute Silo #3	398,260.10	4,277,758.70	177.39	89.00	30.00
SUBS4	Scrap Substitute Silo #4	398,268.10	4,277,738.70	177.39	89.00	30.00
EAF1SILO	EAF Dust Silo #1	398,426.40	4,277,946.90	177.39	60.00	16.00
EAFSILO2	EAF Dust Silo #2	398,415.80	4,277,942.70	177.39	60.00	16.00

Rectangular Buildings

Building ID	Building Description	UTM East	UTM North	Elevation	Height	Height	X Length	Y Length	Angle
		m	m	m	ft	m	m	m	degree
MELTBAG1	Meltshop Baghouse #1	398,375.60	4,278,077.30	177.39	80.90	24.66	68.50	20.30	67.80
MELTBAG2	Meltshop Baghouse #2	398,344.10	4,278,064.30	177.39	80.90	24.66	68.50	20.30	67.80
FNCOIL	Finished Coil Storage	398,585.80	4,278,771.30	177.39	66.00	20.12	73.40	254.00	-112.20
PLTCM	Pickling Line	398,087.70	4,279,081.70	177.39	99.70	30.39	34.20	478.00	157.80
COIL	Coil Transfer	398,116.30	4,279,093.00	177.39	100.80	30.72	30.10	118.40	157.80
ROLLSHP1	Roll Shop - Segment 1	398,024.10	4,279,056.00	177.39	90.00	27.43	478.00	34.80	67.80
HOTMILL1	Hot Mill / Tunnel Furnace 1	398,236.70	4,278,626.30	177.39	99.70	30.39	375.70	34.20	67.80
EAFBAY	EAF Bay	398,241.20	4,278,145.70	177.39	161.40	49.20	33.80	281.00	67.60
CANOPY	EAFBay-Canopy	398,301.40	4,278,132.90	177.39	194.00	59.13	76.50	33.80	-23.30
OFFICE	Cold Mill Office	398,258.50	4,278,749.40	177.39	40.00	12.19	39.00	30.60	67.80
WAREHSE	Warehouse	398,642.10	4,278,432.20	177.39	50.94	15.53	145.00	30.20	67.70
ADMIN	Administrative Building	398,585.40	4,278,616.50	177.39	20.75	6.33	37.50	55.50	67.40
REC	Gym, Cafeteria, Medical Office	398,633.70	4,278,392.30	177.39	40.00	12.19	34.10	44.30	157.70
BAFTEMP	BAF Temper Mill	398,171.20	4,279,114.70	177.39	103.00	31.39	400.60	37.60	67.80
CGL1T	CGL2 Tower	398,279.50	4,278,949.20	177.39	218.20	66.51	34.50	34.50	67.80
CGL1	CGL1	398,206.20	4,279,128.90	177.39	150.00	45.72	400.60	34.50	67.80
CGL2T	CGL2 Tower	398,345.00	4,278,944.30	177.39	169.00	51.51	35.97	35.97	67.80
CGL2	CGL 2	398,238.20	4,279,141.90	177.39	95.00	28.96	400.60	60.00	67.80
ROLLSHP2	Roll Shop - Segment 2	398,204.40	4,278,613.10	177.39	90.00	27.43	282.50	34.80	67.80
HYDAREA	DC Hyd Area / Motor Room	398,374.80	4,278,378.10	177.39	99.70	30.39	23.00	259.70	-22.20
ASPCT	ASP Cooling Tower	399,059.10	4,278,694.50	179.46	20.33	6.20	21.90	8.20	90.00
WIPCOIL	WIP Coil Storage	397,974.90	4,279,075.40	177.39	64.00	19.51	37.10	335.00	67.70
HARDCOIL	Full Hard Coil Storage	397,961.20	4,279,109.20	177.39	61.00	18.59	36.40	395.70	67.70
LMFBAY	LMF Bay	398,241.20	4,278,145.80	177.39	161.40	49.20	281.00	29.50	-22.40
CSTERBAY	Caster Bay	398,214.10	4,278,211.10	177.39	153.40	46.76	41.00	305.30	67.60
MELTH1	MELTH1	398,222.90	4,278,568.10	177.39	81.00	24.69	49.00	29.60	-112.20
MELTH2	MELTH2	398,326.00	4,278,278.50	177.39	67.00	20.42	19.00	46.40	67.60
HOTCOIL	Hot Band Coil Storage	398,176.90	4,278,602.60	177.39	81.00	24.69	29.60	240.80	-22.20
NCT1	NCT1	398,501.30	4,278,144.30	177.39	48.50	14.78	73.40	14.70	157.50
CCT4	CCT4	398,466.10	4,278,516.20	177.39	40.50	12.34	11.00	18.10	157.40
CCT6	CCT6	398,452.60	4,278,559.20	177.39	44.50	13.56	14.30	38.00	157.20
NCT5	NCT5	398,434.90	4,278,597.60	177.39	41.00	12.50	13.00	25.00	157.20
LCT7	LCT7	398,373.10	4,278,560.90	177.39	44.50	13.56	38.10	12.70	157.70
NCT8	NCT8	398,224.90	4,278,893.40	177.39	37.50	11.43	21.90	10.90	157.50
ACDTNK	Acid Tank Farm	398,022.90	4,278,767.90	177.39	53.00	16.15	88.20	29.60	75.80
SCALE	Scale House	398,105.80	4,279,422.80	177.39	28.98	8.83	17.10	25.60	90.60
MSOFFICE	Melt Shop & Hot Mill Office Area	398,427.10	4,278,342.20	177.39	40.00	12.19	38.70	30.80	67.70

Polygon Buildings

Building ID	Building Description	UTM East	UTM North	Elevation	Height	Height
		m	m	m	ft	m
MLDSEG	Mold & Segment	398,472.80	4,278,317.80	177.39	87.30	26.61
LAB	Laboratory	398,269.00	4,278,706.30	177.39	20.00	6.10

APPENDIX C. REGIONAL SOURCE PARAMETERS

NSWV PSD Air Dispersion Modeling
Regional Source Inventory

Table C-1. Significant Impact Area

Pollutant	Averaging Period	Distance (km)
NO_2	1-hr	36.06
	Annual	3.81
SO_2	1-hr	2.86
	3-hr	N/A-Below SIL
	24-hr	No NAAQS
	Annual	No NAAQS
CO	1-hour	N/A-Below SIL
	8-hour	0.50
$PM_{2.5}$	24-hr	8.63
	Annual	14.87
PM_{10}	24-hr	3.54
	Annual	2.72-No NAAQS
Lead	Rolling 3- Month Avg.	N/A-No SIL

NSWV
PSD Air Dispersion Modeling
Regional Source Inventory

Table C-2. Summary of Proposed Sources

NAAQS

Facility ID	Name	1-hr NO_2	Annual NO_2	1-hr SO_2	8-hr CO	24-hr $PM_{2.5}$	Annual $PM_{2.5}$	24-hr PM_{10}	Rolling 3-month Avg. Lead
54-053-00054	WV-APG Polytech LLC	X	X	X	X	X	X	X	
54-053-00007	WV-ICL-North America Inc - GALLIPOLIS FERRY PLANT	X					X		
54-079-00072	WV-TOYOTA MOTOR MANUFACTURING WV INC.	X							
54-011-00220	WV-Saunders Creek RS	X							
54-079-00170	WV-Rhodes Brick And Block Company, Red House	X							
54-011-00021	WV-Southern West Virginia Asphalt, Inc., Huntington Plant 34	X							
54-079-00103	WV-Waste Management - DISPOSAL SERVICE, INC. SANITARY LANDFILL	X							
54-079-00105	WV-ALLIED WASTE SYCAMORE LANDFILL, LLC	X							
54-079-00147	WV-Hurricane Gas Processing Plant, LLC, Hurricane Facility	X							
54-011-00007	WV-HUNTINGTON ALLOYS - A SPECIAL METALS CO.	X							
54-011-00002	WV-Huntington Locomotive Shop dba CSX Transporation	X							
54-011-00009	WV-Steel Dynamics, Inc. - SWVA, INC.	X							
54-079-00006	WV-APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	X	X		X				
54-053-00009	WV-APPALACHIAN POWER - MOUNTAINEER PLANT	X	X						
0627000046	OH-Shelly Liquid Division	X							
0664000074	OH-Shelly Material Plant 2 formerly Allied Corp Plant No 9	X							
0627000003	OH-Ohio Valley Electric Corp., Kyger Creek Station	X	X			X	X	X	X
0627010056	OH-General James M. Gavin Power Plant	X	X		X		X	X	X
2101900004	KY-MPLX Terminals LLC - Catlettsburg Refining		X						

Increment

Facility ID	Name	Annual NO_2	24-hr SO2	24-hr $PM_{2.5}$	Annual $PM_{2.5}$	24-hr PM_{10}	Annual PM_{10}
None							

NSWV
PSD Air Dispersion Modeling
Regional Source Inventory

Table C-3. Full Screening Analysis

Facility ID	Name	UTM N (m)	UTM E (m)	State	Distance from Site (km)	2-yr Annual Averaged Actual Emissions (tpy) NO_X	SO_2	CO	$PM_{2.5}$	PM_{10}	Lead	20D	Include in NAAQS Analysis? 1-hr NO_2	Annual NO_2	1-hr SO_2	8-hr CO	24-hr PM2.5	Annual PM2.5	24-hr PM10	Rolling 3-month Avg Lead
54-053-00054	APG Polytech LLC	4,280,000	398,000	WV	0.1	29.50	0.45	18.16	7.30	7.30	1.88E-04	2	Include - Inside SIA	Include - Inside SIA	Include - Inside SIA	Include - Inside SIA	Include - Inside SIA	Include - Inside SIA	Include - Inside SIA	
54-053-00007	ICL-North America Inc - GALLIPOLIS FERRY PLANT	4,292,190	395,273	WV	14.0	15.71	0.20	13.00	--	1.23	--	280	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Include - Inside SIA	Exclude - <20D	
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	4,272,200	413,500	WV	16.4	24.75	0.15	37.62	14.86	28.25	--	328	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-011-00220	Saunders Creek RS	4,251,753	400,185	WV	26.9	1.76	0.02	1.49	0.19	0.19	--	538	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-079-00170	Rhodes Brick And Block Company, Red House	4,266,778	423,430	WV	27.8	0.08	--	0.07	--	--	--	556	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-011-00021	Southern West Virginia Asphalt, Inc., Huntington Plant 34	4,254,596	380,313	WV	30.0	1.80	0.24	--	14.54	14.54	--	600	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-079-00103	Waste Management - DISPOSAL SERVICE, INC. SANITARY LANDFILL	4,251,254	411,071	WV	30.2	1.81	0.41	8.25	7.34	9.29	--	604	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-079-00105	ALLIED WASTE SYCAMORE LANDFILL, LLC	4,250,300	410,400	WV	30.7	2.52	0.79	13.71	0.26	0.26	--	614	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-079-00147	Hurricane Gas Processing Plant, LLC, Hurricane Facility	4,250,694	412,284	WV	31.3	0.21	--	0.34	--	--	--	626	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	4,252,300	379,200	WV	32.3	93.22	3.87	80.79	21.90	39.30	5.83E-04	646	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-011-00002	Huntington Locomotive Shop dba CSX Transporation	4,253,452	376,690	WV	33.1	4.38	0.03	3.68	0.25	0.25	--	662	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	4,253,700	375,000	WV	33.9	109.73	23.38	208.46	49.59	53.46	3.48E-01	678	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	4,258,400	428,200	WV	36.0	3,981.90	4,925.40	838.00	102.77	135.38	5.13E-02	720	Include - Inside SIA	Include - >20D	Exclude - Outside ROI	Include - >20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-079-00013	West Virginia Paving, Inc., Plant 37 (Poca)	4,257,064	428,592	WV	37.2	1.95	0.26	--	15.73	15.73	--	744	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00733	Nitro Facility	4,253,301	426,117	WV	37.6	--	--	--	--	--	--	752	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-011-00062	BIMBO BAKERIES USA, INC.	4,252,400	370,900	WV	37.7	2.28	0.01	1.91	0.86	5.31	--	754	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00608	American Asphalt Of West Virginia, LLC, Winfield Road	4,251,844	425,621	WV	38.3	15.62	11.60	--	--	--	--	766	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00069	Go-Mart, Inc., Amandaville Terminal	4,250,221	426,074	WV	39.7	--	--	--	--	--	--	794	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-053-00004	Felman Production Inc. - NEW HAVEN PLANT	4,312,200	419,700	WV	40.1	56.52	76.06	367.04	54.82	83.32	1.32E-02	802	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-035-00049	Armstrong World Industries - Millwood Facility	4,307,000	427,200	WV	40.6	0.24	60.19	70.69	41.72	43.46	--	812	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	4,314,700	419,000	WV	41.9	2,714.32	2,697.94	524.30	90.08	181.64	3.14E-02	838	Include - >20D	Include - >20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00036	Kanawha River Terminals, LLC, Ceredo Dock	4,251,102	364,755	WV	43.3	--	--	--	--	--	--	866	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-035-00043	CONSTELLIUM ROLLED PRODUCTS - RAVENSWOOD	4,309,662	428,417	WV	43.3	132.59	0.57	79.55	39.88	39.88	--	866	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-035-00062	Columbia Gas - Mount Olive Compressor Station	4,287,900	441,400	WV	44.1	102.09	1.20	111.30	8.37	10.65	--	882	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00047	Columbia Gas - Lanham Compressor Station	4,259,000	438,000	WV	44.3	7.03	0.01	1.98	0.14	0.14	--	886	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00013	Columbia Gas - Ceredo Compressor Station	4,248,000	366,000	WV	44.5	314.70	0.53	66.76	3.91	3.91	--	890	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00081	Appalachian Power Company - CEREDO ELECTRIC GENERATING STATION	4,247,500	366,000	WV	44.6	90.10	1.47	86.10	33.28	33.28	4.15E-02	892	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00669	Liberty ONE Methanol Plant	4,249,117	431,773	WV	44.6	53.12	5.40	--	4.25	4.25	--	892	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00005	UNION CARBIDE CORPORATION-INSTITUTE	4,248,800	431,900	WV	44.8	4.84	7.00E-03	5.82	0.63	0.63	--	896	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00012	Cranberry Pipeline Corporation - BEECH FORK COMPRESSOR STATION	4,239,790	375,350	WV	44.9	2.02	2.00E-03	0.36	0.05	0.05	--	898	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00682	Specialty Products - Institute	4,248,754	432,189	WV	45.2	0.99	5.63E-03	5.35	0.04	0.04	--	904	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00734	MC (US) 3 LLC - Institute	4,248,754	432,189	WV	45.2	0.05	2.55E-04	0.23	1.58E-03	1.58E-03	--	904	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00692	Altivia - Institute	4,248,310	432,000	WV	45.3	29.36	0.56	32.05	4.81	4.81	2.00E-04	906	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00022	MPLX Terminals LLC - KENOVA-TRISTATE TERMINAL	4,252,037	361,215	WV	45.5	--	--	--	--	--	--	910	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00020	WEST VIRGINIA PAVING, INC., PLANT 30 (DUNBAR)	4,247,073	433,539	WV	47.3	2.87	0.38	--	22.43	22.43	--	946	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00053	Markwest Hydrocarbon, LLC-Kenova Facility	4,248,400	360,966	WV	47.9	14.94	0.06	5.15	9.62E-03	9.62E-03	--	958	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	

NSWV

PSD Air Dispersion Modeling

Regional Source Inventory

Table C-3. Full Screening Analysis

Facility ID	Name	UTM N (m)	UTM E (m)	State	Distance from Site (km)	2-yr Annual Averaged Actual Emissions (tpy)						20D	Include in NAAQS Analysis?							
						NO_x	SO_2	CO	$PM_{2.5}$	PM_{10}	Lead		1-hr NO_2	Annual NO_2	1-hr SO_2	8-hr CO	24-hr PM2.5	Annual PM2.5	24-hr PM10	Rolling 3-month Avg Lead
54-099-00014	Columbia Gas - Kenova Compressor Station	4,248,000	361,000	WV	48.1	373.34	0.15	23.74	2.06	2.06	--	962	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00009	AOC MATERIALS LLC. - NEAL, WV	4,247,778	360,879	WV	48.3	0.71	0.32	226.58	0.49	0.49	--	966	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-035-00084	Ravenswood HMA Plant #61	4,311,521	433,614	WV	48.3	--	--	--	--	--	--	966	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00118	Marathon Petroleum - Neal Propane Cavern	4,247,736	360,688	WV	48.6	0.01	8.29E-08	2.53E-03	4.71E-03	0.04	--	972	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-035-00003	Columbia Gas - Ripley Compressor Station	4,303,563	440,150	WV	48.7	34.74	0.05	14.33	0.53	0.53	--	974	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00112	Marathon Petroleum - Butane Cavern	4,247,200	360,600	WV	49.0	--	--	--	0.03	0.25	--	980	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00010	BRASKEM AMERICA NEAL PLANT	4,246,300	360,600	WV	49.4	20.83	0.38	20.78	49.85	52.69	1.30E-04	988	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00090	American Asphalt of West Virginia, LLC, Kenova	4,246,103	360,862	WV	49.5	2.74	0.50	--	--	--	--	990	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-043-00002	Columbia Gas - Hubball Compressor Station	4,229,000	396,000	WV	49.9	18.97	0.02	3.63	0.31	0.31	--	998	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00080	BIG SANDY PEAKER PLANT	4,245,000	360,900	WV	50.1	136.81	0.97	20.98	10.62	10.62	--	1,002	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00016	Docks Creek LLC, Kenova	4,244,246	361,742	WV	50.1	--	--	--	--	--	--	1,002	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00020	Argus Energy WV, LLC, Wayne County River Terminals	4,242,379	362,660	WV	50.8	--	--	--	--	--	--	1,016	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00011	Clearon Corp. - South Charleston Plant	4,246,600	438,300	WV	51.1	10.08	0.42	7.39	7.25	8.59	--	1,022	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00618	Univation Technologies, LLC, South Charleston Catalyst Plant	4,245,454	438,402	WV	52.0	0.16	7.00E-04	0.47	0.02	0.02	--	1,040	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-099-00122	Sandy River Dock	4,240,799	362,400	WV	52.1	8.95E-03	0.22	0.11	--	--	--	1,042	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00004	UNION CARBIDE CORPORATION - UCC TECHNOLOGY PARK OPERATIONS	4,245,397	438,589	WV	52.2	4.04	0.02	3.39	0.31	0.31	--	1,044	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00102	Covestro LLC - SOUTH CHARLESTON	4,247,090	440,308	WV	52.5	3.71	--	6.50E-04	--	0.01	--	1,050	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00003	UNION CARBIDE CORP -SO CHARLESTON FAC.	4,247,012	440,327	WV	52.6	71.18	0.50	47.74	5.31	5.31	4.00E-04	1,052	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
54-039-00749	PureTech Scientific LLC	4,262,600	451,900	WV	55.9	1.18	1.69E-03	6.57	0.26	0.26	--	1,118	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
54-039-00009	MPLX TERMINALS LLC CHARLESTON TERMINAL	4,245,054	443,561	WV	56.3	0.07	--	--	--	--	--	1,126	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
54-039-00057	CAMC General Hospital	4,244,558	445,192	WV	57.9	10.98	0.69	6.92	0.97	0.99	1.00E-05	1,158	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
54-005-00067	Coal River Energy, LLC, Fork Creek Plant	4,229,447	431,804	WV	59.5	--	--	--	--	--	--	1,190	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
54-039-00549	WV Dept. Of Administration, General Services Division, State Capitol Complex	4,243,526	446,680	WV	59.7	0.05	0.01	--	0.13	0.13	--	1,194	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
54-039-00461	CITY OF CHARLESTON SANITARY LANDFILL	4,240,500	445,900	WV	60.9	9.82	1.32	29.38	10.48	17.79	--	1,218	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
54-039-00101	Columbia Gas - Hunt Compressor Station	4,262,852	458,056	WV	61.7	--	--	--	--	--	--	1,234	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	

NSWV

PSD Air Dispersion Modeling

Regional Source Inventory

Table C-3. Full Screening Analysis

Facility ID	Name	UTM N	UTM E	State	Distance from Site	2-yr Annual Averaged Actual Emissions (tpy)						20D	Include in NAAQS Analysis?							
		(m)	(m)		(km)	NO_X	SO_2	CO	$PM_{2.5}$	PM_{10}	Lead		1-hr NO_2	Annual NO_2	1-hr SO_2	8-hr CO	24-hr PM2.5	Annual PM2.5	24-hr PM10	Rolling 3-month Avg Lead
0627000046	Shelly Liquid Division	4,301,286	400,751	OH	22.9	7.73	0.05	6.49	56.47	57.06	--	458	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
0664000074	Shelly Material Plant 2 formerly Allied Corp Plant No 9	4,303,000	398,437	OH	24.5	1.52	0.14	10.50	--	--	4.60E-04	490	Include - Inside SIA	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	4,308,072	402,203	OH	29.8	3,134.75	3,770.80	552.86	598.25	657.17	4.58E-02	596	Include - Inside SIA	Include - >20D	Exclude - Outside ROI	Exclude - <20D	Include - >20D	Include - >20D	Include - >20D	Include to represent background
0627010056	General James M. Gavin Power Plant	4,310,254	403,277	OH	32.1	6,722.24	23,066.58	1,361.65	603.81	741.22	2.16E-01	642	Include - Inside SIA	Include - >20D	Exclude - Outside ROI	Include - >20D	Exclude - <20D	Include - >20D	Include - >20D	Include to represent background
0744010055	Ergon - Ironton LLC.	4,263,549	359,068	OH	41.9	--	--	--	--	--	--	838	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
0744000168	McGinnis, Inc. - Sheridan Shipyard/Marine Ways	4,258,320	360,043	OH	43.2	--	--	--	--	--	--	864	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
0744000187	Superior Marine Ways - South Point	4,251,874	364,016	OH	43.4	--	--	--	3.61E-03	3.61E-03	--	868	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
0640010011	CEDAR HEIGHTS CLAY CO	4,304,456	363,285	OH	43.5	0.09	5.60E-04	0.08	2.86	2.86	--	870	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
0640010010	CEDAR HEIGHTS CLAY CO	4,305,500	363,496	OH	43.9	0.05	2.90E-04	0.04	0.37	0.37	--	878	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
0640005007	Columbia Pipeline Group-Oak Hill Compressor Station	4,309,751	365,749	OH	45.0	15.91	0.15	22.68	3.33	3.33	--	900	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
0682000057	Rolling Hills Generating, LLC	4,327,457	384,638	OH	50.8	197.35	3.26	216.71	41.09	41.09	--	1,016	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
0744000150	Hanging Rock Power Company, LLC	4,270,785	344,622	OH	54.1	286.01	21.21	72.31	185.42	200.51	--	1,082	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
0744000173	Americas Styrenics	4,271,136	343,999	OH	54.6	6.00	3.22	3.54	0.45	0.49	--	1,092	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
0773000080	ALTIVIA Petrochemicals, LLC	4,273,035	341,544	OH	56.8	41.49	0.20	26.16	22.95	22.95	--	1,136	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
0640025002	McKee Materials - Plant 2	4,328,332	370,515	OH	57.0	0.82	0.11	3.78	--	0.88	--	1,140	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
0773000182	Haverhill Coke Company LLC	4,274,031	341,079	OH	57.2	699.70	1,556.35	46.09	189.68	214.40	1.77E-01	1,144	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
0660010027	Mar-Zane Plant No 10	4,332,892	375,143	OH	59.1	1.42	0.49	2.18	0.08	1.03	--	1,182	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
0640020059	Beech Hollow Landfill	4,332,695	372,900	OH	59.8	--	--	6.59	6.75	18.13	--	1,196	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
0773000040	NORFOLK SOUTHERN RAILWAY COMPANY - WHEELERSBURG	4,286,553	337,922	OH	60.7	--	--	--	12.20	12.20	--	1,214	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
0640010009	OSCO Inc.-Jackson Division	4,324,433	358,317	OH	60.8	9.85	1.94	370.96	35.01	35.31	1.14E-01	1,216	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
0605000020	Kinder Morgan Tennessee Gas Pipeline Station 204	4,339,340	392,419	OH	61.2	1,761.30	0.39	309.02	30.30	30.30	--	1,224	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
2101900027	Cleveland-Cliffs Steel Corp - Coke Plant	4,257,774	359,548	KY	43.9	--	--	--	0.03	0.25	--	878	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900003	River Metals Recycling - Ashland	4,260,022	357,988	KY	44.3	0.06	1.49E-03	0.04	5.68	23.00	2.25E-07	886	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900110	Valvoline LLC	4,259,998	357,600	KY	44.6	2.02	0.05	10.18	0.12	0.26	2.30E-07	892	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900016	Hardin Street Marine LLC - Marine Repair Facility	4,255,083	360,011	KY	44.8	0.88	5.06E-03	0.80	0.02	0.06	4.03E-06	896	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900019	Mountain Enterprises Inc - Ashland Plant 13	4,260,825	356,160	KY	45.6	2.26	0.30	11.41	0.76	2.47	5.39E-05	912	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900044	Coal Equity Inc - Transload Terminal (810-8023)	4,248,873	360,752	KY	47.8	--	--	--	0.25	0.84	--	956	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900004	MPLX Terminals LLC - Catlettsburg Refining	4,248,880	360,490	KY	48.0	1,010.65	189.75	763.19	166.95	174.33	--	960	Exclude - Outside ROI	Include - >20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900117	Air Products & Chemicals Inc - Catlettsburg Hydrogen Plant	4,248,641	359,874	KY	48.6	75.40	0.30	6.81	4.05	4.05	--	972	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900121	Union Tank Car Co - Catlettsburg Mini Shop	4,246,661	360,301	KY	49.6	6.50E-03	0.02	1.63E-03	6.50E-04	6.50E-04	--	992	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900014	Calgon Carbon Corp	4,244,424	361,110	KY	50.4	244.85	80.96	55.50	16.83	158.94	1.18E-03	1,008	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900035	SNR River Ops LLC - Lockwood Dock Facility	4,243,178	362,014	KY	50.6	--	--	--	7.45E-05	5.14E-04	--	1,012	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900079	Riverway South Inc (810-8030)	4,242,777	362,032	KY	50.9	--	--	--	0.15	0.93	--	1,018	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900093	CW Coal Sales Inc (810-8042)	4,242,320	362,251	KY	51.1	--	--	--	1.29	2.83	--	1,022	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	

NSWV

PSD Air Dispersion Modeling

Regional Source Inventory

Table C-3. Full Screening Analysis

Facility ID	Name	UTM N (m)	UTM E (m)	State	Distance from Site (km)	2-yr Annual Averaged Actual Emissions (tpy) NO_X	SO_2	CO	$PM_{2.5}$	PM_{10}	Lead	20D	Include in NAAQS Analysis? 1-hr NO_2	Annual NO_2	1-hr SO_2	8-hr CO	24-hr PM2.5	Annual PM2.5	24-hr PM10	Rolling 3-month Avg Lead
2101900030	Contech Construction Products Inc	4,256,439	351,498	KY	51.6	0.16	6.98E-04	0.04	0.36	0.67	--	1,032	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900098	Big Sandy Development Co (810-8040)	4,241,175	361,907	KY	52.1	--	--	--	0.13	0.81	--	1,042	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2108900036	Great Lakes Minerals LLC	4,268,714	346,446	KY	52.6	--	--	--	3.69	19.73	--	1,052	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2108900049	Marquet Terminals Inc	4,268,660	346,082	KY	53.0	0.11	6.30E-04	0.09	0.45	0.45	5.25E-07	1,060	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2108900037	Vesuvius USA	4,268,529	346,078	KY	53.0	--	--	--	1.36	3.82	--	1,060	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2101900601	Marathon	4,253,487	351,007	KY	53.4	--	--	--	--	--	--	1,068	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	
2108900014	Pregis LLC	4,268,819	344,221	KY	54.8	0.07	4.08E-04	0.06	1.29E-03	5.17E-03	--	1,096	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
2108900001	Veolia North America Regeneration Services LLC	4,268,914	344,101	KY	54.9	7.88	133.41	0.96	15.08	15.17	--	1,098	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
2101900106	TN Gas Pipeline Co Station 114	4,236,979	362,103	KY	55.1	31.51	1.92	32.53	3.75	3.75	2.25E-07	1,102	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
2101900013	Huntington Alloys Corp	4,236,364	361,995	KY	55.6	2.91	0.02	2.44	2.35	6.96	1.07E-04	1,112	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
2101900116	Liquid Transport LLC	4,251,782	348,233	KY	56.7	--	--	--	--	--	--	1,134	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	
2101900113	Boyd Co Sanitary Landfill	4,248,401	347,611	KY	58.9	9.33	26.92	51.01	2.33	2.36	--	1,178	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
2101900134	Big Run Power Producers LLC	4,248,394	347,122	KY	59.3	3.84	0.27	5.82	0.29	0.29	--	1,186	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
2101909079	Rumpke of KY Inc - Portable Plant	4,248,635	346,669	KY	59.6	0.12	1.61E-04	0.13	0.08	0.16	--	1,192	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
2101900009	The Hyland Co	4,248,582	346,207	KY	60.0	3.94	0.02	3.31	0.17	2.67	--	1,200	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
2101900020	SWVA Kentucky LLC	4,248,065	345,833	KY	60.6	10.51	0.92	8.69	0.53	1.09	5.13E-05	1,212	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
2108900034	Green Valley Landfill General Partnership	4,251,482	342,243	KY	62.1	2.10	2.50	2.73	4.86	10.82	--	1,242	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	
2108900040	East KY Power Cooperative - Green Valley Landfill Station	4,251,365	342,066	KY	62.3	58.94	22.66	129.66	4.70	4.70	--	1,246	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	

NSWV
PSD Air Dispersion Modeling
Regional Source Inventory

Table C-4. Source Parameters

Facility ID	Facility Name	Release Point ID	Description	State	Model Source ID	Easting	Northing	Elevation	Stack Height	Stack Diameter	Exit Velocity	Exit Temperature	Short Term Emission Rates						Long Term Emission Rates					
						(m)	(m)	(ft)	(m)	(m)	(m/s)	K	NO2 (lb/hr)	SO2 (lb/hr)	CO (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)	Lead (lb/hr)	NO2 (tpy)	SO2 (tpy)	CO (tpy)	PM10 (tpy)	PM2.5 (tpy)	Lead (tpy)
54-053-00054	APG Polytech LLC	0	PLANTWIDE FUGITIVES	WV	WV_1_1	398,017	4,280,174	580	3.0	0.01	0.01	-0.01	1.10	0.02	0.56	0.99	0.99	0.00	4.81	0.07	2.44	4.32	4.32	0.00
54-053-00054	APG Polytech LLC	4	CP-3 BONO HEATER	WV	WV_1_2	398,017	4,280,174	580	7.6	0.5	7.55	533	1.31	0.01	1.09	0.17	0.17	0.00	5.72	0.03	4.79	0.73	0.73	0.00
54-053-00054	APG Polytech LLC	5	CP-4 BORN HEATER	WV	WV_1_3	398,017	4,280,174	580	30.5	1.2	6.08	561	2.12	0.04	1.23	0.22	0.22	0.00	9.27	0.15	5.40	0.98	0.98	0.00
54-053-00054	APG Polytech LLC	6	CP-2 BORN Heater	WV	WV_1_4	398,017	4,280,174	580	3.0	0.1	0.16	294	0.48	0.01	0.26	0.07	0.07	0.00	2.12	0.06	1.14	0.30	0.30	0.00
54-053-00054	APG Polytech LLC	3	CP-3 BORN HEATER	WV	WV_1_5	398,017	4,280,174	580	30.5	1.2	7.59	561	1.73	0.03	1.01	0.22	0.22	0.00	7.58	0.12	4.40	0.96	0.96	0.00
54-053-00007	ICL-North America Inc - GALLIPOLIS FERRY	CES	CES Facility Totals	WV	WV_2_1	395,273	4,292,190	563	3.0	0.01	0.01	-0.01	3.59	0.05	2.97	0.28	--	--	15.71	0.20	13.00	1.23	--	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	5	LMSC-0013 (4 CYL. ENGINE MACHINING)	WV	WV_3_1	413,500	4,272,200	580	14.3	0.8	21.22	300	--	--	--	--	--	--	--	--	--	--	--	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	17	LMWB-0006 (4 CYL. ENGINE ASSEMBLY)	WV	WV_3_2	413,500	4,272,200	580	11.9	0.3	1.10	310	--	--	--	0.00	0.00	--	--	--	--	0.01	0.00	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	32	WB-0092 (TRANSMISSION ASSEMBLY)	WV	WV_3_3	413,500	4,272,200	580	10.4	0.3	0.51	300	--	--	--	0.00	0.00	--	--	--	--	0.01	0.00	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	34	LMWB-0060 (TRANSMISSION MACHINING)	WV	WV_3_4	413,500	4,272,200	580	3.0	0.3	0.91	320	--	--	--	0.00	0.00	--	--	--	--	0.01	0.01	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	43	LMZY-0160 (6 CYL. ENGINE MACHINING)	WV	WV_3_5	413,500	4,272,200	580	14.3	0.7	8.84	300	--	--	--	0.01	0.01	--	--	--	--	0.06	0.03	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	50	LMWB-073 (TRANSMISSION ASSEMBLY)	WV	WV_3_6	413,500	4,272,200	580	14.3	0.4	0.51	300	--	--	--	0.00	0.00	--	--	--	--	0.01	0.00	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	66	MZ-SB (6 CYL. ENGINE ASSEMBLY)	WV	WV_3_7	413,500	4,272,200	580	14.3	0.3	5.46	309	--	--	--	0.02	0.01	--	--	--	--	0.07	0.04	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	68	WB-068 (TEST/MAINT/QC/REGRIND)	WV	WV_3_8	413,500	4,272,200	580	14.3	0.6	0.51	300	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	998	NOT A REAL STACK (4 CYL. ENGINE	WV	WV_3_9	413,500	4,272,200	580	3.0	0.01	0.01	-0.01	3.68	0.03	3.23	6.27	3.29	--	16.11	0.15	14.14	27.47	14.43	--
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	2	ENGINE TEST CELLS	WV	WV_3_10	413,500	4,272,200	580	14.3	0.8	1.03	811	3.95	--	10.72	0.20	0.11	--	17.29	--	46.97	0.87	0.49	--
54-011-00220	Saunders Creek RS	CES Total	CES Total Facility Emissions	WV	WV_4_1	400,185	4,251,753	736	3.0	0.01	0.01	-0.01	0.40	0.00	0.34	0.04	0.04	--	1.76	0.02	1.49	0.19	0.19	--
54-079-00170	Rhodes Brick And Block Company, Red House	CES Total	CES Total Facility Emissions	WV	WV_5_1	423,430	4,266,778	592	3.0	0.01	0.01	-0.01	0.02	--	0.02	--	--	--	0.08	--	0.07	--	--	--
54-011-00021	Southern West Virginia Asphalt, Inc., Huntington F	CES Total	CES Total Facility Emissions	WV	WV_6_1	380,313	4,254,596	557	3.0	0.01	0.01	-0.01	0.41	0.05	--	3.32	3.32	--	1.80	0.24	--	14.54	14.54	--
54-079-00103	Waste Management - DISPOSAL SERVICE, INC. SA	0	PLANTWIDE FUGITIVES	WV	WV_7_1	411,071	4,251,254	923	3.0	0.01	0.01	-0.01	0.41	0.09	1.88	2.12	1.68	--	1.81	0.41	8.25	9.29	7.34	--
54-079-00105	ALLIED WASTE SYCAMORE LANDFILL, LLC	1	FLARE	WV	WV_8_1	410,400	4,250,300	752	10.7	0.3	10.15	1,089	0.58	0.18	3.13	0.06	0.06	--	2.52	0.79	13.71	0.26	0.26	--
54-079-00147	Hurricane Gas Processing Plant, LLC, Hurricane Fa	CES Total	CES Total Facility Emissions	WV	WV_9_1	412,284	4,250,694	749	3.0	0.01	0.01	-0.01	0.05	--	0.08	--	--	--	0.21	--	0.34	--	--	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	0	PLANTWIDE FUGITIVES	WV	WV_10_1	379,200	4,252,300	560	3.0	0.01	0.01	-0.01	1.66	0.01	1.39	0.50	0.43	--	7.26	0.04	6.10	2.20	1.89	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	1	NON REG 13 PLANT STACK	WV	WV_10_2	379,200	4,252,300	560	3.0	0.01	0.01	-0.01	18.19	0.11	15.45	3.94	2.99	--	79.65	0.48	67.68	17.24	13.09	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	2	PM PLASMA TORCH STACK	WV	WV_10_3	379,200	4,252,300	560	3.0	1.2	1.46	294	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	3	CD CHROME PLATE STACK	WV	WV_10_4	379,200	4,252,300	560	6.7	0.5	14.08	294	--	--	--	--	--	--	--	--	--	--	--	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	4	F101 FORGE FURNACE STACK	WV	WV_10_5	379,200	4,252,300	560	8.5	1.1	1.58	1,255	0.17	0.00	0.29	0.07	0.05	--	0.75	0.01	1.27	0.30	0.22	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	5	F102 FORGE FURNACE STACK	WV	WV_10_6	379,200	4,252,300	560	8.5	1.1	1.58	1,255	0.15	0.00	0.26	0.06	0.04	--	0.67	0.01	1.12	0.26	0.19	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	6	MELT SHOP BAGHOUSE STACK	WV	WV_10_7	379,200	4,252,300	560	20.7	3.7	15.73	339	--	--	--	0.32	0.10	0.00	--	--	--	1.39	0.42	0.00
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	33	C.D. WEST CUTTERS	WV	WV_10_8	379,200	4,252,300	560	4.3	0.7	4.27	298	--	--	--	0.07	0.02	--	--	--	--	0.33	0.10	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	35	ROD HEAT TREAT FCE.	WV	WV_10_9	379,200	4,252,300	560	20.7	2.8	2.77	298	0.79	0.01	0.88	0.29	0.25	--	3.45	0.03	3.86	1.29	1.09	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	36	P.M. PLATE ANN. FCE VENT	WV	WV_10_10	379,200	4,252,300	560	3.0	0.01	0.01	-0.01	0.33	0.00	0.17	0.02	0.01	--	1.44	0.01	0.76	0.07	0.03	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	37	PICKLE HOUSE STACKS	WV	WV_10_11	379,200	4,252,300	560	14.6	1.5	14.11	298	--	--	--	1.25	0.38	--	--	--	--	5.48	1.64	--
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	38	THISTLE DEGREASER	WV	WV_10_12	379,200	4,252,300	560	9.1	0.6	3.87	298	--	--	--	--	--	--	--	--	--	--	--	--
54-011-00002	Huntington Locomotive Shop dba CSX Transporati	CES Total	CES Total Facility Emissions	WV	WV_11_1	376,690	4,253,452	560	3.0	0.01	0.01	-0.01	1.00	0.01	0.84	0.06	0.06	--	4.38	0.03	3.68	0.25	0.25	--
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	1	NOT A REAL STACK (Fugitives)	WV	WV_12_1	375,000	4,253,700	546	3.0	0.01	0.01	-0.01	17.13	0.06	1.18	5.24	5.18	0.02	75.01	0.25	5.18	22.97	22.70	0.10
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	2	NOT A REAL STACK (Fugitives)	WV	WV_12_2	375,000	4,253,700	546	3.0	0.01	0.01	-0.01	2.32	0.18	0.53	1.61	0.88	--	10.16	0.81	2.32	7.03	3.86	--
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	3	NOT A REAL STACK (Fugitives)	WV	WV_12_3	375,000	4,253,700	546	3.0	0.01	0.01	-0.01	--	--	--	0.14	0.13	0.00	--	--	--	0.61	0.56	0.00
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	6	EAST BAGHOUSE STACK	WV	WV_12_4	375,000	4,253,700	546	22.6	3.4	8.59	313	2.78	2.53	22.73	1.98	1.95	0.02	12.17	11.06	99.58	8.68	8.54	0.09
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	7	WHEELABRATOR BAGHOUSE STA	WV	WV_12_5	375,000	4,253,700	546	12.8	2.50	18.41	328.15	2.83	2.57	23.15	1.49	1.47	0.01	12.39	11.27	101.39	6.54	6.45	0.06
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	8	WEST BAGHOUSE STACK	WV	WV_12_6	375,000	4,253,700	546	22.6	3.43	9.61	321.48	2.80	2.55	22.94	1.74	1.71	0.02	12.28	11.16	100.48	7.61	7.47	0.10
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	23	SHOTBLAST BAGHOUSE STACK	WV	WV_12_7	375,000	4,253,700	546	6.1	0.76	8.26	299.82	--	--	--	0.00	0.00	--	--	--	--	0.02	0.02	--
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E	0	PLANTWIDE FUGITIVES	WV	WV_13_1	428,200	4,258,400	587	3.0	0.01	0.01	-0.01	--	--	--	3.48	2.09	--	--	--	--	15.26	9.14	--
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E	1	AUX 1 STACK	WV	WV_13_2	428,200	4,258,400	587	31.7	2.1	36.58	659	1.89	0.13	0.47	0.22	0.15	--	8.27	0.59	2.07	0.95	0.64	--
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E	2	AUX 3 STACK	WV	WV_13_3	428,200	4,258,400	587	61.0	2.1	32.92	604	1.01	0.07	0.25	0.12	0.08	--	4.43	0.32	1.11	0.51	0.34	--
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E	3	UNIT 3 STACK	WV	WV_13_4	428,200	4,258,400	587	275.2	13.0	15.30	326	452.49	522.79	87.18	16.14	12.58	0.01	1,981.92	2,289.83	381.85	70.70	55.10	0.03
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E	13	UNIT 1 STACK	WV	WV_13_5	428,200	4,258,400	587	275.2	10.3	15.24	326	247.58	209.70	53.82	5.79	4.53	0.00	1,084.41	918.47	235.75	25.37	19.85	0.01
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E	14	UNIT 2 STACK	WV	WV_13_6	428,200	4,258,400	587	275.2	10.29	15.24	326.48	206.09	391.83	49.59	5.16	4.04	0.00	902.67	1,716.21	217.20	22.61	17.71	0.01
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	Cop Emerg Gen Exhst	Coping Power Emergency Generator Exhaust	WV	WV_13_7	428,200	4,258,400	587	4.4	0.3	20.00	736	Intermittent Source		0.01	0.00	0.00	--	0.21	0.00	0.03	0.00	0.00	--
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	0	PLANTWIDE FUGITIVES	WV	WV_14_1	419,000	4,314,700	586	3.0	0.01	0.01	-0.01	--	--	--	18.91	3.06	--	--	--	--	82.82	13.42	--
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	1	UNIT 1 STACK	WV	WV_14_2	419,000	4,314,700	586	304.8	13.0	15.12	327	617.33	615.80	119.11	22.29	17.32	0.01	2,703.90	2,697.20	521.70	97.62	75.86	0.03
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	2	AUX 1 & 2 COMMON STACK	WV	WV_14_3	419,000	4,314,700	586	91.4	3.35	26.82	603.71	2.37	0.17	0.59	0.27	0.18	--	10.38	0.74	2.60	1.20	0.80	--
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	4	Coping Power Emergency Generator	WV	WV_14_4	419,000	4,314,700	586	6.7	0.3	36.88	736	Intermittent Source		0.00	--	--	--	0.03	0.00	0.00	--	--	--
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	5	Engines Exhausts (2) for Emergency Fire	WV	WV_14_5	419,000	4,314,700	586	2.1	0.1	20.00	853	Intermittent Source		0.00	--	--	--	0.01	0.00	0.01	--	--	--
0627000046	Shelly Liquid Division	B001	Thermal Fluid Heater	OH	OH_1_1	400,751	4,301,286	559	9.14	0.6	20.0	450	1.76	0.01	1.48	0.27	0.13	--	7.73	0.05	6.49	1.18	0.59	--
0627000046	Shelly Liquid Division	F001	Roadways and Parking Areas	OH	OH_1_2	400,751	4,301,286	559	3.0	0.01	0.01	-0.01	--	--	--	6.03	6.03	--	--	--	--	26.40	26.40	--
0627000046	Shelly Liquid Division	J001	Asphalt Loading Rack	OH	OH_1_3	400,751	4,301,286	559	3.0	0.01	0.01	394.26	--	--	--	0.78	0.78	--	--	--	--	3.41	3.41	--
0627000046	Shelly Liquid Division	J002	Asphalt Loading Rack	OH	OH_1_4	400,751	4,301,286	559	3.0	0.01	0.01	394.26	--	--	--	0.17	0.17	--	--	--	--	0.76	0.76	--
0627000046	Shelly Liquid Division	T001	Liquid Asphalt Storage Tank	OH	OH_1_5	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	0.40	0.40	--	--	--	--	1.76	1.76	--
0627000046	Shelly Liquid Division	T002	Liquid Asphalt Storage Tank	OH	OH_1_6	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	0.61	0.61	--	--	--	--	2.67	2.67	--
0627000046	Shelly Liquid Division	T003	Liquid Asphalt Storage Tank	OH	OH_1_7	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	0.45	0.45	--	--	--	--	1.96	1.96	--
0627000046	Shelly Liquid Division	T004	Liquid Asphalt Storage Tank	OH	OH_1_8	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	0.13	0.13	--	--	--	--	0.59	0.59	--
0627000046	Shelly Liquid Division	T005	Liquid Asphalt Storage Tank	OH	OH_1_9	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	0.20	0.20	--	--	--	--	0.87	0.87	--
0627000046	Shelly Liquid Division	T007	Liquid Asphalt Storage Tank	OH	OH_1_10	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	0.62	0.62	--	--	--	--	2.73	2.73	--
0627000046	Shelly Liquid Division	T010	Liquid Asphalt Storage Tank	OH	OH_1_11	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	0.26	0.26	--	--	--	--	1.15	1.15	--
0627000046	Shelly Liquid Division	T011	Liquid Asphalt Storage Tank	OH	OH_1_12	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	0.54	0.54	--	--	--	--	2.36	2.36	--
0627000046	Shelly Liquid Division	T012	Liquid Asphalt Storage Tank	OH	OH_1_13	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	1.10	1.10	--	--	--	--	4.83	4.83	--
0627000046	Shelly Liquid Division	T013	Liquid Asphalt Storage Tank	OH	OH_1_14	400,751	4,301,286	559	12.2	0.01	0.01	394.26	--	--	--	1.46	1.46	--	--	--	--	6.39	6.39	--
0664000074	Shelly Material Plant 2 formerly Allied Corp Plant	P901	Hot Mix Asphalt Rotary Drum Dryer (300	OH	OH_2_1	398,437	4,303,000	666	12.2	1.4	19.8	375	0.35	0.03	2.40	--	--	0.00	1.52	0.14	10.50	--	--	0.00
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	B001	Unit #1 Boiler	OH	OH_3_1	402,203	4,308,072	578	253.0	7.5	15.3	326	143.96	163.15	24.49	28.81	26.48	0.00	630.55	714.60	107.25	126.20	116.00	0.01
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	B002	Unit #2 Boiler	OH									154.16	174.25	26.40	30.94	28.47	0.00	675.20	763.20	115.64	135.52	124.69	0.01
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	B003	Unit #3 Boiler	OH									149.38	186.71	26.90	30.89	28.71	0.00	654.30	817.80	117.83	135.29	125.75	0.01
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	B004	Unit #4 Boiler	OH	OH_3_2	402,203	4,308,072	578	253.0	9.2	15.2	326	128.31	161.95	23.17	26.67	24.78	0.00	562.00	709.35	101.46	116.81	108.55	0.01
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	B005	Unit #5 Boiler	OH									139.89	174.85	25.27	29.00	26.96	0.00	612.70	765.85	110.67	127.04	118.10	0.01
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	F001	Existing Plant Parking Areas and Roadways	OH	OH_3_3	402,203	4,308,072	578	3.05	0.01	0.01	-0.01	--	--	--	0.19	0.11	--	--	--	--	0.83	0.46	--
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	F002	Existing Coal Storage Area	OH									--	--	--	1.06	0.60	--	--	--	--	4.64	2.63	--
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	F003	Coal Handling Facilities	OH									--	--	--	1.35	0.29	--	--	--	--	5.93	1.26	--
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	F006	Flue Gas Desulfurization(FGD)Limestone Handling System	OH									--	--	--	0.08	0.03	--	--	--	--	0.37	0.12	--
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	F007	Limestone and Gypsum Storage Piles	OH									--	--	--	0.14	0.06	--	--	--	--	0.62	0.25	--
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	F008	Gypsum Handling System	OH									--	--	--	0.02	0.00	--	--	--	--	0.08	0.02	--
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	F010	Residual Waste Landfill Roadways	OH									--	--	--	0.84	0.09	--	--	--	--	3.70	0.40	--
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	F012	Flue Gas Desulfurization(FGD) Landfill	OH									--	--	--	0.03	0.00	--	--	--	--	0.12	0.02	--
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	P901	Silo and Transfer of Dry Fly Ash Handling	OH									--	--	--	0.00	--	--	--	--	--	0.00	--	--
0627010056	General James M. Gavin Power Plant	B001	Unit 1 Auxiliary Steam Boiler	OH	OH_4_1	403,277	4,310,254	571	91.4	3.35	26.82	422.04	0.71	0.10	0.35	0.16	0.11	0.00	3.09	0.44	1.55	0.71	0.48	0.00
0627010056	General James M. Gavin Power Plant	B002	Unit 2 Auxiliary Steam Boiler	OH	OH_4_2	403,277	4,310,254	571	91.4	3.35	26.82	422.04	0.79	0.11	0.39	0.18	0.12	0.00	3.45	0.49	1.72	0.79	0.53	0.00
0627010056	General James M. Gavin Power Plant	B003	Unit 1 Main Boiler	OH	OH_4_3	403,277	4,310,254	571	253.0	12.8	16.2	325	860.61	2,827.77	161.76	67.27	51.08	0.03	3,769.45	12,385.65	708.53	294.63	223.73	0.11
0627010056	General James M. Gavin Power Plant	B004	Unit 2 Main Boiler	OH	OH_4_4	403,277	4,310,254	571	253.0	12.8	16.2	325	672.66	2,438.36	148.37	91.64	83.24	0.02	2,946.25	10,680.00	649.86	401.41	364.60	0.11

NSWV
PSD Air Dispersion Modeling
Regional Source Inventory

Table C-4. Source Parameters

Facility ID	Facility Name	Release Point ID	Description	State	Model Source ID	Easting (m)	Northing (m)	Elevation (ft)	Stack Height (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temperature K	Short Term Emission Rates NO2 (lb/hr)	SO2 (lb/hr)	CO (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)	Lead (lb/hr)	Long Term Emission Rates NO2 (tpy)	SO2 (tpy)	CO (tpy)	PM10 (tpy)	PM2.5 (tpy)	Lead (tpy)
0627010056	General James M. Gavin Power Plant	P006	Unit 1 Cooling Tower	OH	OH_4_5	403,277	4,310,254	571	15.2	2.1	9.1	-0.01	--	--	--	1.13	1.13	--	--	--	--	4.94	4.94	--
0627010056	General James M. Gavin Power Plant	P007	Unit 2 Cooling Tower	OH	OH_4_6	403,277	4,310,254	571	15.2	2.1	9.1	-0.01	--	--	--	0.98	0.98	--	--	--	--	4.30	4.30	--
0627010056	General James M. Gavin Power Plant	P902	Limestone and Lime Handling Systems	OH	OH_4_7	403,277	4,310,254	571	4.6	1.2	15.2	-0.01	--	--	--	0.19	0.17	--	--	--	--	0.85	0.76	--
0627010056	General James M. Gavin Power Plant	F001	Coal Handling Operations	OH	OH_4_8	403,277	4,310,254	571	3.0	0.01	0.01	-0.01	--	--	--	0.18	0.03	--	--	--	--	0.80	0.12	--
0627010056	General James M. Gavin Power Plant	F002	Flue Gas Desulfurization (FGD) Storage Piles and Landfill Operations	OH									--	--	--	3.00	0.45	--	--	--	--	13.12	1.97	--
0627010056	General James M. Gavin Power Plant	F003	Roadways and Parking Areas	OH									--	--	--	3.24	0.36	--	--	--	--	14.18	1.56	--
0627010056	General James M. Gavin Power Plant	F007	Coal Storage Piles	OH									--	--	--	2.51	0.38	--	--	--	--	10.99	1.65	--
0627010056	General James M. Gavin Power Plant	F010	Bottom Ash Pond Excavation	OH									--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B011	#7 Boiler	KY	KY_1_1	360,490	4,248,880	546	12.19	1.17	10.57	422.04	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B012	#8 Boiler	KY	KY_1_2	360,490	4,248,880	546	12.19	1.17	10.57	422.04	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B013	#5 Package Boiler	KY	KY_1_3	360,490	4,248,880	546	12.19	1.12	11.08	517.59	7.36	0.24	0.24	1.00	1.00	--	32.23	1.04	1.07	4.36	4.36	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B016	#10 Boiler	KY	KY_1_4	360,490	4,248,880	546	53.34	2.10	3.66	441.48	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B017	#12 Boiler	KY	KY_1_5	360,490	4,248,880	546	53.34	2.10	9.53	441.48	7.98	0.16	4.59	0.42	0.42	--	34.97	0.69	20.10	1.82	1.82	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B019	East Portable Boiler #1	KY	KY_1_6	360,490	4,248,880	546	15.24	0.30	6.47	338.71	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B020	West Portable Boiler #2	KY	KY_1_7	360,490	4,248,880	546	15.24	0.30	6.47	338.71	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B021	Lube Portable Boiler (North)	KY	KY_1_8	360,490	4,248,880	546	15.24	0.30	6.47	338.71	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B022	Lube Portable Boiler (South)	KY	KY_1_9	360,490	4,248,880	546	15.24	0.30	6.47	338.71	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B023	#11 Boiler	KY	KY_1_10	360,490	4,248,880	546	45.7	2.1	5.8	449	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B024	#13 Package Boiler	KY	KY_1_11	360,490	4,248,880	546	22.9	1.6	19.9	431	4.26	0.05	0.53	0.68	0.68	--	18.65	0.21	2.33	3.00	3.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	B025	#14 Package Boiler	KY	KY_1_12	360,490	4,248,880	546	22.9	1.6	19.9	434	4.99	0.06	0.14	0.74	0.74	--	21.83	0.25	0.60	3.24	3.24	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT01	Petrochem Cooling Tower (#1) East	KY	KY_1_13	360,490	4,248,880	546	16.9	6.7	9.7	286	--	--	--	0.03	0.02	--	--	--	--	0.12	0.11	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT02	Petrochem Cooling Tower (#2) West	KY	KY_1_14	360,490	4,248,880	546	16.9	6.7	9.7	286	--	--	--	0.02	0.02	--	--	--	--	0.09	0.08	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT04	Lube Plant Cooling Tower	KY	KY_1_15	360,490	4,248,880	546	19.9	7.3	12.5	286	--	--	--	0.01	0.01	--	--	--	--	0.06	0.06	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT05	North Area Cooling Tower (#3) Middle	KY	KY_1_16	360,490	4,248,880	546	13.5	6.7	7.4	286	--	--	--	2.21	1.98	--	--	--	--	9.68	8.67	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT06	North Area Cooling Tower (#1) East	KY	KY_1_17	360,490	4,248,880	546	14.4	6.7	9.2	286	--	--	--	1.30	1.17	--	--	--	--	5.69	5.11	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT07	North Area Cooling Tower (#3) Middle	KY	KY_1_18	360,490	4,248,880	546	19.9	7.3	13.7	286	--	--	--	3.38	3.03	--	--	--	--	14.82	13.29	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT08	North Area Cooling Tower (#2) West	KY	KY_1_19	360,490	4,248,880	546	16.9	5.5	9.8	286	--	--	--	0.89	0.80	--	--	--	--	3.89	3.49	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT09	Gas Con Area Cooling Tower	KY	KY_1_20	360,490	4,248,880	546	18.1	7.3	12.7	286	--	--	--	2.06	1.85	--	--	--	--	9.04	8.11	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT10	HF Alky Area Cooling Tower	KY	KY_1_21	360,490	4,248,880	546	16.2	7.3	10.6	286	--	--	--	2.01	1.80	--	--	--	--	8.79	7.88	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT11	FCCU Area Cooling Tower	KY	KY_1_22	360,490	4,248,880	546	12.6	8.5	8.5	286	--	--	--	0.16	0.14	--	--	--	--	0.69	0.62	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT12	SRU/DDS Cooling Tower	KY	KY_1_23	360,490	4,248,880	546	18.3	7.9	11.9	286	--	--	--	1.48	1.33	--	--	--	--	6.48	5.81	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	CT13	Cooling Tower	KY	KY_1_24	360,490	4,248,880	546	16.7	7.1	10.5	303	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG001	Radio Tower #2 Emergency (50kW) Generator	KY	KY_1_25	360,490	4,248,880	546	1.2	0.1	22.5	924	Intermittent Source		0.03	0.00	0.00	--	0.03	0.00	0.13	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG002	Radio Tower #1 Emergency (75kW) Generator	KY	KY_1_26	360,490	4,248,880	546	1.2	0.1	25.8	844	Intermittent Source		0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG003	Central Control Room Emergency (300kW) Generator	KY	KY_1_27	360,490	4,248,880	546	1.7	0.1	20.0	1005	Intermittent Source		0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG101	Firewater Pump House Engine	KY	KY_1_28	360,490	4,248,880	546	3.7	0.1	30.6	783	Intermittent Source		0.00	0.00	0.00	--	0.07	0.00	0.01	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG102	Firewater Pump House Engine	KY	KY_1_29	360,490	4,248,880	546	3.7	0.1	30.6	783	Intermittent Source		0.00	0.00	0.00	--	0.03	0.00	0.01	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG103	Firelake Firewater Pump Engine	KY	KY_1_30	360,490	4,248,880	546	3.7	0.1	45.8	783	Intermittent Source		0.00	0.00	0.00	--	0.09	0.00	0.02	0.01	0.01	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG104	Hcoal Firewater Pump Engine	KY	KY_1_31	360,490	4,248,880	546	3.7	0.1	20.0	728	Intermittent Source		0.00	0.00	0.00	--	0.01	0.00	0.00	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG105	Firelake Firewater Pump Engine	KY	KY_1_32	360,490	4,248,880	546	6.1	0.1	20.0	791	Intermittent Source		0.00	0.00	0.00	--	0.01	0.00	0.02	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG106	Firelake Firewater Pump Engine	KY	KY_1_33	360,490	4,248,880	546	6.1	0.1	20.0	751	Intermittent Source		0.00	0.00	0.00	--	0.01	0.00	0.02	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG107	Firelake Firewater Pump Engine	KY	KY_1_34	360,490	4,248,880	546	1.5	0.1	20.0	751	Intermittent Source		0.00	0.00	0.00	--	0.01	0.00	0.01	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG201	Lube Area Flare Knockout Drum Pump Engine	KY	KY_1_35	360,490	4,248,880	546	1.5	0.1	24.7	300	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG302	Water Pump Engine at the Centrifuge	KY	KY_1_36	360,490	4,248,880	546	2.4	0.1	15.3	783	0.01	0.00	0.01	0.00	0.00	--	0.04	0.00	0.03	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG303	Godwin Pump Engine Viney Branch	KY	KY_1_37	360,490	4,248,880	546	1.5	0.1	15.3	783	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG305	FCC Hill Run-off Water Pump Engine	KY	KY_1_38	360,490	4,248,880	546	0.9	0.1	6.9	783	0.07	0.00	0.05	0.01	0.01	--	0.29	0.00	0.23	0.03	0.03	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG306	Compressor engine(1) at #10 boiler house	KY	KY_1_39	360,490	4,248,880	546	2.1	0.1	20.0	783	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG307	Compressor engine(2) at #10 boiler house	KY	KY_1_40	360,490	4,248,880	546	2.1	0.1	20.0	783	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG308	South End AI Compressor engine	KY	KY_1_41	360,490	4,248,880	546	2.1	0.1	20.0	783	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG309	HCoal Storm Water Pump Engine	KY	KY_1_42	360,490	4,248,880	546	1.5	0.1	15.3	783	0.01	0.00	0.01	0.00	0.00	--	0.04	0.00	0.03	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG310	East Viney Tunnel Sump Pump Engine	KY	KY_1_43	360,490	4,248,880	546	1.5	0.1	15.3	783	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG312	Settling Pond Pump Engine	KY	KY_1_44	360,490	4,248,880	546	0.4	0.1	14.8	644	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG313	Compressor Engine at #10 Boiler House	KY	KY_1_45	360,490	4,248,880	546	2.1	0.1	20.0	783	0.06	0.00	0.06	0.00	0.00	--	0.28	0.00	0.27	0.02	0.02	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG314	Compressor Engine at #10 Boiler House	KY	KY_1_46	360,490	4,248,880	546	2.1	0.1	20.0	783	0.03	0.00	0.03	0.00	0.00	--	0.12	0.00	0.11	0.01	0.01	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	ENG315	Blowdown Ponds Pump Engine	KY	KY_1_47	360,490	4,248,880	546	2.6	0.1	20.0	644	0.05	0.00	0.06	0.00	0.00	--	0.21	0.00	0.24	0.02	0.02	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	EP017	FCC Regenerator	KY	KY_1_48	360,490	4,248,880	546	53.3	3.7	14.9	577	21.03	27.27	0.94	2.59	2.33	--	92.12	119.44	4.10	11.34	10.20	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	EP019	FCCU Fresh Catalyst Hopper	KY	KY_1_49	360,490	4,248,880	546	32.0	0.2	8.4	298	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	EP020	FCCU Spent Catalyst Shipping Bin (Offsite)	KY	KY_1_50	360,490	4,248,880	546	7.0	0.2	1.4	311	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	EP028	FCCU Fresh/Spent Catalyst Hopper	KY	KY_1_51	360,490	4,248,880	546	25.0	0.3	3.0	366	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	EP029	FCCU Spent Catalyst Hopper	KY	KY_1_52	360,490	4,248,880	546	25.9	0.2	11.7	366	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	EP030	FCCU Catalyst Hopper (Truck unloading)	KY	KY_1_53	360,490	4,248,880	546	31.1	0.4	14.5	366	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	EP031	FCCU Fresh/Spent Catalyst Hopper	KY	KY_1_54	360,490	4,248,880	546	29.9	0.2	12.6	311	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	EP034	FCCU SOx control addition Hopper	KY	KY_1_55	360,490	4,248,880	546	28.8	0.3	10.0	303	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	EP035	FCCU NOx /Super Z Addition Hopper	KY	KY_1_56	360,490	4,248,880	546	28.8	0.3	10.0	303	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	FL02	NNA Flare	KY	KY_1_57	360,490	4,248,880	546	45.7	0.9	1.0	922	6.26	0.17	20.53	1.22	1.22	--	27.40	0.73	89.91	5.33	5.33	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	FL03	HF Alky Flare	KY	KY_1_58	360,490	4,248,880	546	75.9	0.9	0.7	922	0.72	0.04	4.11	0.11	0.11	--	3.14	0.16	17.99	0.46	0.46	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	FL04	FCC Flare	KY	KY_1_59	360,490	4,248,880	546	22.9	0.4	2.7	768	0.98	0.02	2.08	0.13	0.13	--	4.30	0.10	9.09	0.56	0.56	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	FL05	Lube Area Flare	KY	KY_1_60	360,490	4,248,880	546	61.0	0.9	1.0	922	0.75	0.01	6.77	0.13	0.13	--	3.29	0.04	29.63	0.57	0.57	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	FUG200	Sulfur solidification in the earthen pit and disposition of solid sulfur in land fill	KY	KY_1_61	360,490	4,248,880	546	3.0	0.01	0.01	561	--	--	--	0.00	0.00	--	--	--	--	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	FUG201	Solid and liquid sulfur hauling to landfill	KY	KY_1_62	360,490	4,248,880	546	3.0	0.01	0.01	303	--	--	--	0.01	0.00	--	--	--	--	0.06	0.02	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H003	CCR#2 Guardcase Heater	KY	KY_1_63	360,490	4,248,880	546	45.7	2.1	4.5	674	15.30	0.62	9.00	0.81	0.81	--	67.03	2.71	39.44	3.57	3.57	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H004	Aliphatics Hot Oil Heater	KY	KY_1_64	360,490	4,248,880	546	24.7	1.8	8.9	537	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H005	Asphalt Heaters for Tank 119	KY	KY_1_65	360,490	4,248,880	546	17.1	0.8	10.3	866	0.30	0.00	0.25	0.02	0.02	--	1.33	0.01	1.11	0.10	0.10	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H006	Asphalt Heaters for Tank 118	KY	KY_1_66	360,490	4,248,880	546	17.2	0.8	10.3	865	0.30	0.00	0.25	0.02	0.02	--	1.33	0.01	1.11	0.10	0.10	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H007	ADS Charge Heater	KY	KY_1_67	360,490	4,248,880	546	20.4	1.4	4.5	515	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H008	ADS #2 Tower Reboiler	KY	KY_1_68	360,490	4,248,880	546	35.1	1.1	3.5	643	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H009	SHU Hot Oil Heater	KY	KY_1_69	360,490	4,248,880	546	13.7	1.1	16.8	785	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H010	SHU/SPU Hot Oil Heater	KY	KY_1_70	360,490	4,248,880	546	20.4	1.3	10.4	633	1.98	0.11	1.67	0.15	0.15	--	8.69	0.47	7.30	0.66	0.66	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H011	SHU Reactor Charge Heater	KY	KY_1_71	360,490	4,248,880	546	13.7	1.1	17.7	589	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H012	SPU Reactor Charge Heater	KY	KY_1_72	360,490	4,248,880	546	29.0	1.2	1.9	575	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H013	Benzene Recycle Column Reboiler	KY	KY_1_73	360,490	4,248,880	546	42.7	1.8	6.0	518	4.14	0.23	3.48	0.31	0.31	--	18.13	1.01	15.23	1.38	1.38	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H014	Cumene Reboiler	KY	KY_1_74	360,490	4,248,880	546	33.8	1.1	3.6	523	1.00	0.06	0.84	0.08	0.08	--	4.36	0.25	3.66	0.33	0.33	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H015	Lube Vacuum Charge Heater	KY	KY_1_75	360,490	4,248,880	546	53.3	2.1	5.5	428	2.17	0.35	3.83	0.35	0.35	--	9.51	1.55	16.79	1.52	1.52	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H017	#5 Crude Charge Heater	KY	KY_1_76	360,490	4,248,880	546	76.2	2.8	10.1	566	32.77	1.82	19.66	1.78	1.78	--	143.54	7.97	86.13	7.79	7.79	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H018	LEP Dehexanizer Reboiler	KY	KY_1_77	360,490	4,248,880	546	76.2	2.8	10.1	602	4.78	0.37	4.01	0.36	0.36	--	20.92	1.62	17.57	1.59	1.59	--

NSWV
PSD Air Dispersion Modeling
Regional Source Inventory

Table C-4. Source Parameters

													Short Term Emission Rates						Long Term Emission Rates					
Facility ID	Facility Name	Release Point ID	Description	State	Model Source ID	Easting (m)	Northing (m)	Elevation (ft)	Stack Height (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temperature K	NO2 (lb/hr)	SO2 (lb/hr)	CO (lb/hr)	PM10 (lb/hr)	PM2.5 (lb/hr)	Lead (lb/hr)	NO2 (tpy)	SO2 (tpy)	CO (tpy)	PM10 (tpy)	PM2.5 (tpy)	Lead (tpy)
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H019	#4 Vacuum Heater	KY	KY_1_78	360,490	4,248,880	546	53.3	2.4	5.9	552	4.10	0.29	0.10	0.73	0.73	--	17.94	1.26	0.43	3.18	3.18	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H020	No.4 Vacuum Charge Heater	KY	KY_1_79	360,490	4,248,880	546	76.2	2.8	6.0	482	6.96	0.23	0.08	0.58	0.58	--	30.48	1.02	0.34	2.55	2.55	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H021	#3 Crude Charge Heater	KY	KY_1_80	360,490	4,248,880	546	53.3	2.9	6.1	644	6.60	0.45	0.15	1.12	1.12	--	28.91	1.95	0.66	4.90	4.90	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H022	#3 Crude Charge Heater	KY	KY_1_81	360,490	4,248,880	546	53.3	2.9	5.3	630	5.76	0.44	0.15	1.11	1.11	--	25.24	1.94	0.65	4.86	4.86	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H023	Sat Gas Fractionator Reboiler	KY	KY_1_82	360,490	4,248,880	546	39.9	2.8	3.0	484	4.87	0.83	1.38	1.03	1.03	--	21.35	3.64	6.06	4.51	4.51	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H024	Asphalt Mix Heater	KY	KY_1_83	360,490	4,248,880	546	33.5	1.3	1.8	820	0.31	0.06	1.63	0.15	0.15	--	1.37	0.26	7.16	0.65	0.65	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H025	SDA Hot Oil Heater	KY	KY_1_84	360,490	4,248,880	546	33.5	1.3	3.5	587	3.57	0.11	3.00	0.27	0.27	--	15.62	0.48	13.12	1.19	1.19	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H026	ISOM Unit Heaters	KY	KY_1_85	360,490	4,248,880	546	50.3	2.1	6.1	546	9.74	0.25	6.69	0.61	0.61	--	42.67	1.08	29.29	2.65	2.65	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H027	ISOM Regenerator Vapor Super Heater	KY	KY_1_86	360,490	4,248,880	546	15.2	0.6	3.6	422	0.09	0.00	0.07	0.01	0.01	--	0.38	0.01	0.32	0.03	0.03	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H028	HF Alky Isostripper Reboiler	KY	KY_1_87	360,490	4,248,880	546	76.2	2.1	5.0	466	8.29	0.22	0.08	0.57	0.57	--	36.32	0.97	0.34	2.51	2.51	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H029	HF Alky Hot Oil Heater	KY	KY_1_88	360,490	4,248,880	546	12.2	0.6	2.3	564	1.11	0.03	0.93	0.08	0.08	--	4.86	0.14	4.08	0.37	0.37	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H030	NPT Charge & Reboiler	KY	KY_1_89	360,490	4,248,880	546	76.2	1.9	7.7	583	10.56	0.32	8.87	0.80	0.80	--	46.23	1.41	38.83	3.51	3.51	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H031	HPCCR Reactor Heater	KY	KY_1_90	360,490	4,248,880	546	54.9	2.4	9.1	523	4.58	0.37	10.33	0.93	0.93	--	20.06	1.61	45.23	4.09	4.09	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H032	HPCCR Reactor Heater	KY	KY_1_91	360,490	4,248,880	546	54.9	2.4	8.2	545	3.94	0.32	8.78	0.79	0.79	--	17.28	1.42	38.47	3.48	3.48	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H033	HPCCR Reactor Heater	KY	KY_1_92	360,490	4,248,880	546	54.9	2.4	7.4	495	3.86	0.33	9.49	0.86	0.86	--	16.89	1.45	41.58	3.76	3.76	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H034	LPVGO Hydrotreater Charge Heater	KY	KY_1_93	360,490	4,248,880	546	61.3	1.8	5.9	540	3.20	0.11	0.04	0.27	0.27	--	14.01	0.47	0.16	1.17	1.17	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H035	LPVGO Hydrotreater Charge Heater	KY	KY_1_94	360,490	4,248,880	546	61.3	1.8	6.0	523	3.41	0.10	0.03	0.25	0.25	--	14.94	0.45	0.15	1.11	1.11	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H036	LPVGO Stripper Reboiler	KY	KY_1_95	360,490	4,248,880	546	63.1	2.2	5.7	469	2.79	0.13	0.04	0.31	0.31	--	12.23	0.55	0.18	1.34	1.34	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H037	HPVGO Charge Heater	KY	KY_1_96	360,490	4,248,880	546	56.4	1.8	8.3	689	2.91	0.20	0.07	0.50	0.50	--	12.72	0.89	0.30	2.20	2.20	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H038	HPVGO Charge Heater	KY	KY_1_97	360,490	4,248,880	546	56.4	1.8	8.2	714	2.81	0.18	0.06	0.46	0.46	--	12.31	0.80	0.27	1.99	1.99	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H039	SRU#1 Thermal Oxidizer	KY	KY_1_98	360,490	4,248,880	546	76.2	1.6	10.3	539	1.14	2.26	0.96	0.09	0.09	--	5.00	9.92	4.20	0.38	0.38	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H040	FCC Startup Heater (direct-fired)	KY	KY_1_99	360,490	4,248,880	546	53.3	2.4	1.2	450	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H041	FCC Heat Recovery Units	KY	KY_1_100	360,490	4,248,880	546	70.1	2.9	23.0	450	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H042	Cumene Column Reboiler	KY	KY_1_101	360,490	4,248,880	546	54.9	1.6	6.4	533	2.77	0.25	3.79	0.34	0.34	--	12.15	1.10	16.62	1.50	1.50	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H043	DDS Reactor Charge Heater	KY	KY_1_102	360,490	4,248,880	546	53.3	1.5	6.6	612	1.47	0.08	2.31	0.21	0.21	--	6.43	0.37	10.11	0.92	0.92	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H044	DDS Reactor Charge Heater	KY	KY_1_103	360,490	4,248,880	546	53.3	1.5	6.6	622	1.17	0.08	2.21	0.20	0.20	--	5.11	0.34	9.67	0.87	0.87	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H045	DDS Reactor Stripper Reboiler	KY	KY_1_104	360,490	4,248,880	546	53.3	2.1	5.8	556	3.70	0.22	6.09	0.55	0.55	--	16.21	0.95	26.70	2.42	2.42	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H046	CCR #2 Charge Heater	KY	KY_1_105	360,490	4,248,880	546	64.9	3.5	8.5	550	2.57	0.34	5.03	0.46	0.46	--	11.26	1.48	22.03	1.99	1.99	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H047	CCR #2 No. 1 Interheater	KY	KY_1_106	360,490	4,248,880	546	64.9	3.5	8.5	550	2.86	0.38	5.59	0.51	0.51	--	12.51	1.65	24.47	2.21	2.21	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H048	CCR #2 No. 2 Interheater	KY	KY_1_107	360,490	4,248,880	546	64.9	3.5	8.5	550	2.38	0.31	4.65	0.42	0.42	--	10.42	1.37	20.38	1.84	1.84	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H049	CCR #2 No. 3 Interheater	KY	KY_1_108	360,490	4,248,880	546	64.9	3.5	8.5	550	1.18	0.16	2.30	0.21	0.21	--	5.16	0.68	10.09	0.91	0.91	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H050	CCR #2 Reboiler	KY	KY_1_109	360,490	4,248,880	546	64.9	3.5	8.5	550	0.53	0.07	1.03	0.09	0.09	--	2.31	0.31	4.52	0.41	0.41	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H051	KDS Unit Charge Heater	KY	KY_1_110	360,490	4,248,880	546	53.3	1.5	8.3	505	1.00	0.14	0.00	0.34	0.34	--	4.37	0.59	0.01	1.49	1.49	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H052	Lube Plant Asphalt Oxidizer Fume Burner	KY	KY_1_111	360,490	4,248,880	546	53.3	2.1	5.5	428	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H055	Asphalt Tank Heaters (3) for Tank 16	KY	KY_1_112	360,490	4,248,880	546	17.1	0.2	2.9	755	0.03	0.00	0.02	0.00	0.00	--	0.12	0.00	0.10	0.01	0.01	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H056	Asphalt Tank Heaters (3) for Tank 31	KY	KY_1_113	360,490	4,248,880	546	17.1	0.2	2.9	755	0.02	0.00	0.02	0.00	0.00	--	0.08	0.00	0.07	0.01	0.01	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H058	Asphalt Tank Heaters (3) for Tank 72	KY	KY_1_114	360,490	4,248,880	546	17.1	0.2	2.9	450	0.02	0.00	0.02	0.00	0.00	--	0.08	0.00	0.07	0.01	0.01	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H064	Asphalt Tank Heaters (3) for Tank 833	KY	KY_1_115	360,490	4,248,880	546	17.1	0.2	2.9	450	0.03	0.00	0.02	0.00	0.00	--	0.12	0.00	0.10	0.01	0.01	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H065	Asphalt Tank Heaters (3) for Tank 849	KY	KY_1_116	360,490	4,248,880	546	17.1	0.2	2.9	450	0.05	0.00	0.05	0.00	0.00	--	0.24	0.00	0.20	0.02	0.02	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H067	Asphalt Tank Heaters (2) for Tank 871	KY	KY_1_117	360,490	4,248,880	546	17.1	0.2	2.9	450	0.01	0.00	0.01	0.00	0.00	--	0.06	0.00	0.05	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H068	Pitch Tank Heaters (2) for Tank 808	KY	KY_1_118	360,490	4,248,880	546	17.1	0.2	2.9	394	0.00	0.00	0.00	0.00	0.00	--	0.02	0.00	0.02	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H069	Asphalt Tank Heater (1) for Tank 67	KY	KY_1_119	360,490	4,248,880	546	17.1	0.2	2.9	478	0.30	0.00	0.25	0.02	0.02	--	1.30	0.01	1.09	0.10	0.10	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H071	Asphalt Tank Heaters (1 ea) for Tank 69, 70 and 71	KY	KY_1_120	360,490	4,248,880	546	16.2	0.2	2.9	450	0.36	0.00	0.31	0.03	0.03	--	1.59	0.01	1.34	0.12	0.12	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H072	Asphalt Tank Heaters (2) for Tank 872	KY	KY_1_121	360,490	4,248,880	546	17.1	0.2	2.9	478	0.01	0.00	0.01	0.00	0.00	--	0.06	0.00	0.05	0.00	0.00	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H073	Condensate Naphtha Splitter Reboiler	KY	KY_1_122	360,490	4,248,880	546	53.3	1.6	4.8	586	0.73	0.19	2.73	0.25	0.25	--	3.18	0.81	11.96	1.08	1.08	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H076	#2 SRU Thermal Oxidizer	KY	KY_1_123	360,490	4,248,880	546	64.9	1.1	22.2	539	1.19	2.29	1.00	0.09	0.09	--	5.21	10.02	4.38	0.40	0.40	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H078	Asphalt Tank Heater (T172)	KY	KY_1_124	360,490	4,248,880	546	9.1	0.01	0.01	355	0.03	0.00	0.02	0.00	0.00	--	0.12	0.00	0.10	0.01	0.01	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H079	Portable thermal oxidizer-tank cleaning	KY	KY_1_125	360,490	4,248,880	546	12.2	1.2	10.3	700	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H080	Portable thermal oxidizer-tank cleaning	KY	KY_1_126	360,490	4,248,880	546	12.2	1.2	10.3	700	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	H081	Backup Vapor Combustion Unit	KY	KY_1_127	360,490	4,248,880	546	15.2	2.9	14.2	1033	--	--	--	--	--	--	--	--	--	--	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	T172	1-6-TK-172 - Asphalt Tank	KY	KY_1_128	360,490	4,248,880	546	9.1	0.01	0.01	297	--	--	--	0.01	--	--	--	--	--	0.04	--	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	VDUI-1	New Solvent Truck Rack and Solvent (A&A) Railcar Rack	KY	KY_1_129	360,490	4,248,880	546	18.3	2.1	0.3	1089	0.33	0.00	0.55	0.05	0.05	--	1.43	0.02	2.40	0.22	0.22	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	VDUI-2	Light Oil Dock VDU	KY	KY_1_130	360,490	4,248,880	546	10.7	0.6	1.9	394	0.09	0.00	0.15	0.01	0.01	--	0.39	0.00	0.65	0.06	0.06	--
2101900004	MPLX Terminals LLC - Catlettsburg Refining	VEPR01	Crude Dock VEPR Blower	KY	KY_1_131	360,490	4,248,880	546	9.1	0.01	0.01	297	0.12	0.02	0.11	0.01	--	--	0.51	0.08	0.46	0.04	--	--

NSWV

PSD Air Dispersion Modeling

Regional Source Inventory

Table C-4. Source Parameters - Model Inputs

Facility ID	Facility Name	Copy to AERMOD																
		Model Source ID	Description	Easting	Northing	Elevation	Emission Rate (g/s)								Stack Height	Exit Temperature	Exit Velocity	Stack Diameter
				(m)	(m)	(m)	NO2-ST	NO2-LT	SO2-ST	CO-ST	PM2.5-ST	PM2.5-LT	PM10-ST	Lead-LT	(m)	K	(m/s)	(m)
54-053-00054	APG Polytech LLC	WV_1_1	PLANTWIDE FUGITIVES	398016.9	4280174.3	176.93	1.385E-01	1.385E-01	2.123E-03	7.019E-02	1.242E-01	1.242E-01	1.242E-01		9.144	-0.010	0.010	0.010
54-053-00054	APG Polytech LLC	WV_1_2	CP-3 BONO HEATER	398016.9	4280174.3	176.93	1.645E-01	1.645E-01	1.000E-03	1.377E-01	2.111E-02	2.111E-02	2.111E-02		7.620	533.150	7.547	0.549
54-053-00054	APG Polytech LLC	WV_1_3	CP-4 BORN HEATER	398016.9	4280174.3	176.93	2.668E-01	2.668E-01	4.421E-03	1.552E-01	2.819E-02	2.819E-02	2.819E-02		30.480	560.928	6.078	1.219
54-053-00054	APG Polytech LLC	WV_1_4	CP-2 BORN Heater	398016.9	4280174.3	176.93	6.088E-02	6.088E-02	1.817E-03	3.271E-02	8.653E-03	8.653E-03	8.653E-03		3.048	294.261	0.155	0.101
54-053-00054	APG Polytech LLC	WV_1_5	CP-3 BORN HEATER	398016.9	4280174.3	176.93	2.179E-01	2.179E-01	3.580E-03	1.267E-01	2.774E-02	2.774E-02	2.774E-02		30.480	560.928	7.590	1.219
54-053-00007	ICL-North America Inc - GALLIPOLIS FERRY PLANT	WV_2_1	CES Facility Totals	395272.9	4292190.1	171.72	4.518E-01					--			3.048	-0.010	0.010	0.010
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_1	LMSC-0013 (4 CYL. ENGINE MACHINING)	413500.0	4272200.0	176.83	--								14.326	299.817	21.215	0.762
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_2	LMWB-0006 (4 CYL. ENGINE ASSEMBLY)	413500.0	4272200.0	176.83	--								11.887	310.372	1.102	0.274
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_3	WB-0092 (TRANSMISSION ASSEMBLY)	413500.0	4272200.0	176.83	--								10.363	299.817	0.508	0.305
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_4	LMWB-0060 (TRANSMISSION MACHINING)	413500.0	4272200.0	176.83	--								3.048	319.817	0.914	0.253
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_5	LMZY-0160 (6 CYL. ENGINE MACHINING)	413500.0	4272200.0	176.83	--								14.326	300.372	8.839	0.732
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_6	LMWB-073 (TRANSMISSION ASSEMBLY)	413500.0	4272200.0	176.83	--								14.326	299.817	0.508	0.427
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_7	MZ-SB (6 CYL. ENGINE ASSEMBLY)	413500.0	4272200.0	176.83	--								14.326	308.706	5.461	0.274
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_8	WB-068 (TEST/MAINT/QC/REGRIND)	413500.0	4272200.0	176.83	--								14.326	299.817	0.508	0.610
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_9	NOT A REAL STACK (4 CYL. ENGINE ASSEMBLY)	413500.0	4272200.0	176.83	4.634E-01								3.048	-0.010	0.010	0.010
54-079-00072	TOYOTA MOTOR MANUFACTURING WV INC.	WV_3_10	ENGINE TEST CELLS (TEST/MAINT/QC/REGRIND)	413500.0	4272200.0	176.83	4.974E-01								14.326	810.928	1.035	0.762
54-011-00220	Saunders Creek RS	WV_4_1	CES Total Facility Emissions	400184.9	4251753.5	224.23	5.063E-02								3.048	-0.010	0.010	0.010
54-079-00170	Rhodes Brick And Block Company, Red House	WV_5_1	CES Total Facility Emissions	423429.5	4266777.8	180.39	2.301E-03								3.048	-0.010	0.010	0.010
54-011-00021	Southern West Virginia Asphalt, Inc., Huntington Plant 3	WV_6_1	CES Total Facility Emissions	380313.4	4254596.0	169.78	5.164E-02								3.048	-0.010	0.010	0.010
54-079-00103	Waste Management - DISPOSAL SERVICE, INC. SANITAI	WV_7_1	PLANTWIDE FUGITIVES	411071.5	4251254.3	281.36	5.192E-02								3.048	-0.010	0.010	0.010
54-079-00105	ALLIED WASTE SYCAMORE LANDFILL, LLC	WV_8_1	FLARE	410400.0	4250300.0	229.08	7.249E-02								10.668	1088.706	10.150	0.305
54-079-00147	Hurricane Gas Processing Plant, LLC, Hurricane Facility	WV_9_1	CES Total Facility Emissions	412284.0	4250694.0	228.33	6.041E-03								3.048	-0.010	0.010	0.010
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_1	PLANTWIDE FUGITIVES	379200.0	4252300.0	170.59	2.088E-01								3.048	-0.010	0.010	0.010
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_2	NON REG 13 PLANT STACK	379200.0	4252300.0	170.59	2.291E+00								3.048	-0.010	0.010	0.010
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_3	PM PLASMA TORCH STACK	379200.0	4252300.0	170.59	--								3.048	294.261	1.455	1.219
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_4	CD CHROME PLATE STACK	379200.0	4252300.0	170.59	--								6.706	294.261	14.083	0.506
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_5	F101 FORGE FURNACE STACK	379200.0	4252300.0	170.59	2.169E-02								8.534	1255.372	1.585	1.106
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_6	F102 FORGE FURNACE STACK	379200.0	4252300.0	170.59	1.918E-02								8.534	1255.372	1.585	1.106
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_7	MELT SHOP BAGHOUSE STACK	379200.0	4252300.0	170.59	--								20.726	338.706	15.728	3.658
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_8	C.D. WEST CUTTERS	379200.0	4252300.0	170.59	--								4.267	298.150	4.267	0.671
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_9	ROD HEAT TREAT FCE.	379200.0	4252300.0	170.59	9.923E-02								20.726	298.150	2.774	2.825
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_10	P.M. PLATE ANN. FCE VENT	379200.0	4252300.0	170.59	4.145E-02								3.048	-0.010	0.010	0.010
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_11	PICKLE HOUSE STACKS	379200.0	4252300.0	170.59	--								14.630	298.150	14.112	1.524
54-011-00007	HUNTINGTON ALLOYS - A SPECIAL METALS CO.	WV_10_12	THISTLE DEGREASER	379200.0	4252300.0	170.59	--								9.144	298.150	3.871	0.610
54-011-00002	Huntington Locomotive Shop dba CSX Transporation	WV_11_1	CES Total Facility Emissions	376689.6	4253452.4	170.83	1.260E-01								3.048	-0.010	0.010	0.010
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	WV_12_1	NOT A REAL STACK (Fugitives)	375000.0	4253700.0	166.41	2.158E+00								3.048	-0.010	0.010	0.010
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	WV_12_2	NOT A REAL STACK (Fugitives)	375000.0	4253700.0	166.41	2.922E-01								3.048	-0.010	0.010	0.010
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	WV_12_3	NOT A REAL STACK (Fugitives)	375000.0	4253700.0	166.41	--								3.048	-0.010	0.010	0.010
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	WV_12_4	EAST BAGHOUSE STACK	375000.0	4253700.0	166.41	3.501E-01								22.555	313.150	8.586	3.429
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	WV_12_5	WHEELABRATOR BAGHOUSE STA	375000.0	4253700.0	166.41	3.565E-01								12.802	328.150	18.410	2.502
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	WV_12_6	WEST BAGHOUSE STACK	375000.0	4253700.0	166.41	3.533E-01								22.555	321.483	9.608	3.429
54-011-00009	Steel Dynamics, Inc. - SWVA, INC.	WV_12_7	SHOTBLAST BAGHOUSE STACK	375000.0	4253700.0	166.41	--								6.096	299.817	8.260	0.762
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	WV_13_1	PLANTWIDE FUGITIVES	428200.0	4258400.0	178.85	--	--		--					3.048	-0.010	0.010	0.010
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	WV_13_2	AUX 1 STACK	428200.0	4258400.0	178.85	2.379E-01	2.379E-01		5.940E-02					31.699	658.706	36.576	2.134
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	WV_13_3	AUX 3 STACK	428200.0	4258400.0	178.85	1.274E-01	1.274E-01		3.193E-02					60.960	603.706	32.918	2.134
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	WV_13_4	UNIT 3 STACK	428200.0	4258400.0	178.85	5.701E+01	5.701E+01		1.098E+01					275.234	326.483	15.301	12.954
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	WV_13_5	UNIT 1 STACK	428200.0	4258400.0	178.85	3.119E+01	3.119E+01		6.782E+00					275.234	326.483	15.240	10.287
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	WV_13_6	UNIT 2 STACK	428200.0	4258400.0	178.85	2.597E+01	2.597E+01		6.248E+00					275.234	326.483	15.240	10.287
54-079-00006	APPALACHIAN POWER COMPANY - JOHN E AMOS PLANT	WV_13_7	Coping Power Emergency Generator Exhaust	428200.0	4258400.0	178.85	--	5.897E-03		7.911E-04					4.420	736.483	20.000	0.305
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	WV_14_1	PLANTWIDE FUGITIVES	419000.0	4314700.0	178.60		--		--					3.048	-0.010	0.010	0.010
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	WV_14_2	UNIT 1 STACK	419000.0	4314700.0	178.60	7.778E+01	7.778E+01							304.800	327.039	15.118	12.954
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	WV_14_3	AUX 1 & 2 COMMON STACK	419000.0	4314700.0	178.60	2.986E-01	2.986E-01							91.440	603.706	26.822	3.353
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	WV_14_4	Coping Power Emergency Generator Exhaust	419000.0	4314700.0	178.60	--	8.127E-04							6.706	736.483	36.881	0.305
54-053-00009	APPALACHIAN POWER - MOUNTAINEER PLANT	WV_14_5	Engines Exhausts (2) for Emergency Fire Water	419000.0	4314700.0	178.60	--	2.747E-04							2.134	852.594	20.000	0.101
0627000046	Shelly Liquid Division	OH_1_1	Thermal Fluid Heater	400751.0	4301286.3	170.46	2.224E-01								9.144	449.817	20.000	0.610
0627000046	Shelly Liquid Division	OH_1_2	Roadways and Parking Areas	400751.0	4301286.3	170.46	--								3.048	-0.010	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_3	Asphalt Loading Rack	400751.0	4301286.3	170.46	--								3.048	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_4	Asphalt Loading Rack	400751.0	4301286.3	170.46	--								3.048	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_5	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_6	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_7	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_8	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_9	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_10	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_11	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_12	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_13	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0627000046	Shelly Liquid Division	OH_1_14	Liquid Asphalt Storage Tank	400751.0	4301286.3	170.46	--								12.192	394.261	0.010	0.010
0664000074	Shelly Material Plant 2 formerly Allied Corp Plant No 9	OH_2_1	Hot Mix Asphalt Rotary Drum Dryer (300 TPH)	398436.9	4303000.3	203.13	4.373E-02								12.192	374.817	19.812	1.372
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	OH_3_1	Unit #1, #2 & #3 Boilers	402202.8	4308072.2	176.12	5.638E+01	5.638E+01			1.054E+01	1.054E+01	1.142E+01	7.422E-04	252.980	326.200	15.260	7.530

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Regional Source Inventory

Table C-4. Source Parameters - Model Inputs

Facility ID	Facility Name	Copy to AERMOD																
		Model Source ID	Description	Easting	Northing	Elevation	Emission Rate (g/s)								Stack Height	Exit Temperature	Exit Velocity	Stack Diameter
				(m)	(m)	(m)	NO2-ST	NO2-LT	SO2-ST	CO-ST	PM2.5-ST	PM2.5-LT	PM10-ST	Lead-LT	(m)	K	(m/s)	(m)
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	OH_3_2	Unit #4 & #5 Boilers	402202.8	4308072.2	176.12	3.380E+01	3.380E+01			6.520E+00	6.520E+00	7.014E+00	5.753E-04	252.980	326.200	15.230	9.230
0627000003	Ohio Valley Electric Corp., Kyger Creek Station	OH_3_3	Facility Fugitives	402202.8	4308072.2	176.12	--	--			1.483E-01	1.483E-01	4.687E-01	--	3.048	-0.010	0.010	0.010
0627010056	General James M. Gavin Power Plant	OH_4_1	Unit 1 Auxiliary Steam Boiler	403277.2	4310254.5	174.16	8.897E-02	8.897E-02		4.449E-02		1.379E-02	2.046E-02	1.095E-05	91.440	422.039	26.822	3.353
0627010056	General James M. Gavin Power Plant	OH_4_2	Unit 2 Auxiliary Steam Boiler	403277.2	4310254.5	174.16	9.910E-02	9.910E-02		4.955E-02		1.536E-02	2.279E-02	1.220E-05	91.440	422.039	26.822	3.353
0627010056	General James M. Gavin Power Plant	OH_4_3	Unit 1 Main Boiler	403277.2	4310254.5	174.16	1.084E+02	1.084E+02		2.038E+01		6.436E+00	8.476E+00	3.175E-03	252.984	324.817	16.170	12.802
0627010056	General James M. Gavin Power Plant	OH_4_4	Unit 2 Main Boiler	403277.2	4310254.5	174.16	8.475E+01	8.475E+01		1.869E+01		1.049E+01	1.155E+01	3.025E-03	252.984	324.817	16.170	12.802
0627010056	General James M. Gavin Power Plant	OH_4_5	Unit 1 Cooling Tower	403277.2	4310254.5	174.16	--	--		--		1.421E-01	1.421E-01	--	15.240	-0.010	9.144	2.134
0627010056	General James M. Gavin Power Plant	OH_4_6	Unit 2 Cooling Tower	403277.2	4310254.5	174.16	--	--		--		1.237E-01	1.237E-01	--	15.240	-0.010	9.144	2.134
0627010056	General James M. Gavin Power Plant	OH_4_7	Limestone and Lime Handling Systems	403277.2	4310254.5	174.16	--	--		--		2.193E-02	2.448E-02	--	4.572	-0.010	15.240	1.219
0627010056	General James M. Gavin Power Plant	OH_4_8	Facility Fugitives	403277.2	4310254.5	174.16	--	--		--		1.524E-01	1.124E+00	--	3.048	-0.010	0.010	0.010
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_1	#7 Boiler	360490.2	4248880.0	166.38		--							12.192	422.039	10.574	1.167
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_2	#8 Boiler	360490.2	4248880.0	166.38		--							12.192	422.039	10.574	1.167
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_3	#5 Package Boiler	360490.2	4248880.0	166.38		9.270E-01							12.192	517.594	11.076	1.119
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_4	#10 Boiler	360490.2	4248880.0	166.38		--							53.340	441.483	3.661	2.103
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_5	#12 Boiler	360490.2	4248880.0	166.38		1.006E+00							53.340	441.483	9.528	2.103
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_6	East Portable Boiler #1	360490.2	4248880.0	166.38		--							15.240	338.706	6.468	0.305
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_7	West Portable Boiler #2	360490.2	4248880.0	166.38		--							15.240	338.706	6.468	0.305
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_8	Lube Portable Boiler (North)	360490.2	4248880.0	166.38		--							15.240	338.706	6.468	0.305
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_9	Lube Portable Boiler (South)	360490.2	4248880.0	166.38		--							15.240	338.706	6.468	0.305
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_10	#11 Boiler	360490.2	4248880.0	166.38		--							45.720	449.261	5.800	2.134
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_11	#13 Package Boiler	360490.2	4248880.0	166.38		5.365E-01							22.860	430.928	19.900	1.600
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_12	#14 Package Boiler	360490.2	4248880.0	166.38		6.281E-01							22.860	433.706	19.900	1.600
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_13	Petrochem Cooling Tower (#1) East	360490.2	4248880.0	166.38		--							16.855	285.844	9.690	6.706
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_14	Petrochem Cooling Tower (#2) West	360490.2	4248880.0	166.38		--							16.855	285.844	9.690	6.706
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_15	Lube Plant Cooling Tower	360490.2	4248880.0	166.38		--							19.903	285.844	12.546	7.315
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_16	North Area Cooling Tower (#3) Middle	360490.2	4248880.0	166.38		--							13.503	285.844	7.364	6.706
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_17	North Area Cooling Tower (#1) East	360490.2	4248880.0	166.38		--							14.417	285.844	9.220	6.706
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_18	North Area Cooling Tower (#3) Middle	360490.2	4248880.0	166.38		--							19.903	285.844	13.655	7.315
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_19	North Area Cooling Tower (#2) West	360490.2	4248880.0	166.38		--							16.855	285.844	9.842	5.486
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_20	Gas Con Area Cooling Tower	360490.2	4248880.0	166.38		--							18.105	285.844	12.674	7.315
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_21	HF Alky Area Cooling Tower	360490.2	4248880.0	166.38		--							16.246	285.844	10.561	7.315
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_22	FCCU Area Cooling Tower	360490.2	4248880.0	166.38		--							12.558	285.844	8.504	8.534
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_23	SRU/DDS Cooling Tower	360490.2	4248880.0	166.38		--							18.288	285.844	11.930	7.925
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_24	Cooling Tower	360490.2	4248880.0	166.38		--							16.681	302.594	10.516	7.094
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_25	Radio Tower #2 Emergency (50kW) Generator	360490.2	4248880.0	166.38		7.396E-04							1.219	924.261	22.452	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_26	Radio Tower #1 Emergency (75kW) Generator	360490.2	4248880.0	166.38		2.520E-05							1.219	844.261	25.838	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_27	Central Control Room Emergency (300kW)	360490.2	4248880.0	166.38		1.403E-05							1.676	1005.372	20.000	0.091
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_28	Firewater Pump House Engine	360490.2	4248880.0	166.38		1.932E-03							3.658	783.150	30.553	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_29	Firewater Pump House Engine	360490.2	4248880.0	166.38		9.274E-04							3.658	783.150	30.553	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_30	Firelake Firewater Pump Engine	360490.2	4248880.0	166.38		2.555E-03							3.658	783.150	45.836	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_31	Hcoal Firewater Pump Engine	360490.2	4248880.0	166.38		2.640E-04							3.658	727.594	20.000	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_32	Firelake Firewater Pump Engine	360490.2	4248880.0	166.38		2.648E-04							6.096	791.483	20.000	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_33	Firelake Firewater Pump Engine	360490.2	4248880.0	166.38		2.719E-04							6.096	750.844	20.000	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_34	Firelake Firewater Pump Engine	360490.2	4248880.0	166.38		1.816E-04							1.524	750.844	20.000	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_35	Lube Area Flare Knockout Drum Pump Engine	360490.2	4248880.0	166.38		--							1.524	299.583	24.750	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_36	Water Pump Engine at the Centrifuge	360490.2	4248880.0	166.38		1.130E-03							2.438	783.150	15.277	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_37	Godwin Pump Engine Viney Branch	360490.2	4248880.0	166.38		--							1.524	783.150	15.277	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_38	FCC Hill Run-off Water Pump Engine	360490.2	4248880.0	166.38		8.445E-03							0.914	783.150	6.873	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_39	Compressor engine(1) at #10 boiler house	360490.2	4248880.0	166.38		--							2.134	783.150	20.000	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_40	Compressor engine(2) at #10 boiler house	360490.2	4248880.0	166.38		--							2.134	783.150	20.000	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_41	South End AI Compressor engine	360490.2	4248880.0	166.38		--							2.134	783.150	20.000	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_42	HCoal Storm Water Pump Engine	360490.2	4248880.0	166.38		1.276E-03							1.524	783.150	15.277	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_43	East Viney Tunnel Sump Pump Engine	360490.2	4248880.0	166.38		--							1.524	783.150	15.277	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_44	Settling Pond Pump Engine	360490.2	4248880.0	166.38		--							0.405	644.261	14.850	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_45	Compressor Engine at #10 Boiler House	360490.2	4248880.0	166.38		8.096E-03							2.134	783.150	20.000	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_46	Compressor Engine at #10 Boiler House	360490.2	4248880.0	166.38		3.392E-03							2.134	783.150	20.000	0.101
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_47	Blowdown Ponds Pump Engine	360490.2	4248880.0	166.38		6.132E-03							2.615	644.261	20.000	0.088
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_48	FCC Regenerator	360490.2	4248880.0	166.38		2.650E+00							53.340	577.039	14.905	3.658
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_49	FCCU Fresh Catalyst Hopper	360490.2	4248880.0	166.38		--							32.004	298.150	8.394	0.213
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_50	FCCU Spent Catalyst Shipping Bin (Offsite)	360490.2	4248880.0	166.38		--							7.010	310.928	1.399	0.213
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_51	FCCU Fresh/Spent Catalyst Hopper	360490.2	4248880.0	166.38		--							24.994	365.928	2.969	0.305
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_52	FCCU Spent Catalyst Hopper	360490.2	4248880.0	166.38		--							25.908	365.928	11.656	0.213
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_53	FCCU Catalyst Hopper (Truck unloading)	360490.2	4248880.0	166.38		--							31.090	365.928	14.463	0.396
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_54	FCCU Fresh/Spent Catalyst Hopper	360490.2	4248880.0	166.38		--							29.870	310.928	12.579	0.213
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_55	FCCU SOx control addition Hopper	360490.2	4248880.0	166.38		--							28.773	303.150	10.012	0.268
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_56	FCCU NOx /Super Z Addition Hopper	360490.2	4248880.0	166.38		--							28.773	303.150	10.012	0.268
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_57	NNA Flare	360490.2	4248880.0	166.38		7.882E-01							45.720	922.039	1.006	0.914
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_58	HF Alky Flare	360490.2	4248880.0	166.38		9.039E-02							75.895	922.039	0.719	0.914
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_59	FCC Flare	360490.2	4248880.0	166.38		1.237E-01							22.860	768.150	2.701	0.396
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_60	Lube Area Flare	360490.2	4248880.0	166.38		9.454E-02							60.960	922.039	1.006	0.914
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_61	Sulfur solidification in the earthen pit and disposition of solid sulfur in land fill	360490.2	4248880.0	166.38		--							3.048	560.928	0.010	0.010
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_62	Solid and liquid sulfur hauling to landfill	360490.2	4248880.0	166.38		--							3.048	302.594	0.010	0.010
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_63	CCR#2 Guardcase Heater	360490.2	4248880.0	166.38		1.928E+00							45.720	673.706	4.471	2.134
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_64	Aliphatics Hot Oil Heater	360490.2	4248880.0	166.38		--							24.689	537.039	8.931	1.829

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PSD Air Dispersion Modeling

Regional Source Inventory

Table C-4. Source Parameters - Model Inputs

Facility ID	Facility Name	Copy to AERMOD																
		Model Source ID	Description	Easting	Northing	Elevation	Emission Rate (g/s)								Stack Height	Exit Temperature	Exit Velocity	Stack Diameter
				(m)	(m)	(m)	NO2-ST	NO2-LT	SO2-ST	CO-ST	PM2.5-ST	PM2.5-LT	PM10-ST	Lead-LT	(m)	K	(m/s)	(m)
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_65	Asphalt Heaters for Tank 119	360490.2	4248880.0	166.38		3.813E-02							17.069	865.928	10.311	0.762
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_66	Asphalt Heaters for Tank 118	360490.2	4248880.0	166.38		3.813E-02							17.221	864.817	10.311	0.762
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_67	ADS Charge Heater	360490.2	4248880.0	166.38		--							20.422	514.817	4.542	1.402
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_68	ADS #2 Tower Reboiler	360490.2	4248880.0	166.38		--							35.052	643.150	3.508	1.067
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_69	SHU Hot Oil Heater	360490.2	4248880.0	166.38		--							13.716	784.817	16.798	1.067
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_70	SHU/SPU Hot Oil Heater	360490.2	4248880.0	166.38		2.501E-01							20.422	633.150	10.381	1.295
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_71	SHU Reactor Charge Heater	360490.2	4248880.0	166.38		--							13.716	589.261	17.739	1.067
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_72	SPU Reactor Charge Heater	360490.2	4248880.0	166.38		--							28.956	574.817	1.893	1.189
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_73	Benzene Recycle Column Reboiler	360490.2	4248880.0	166.38		5.215E-01							42.672	518.150	6.035	1.829
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_74	Cumene Reboiler	360490.2	4248880.0	166.38		1.255E-01							33.833	522.594	3.642	1.143
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_75	Lube Vacuum Charge Heater	360490.2	4248880.0	166.38		2.736E-01							53.340	427.594	5.517	2.057
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_76	#5 Crude Charge Heater	360490.2	4248880.0	166.38		4.129E+00							76.200	565.928	10.122	2.807
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_77	LEP Dehexanizer Reboiler	360490.2	4248880.0	166.38		6.017E-01							76.200	602.039	10.122	2.807
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_78	#4 Vacuum Heater	360490.2	4248880.0	166.38		5.162E-01							53.340	552.039	5.944	2.350
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_79	No.4 Vacuum Charge Heater	360490.2	4248880.0	166.38		8.769E-01							76.200	482.039	6.008	2.804
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_80	#3 Crude Charge Heater	360490.2	4248880.0	166.38		8.318E-01							53.340	643.706	6.093	2.896
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_81	#3 Crude Charge Heater	360490.2	4248880.0	166.38		7.262E-01							53.340	630.372	5.325	2.896
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_82	Sat Gas Fractionator Reboiler	360490.2	4248880.0	166.38		6.142E-01							39.929	484.261	2.957	2.819
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_83	Asphalt Mix Heater	360490.2	4248880.0	166.38		3.952E-02							33.528	819.817	1.768	1.311
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_84	SDA Hot Oil Heater	360490.2	4248880.0	166.38		4.494E-01							33.528	587.039	3.536	1.311
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_85	ISOM Unit Heaters	360490.2	4248880.0	166.38		1.227E+00							50.292	545.928	6.102	2.057
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_86	ISOM Regenerator Vapor Super Heater	360490.2	4248880.0	166.38		1.085E-02							15.240	422.039	3.560	0.610
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_87	HF Alky Isostripper Reboiler	360490.2	4248880.0	166.38		1.045E+00							76.200	465.928	4.953	2.109
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_88	HF Alky Hot Oil Heater	360490.2	4248880.0	166.38		1.397E-01							12.192	563.706	2.332	0.622
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_89	NPT Charge & Reboiler	360490.2	4248880.0	166.38		1.330E+00							76.200	582.594	7.714	1.881
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_90	HPCCR Reactor Heater	360490.2	4248880.0	166.38		5.769E-01							54.864	522.594	9.056	2.362
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_91	HPCCR Reactor Heater	360490.2	4248880.0	166.38		4.970E-01							54.864	544.817	8.172	2.362
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_92	HPCCR Reactor Heater	360490.2	4248880.0	166.38		4.857E-01							54.864	495.372	7.428	2.362
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_93	LPVGO Hydrotreater Charge Heater	360490.2	4248880.0	166.38		4.030E-01							61.265	540.372	5.864	1.829
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_94	LPVGO Hydrotreater Charge Heater	360490.2	4248880.0	166.38		4.297E-01							61.265	522.594	5.992	1.829
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_95	LPVGO Stripper Reboiler	360490.2	4248880.0	166.38		3.518E-01							63.094	468.706	5.666	2.210
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_96	HPVGO Charge Heater	360490.2	4248880.0	166.38		3.660E-01							56.388	689.261	8.281	1.829
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_97	HPVGO Charge Heater	360490.2	4248880.0	166.38		3.541E-01							56.388	713.706	8.248	1.829
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_98	SRU#1 Thermal Oxidizer	360490.2	4248880.0	166.38		1.439E-01							76.200	538.706	10.324	1.625
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_99	FCC Startup Heater (direct-fired)	360490.2	4248880.0	166.38		--							53.340	449.817	1.244	2.362
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_100	FCC Heat Recovery Units	360490.2	4248880.0	166.38		--							70.104	450.372	23.049	2.935
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_101	Cumene Column Reboiler	360490.2	4248880.0	166.38		3.495E-01							54.864	533.150	6.352	1.576
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_102	DDS Reactor Charge Heater	360490.2	4248880.0	166.38		1.849E-01							53.340	612.039	6.559	1.472
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_103	DDS Reactor Charge Heater	360490.2	4248880.0	166.38		1.470E-01							53.340	622.039	6.559	1.472
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_104	DDS Reactor Stripper Reboiler	360490.2	4248880.0	166.38		4.663E-01							53.340	555.928	5.809	2.109
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_105	CCR #2 Charge Heater	360490.2	4248880.0	166.38		3.240E-01							64.922	549.817	8.504	3.530
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_106	CCR #2 No. 1 Interheater	360490.2	4248880.0	166.38		3.598E-01							64.922	549.817	8.504	3.530
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_107	CCR #2 No. 2 Interheater	360490.2	4248880.0	166.38		2.996E-01							64.922	549.817	8.504	3.530
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_108	CCR #2 No. 3 Interheater	360490.2	4248880.0	166.38		1.484E-01							64.922	549.817	8.504	3.530
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_109	CCR #2 Reboiler	360490.2	4248880.0	166.38		6.647E-02							64.922	549.817	8.504	3.530
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_110	KDS Unit Charge Heater	360490.2	4248880.0	166.38		1.257E-01							53.340	505.372	8.291	1.472
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_111	Lube Plant Asphalt Oxidizer Fume Burner	360490.2	4248880.0	166.38		--							53.340	427.594	5.517	2.057
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_112	Asphalt Tank Heaters (3) for Tank 16	360490.2	4248880.0	166.38		3.426E-03							17.069	755.372	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_113	Asphalt Tank Heaters (3) for Tank 31	360490.2	4248880.0	166.38		2.398E-03							17.069	755.372	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_114	Asphalt Tank Heaters (3) for Tank 72	360490.2	4248880.0	166.38		2.336E-03							17.069	449.817	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_115	Asphalt Tank Heaters (3) for Tank 833	360490.2	4248880.0	166.38		3.426E-03							17.069	449.817	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_116	Asphalt Tank Heaters (3) for Tank 849	360490.2	4248880.0	166.38		6.851E-03							17.069	449.817	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_117	Asphalt Tank Heaters (2) for Tank 871	360490.2	4248880.0	166.38		1.712E-03							17.069	449.817	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_118	Pitch Tank Heaters (2) for Tank 808	360490.2	4248880.0	166.38		5.716E-04							17.069	394.261	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_119	Asphalt Tank Heater (1) for Tank 67	360490.2	4248880.0	166.38		3.729E-02							17.069	477.594	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_120	Asphalt Tank Heaters (1 ea) for Tank 69, 70 and 71	360490.2	4248880.0	166.38		4.576E-02							16.154	449.817	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_121	Asphalt Tank Heaters (2) for Tank 872	360490.2	4248880.0	166.38		1.712E-03							17.069	477.594	2.880	0.204
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_122	Condensate Naphtha Splitter Reboiler	360490.2	4248880.0	166.38		9.151E-02							53.340	585.928	4.828	1.588
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_123	#2 SRU Thermal Oxidizer	360490.2	4248880.0	166.38		1.498E-01							64.922	538.706	22.229	1.067
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_124	Asphalt Tank Heater (T172)	360490.2	4248880.0	166.38		3.495E-03							9.144	355.372	0.010	0.010
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_125	Portable thermal oxidizer-tank cleaning	360490.2	4248880.0	166.38		--							12.192	699.817	10.302	1.158
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_126	Portable thermal oxidizer-tank cleaning	360490.2	4248880.0	166.38		--							12.192	699.817	10.302	1.158
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_127	Backup Vapor Combustion Unit	360490.2	4248880.0	166.38		--							15.240	1033.150	14.167	2.935
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_128	1-6-TK-172 - Asphalt Tank	360490.2	4248880.0	166.38		--							9.144	297.039	0.010	0.010
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_129	New Solvent Truck Rack and Solvent (A&A) Railcar Rack	360490.2	4248880.0	166.38		4.113E-02							18.288	1088.706	0.347	2.134
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_130	Light Oil Dock VDU	360490.2	4248880.0	166.38		1.110E-02							10.668	394.261	1.942	0.610
2101900004	MPLX Terminals LLC - Catlettsburg Refining	KY_1_131	Crude Dock VEPR Blower	360490.2	4248880.0	166.38		1.478E-02							9.144	297.039	0.010	0.010

NSWV
PSD Air Dispersion Modeling
Regional Source Inventory

Table C-5. List of Clusters

Cluster ID	Facility ID	Name	UTM N (m)	UTM E (m)	State	Distance from Site (km)	2-yr Annual Averaged Actual Emissions (tpy) NO$_X$	SO$_2$	CO	PM$_{2.5}$	PM$_{10}$	Lead	20D	Include in NAAQS Analysis? 1-hr NO$_2$	Annual NO$_2$	1-hr SO$_2$	8-hr CO	24-hr PM2.5	Annual PM2.5	24-hr PM10
1	0744000168	McGinnis, Inc. - Sheridan Shipyard/Marine Ways	4,258,320	360,043	OH	43.2	--	--	--	--	--	--	864	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2101900027	Cleveland-Cliffs Steel Corp - Coke Plant	4,257,774	359,548	KY	43.9	--	--	--	0.03	0.25	--	878	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #1						**43.6**	**--**	**--**	**--**	**0.03**	**0.25**	**--**	**871**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
2	2101900003	River Metals Recycling - Ashland	4,260,022	357,988	KY	44.3	0.06	1.49E-03	0.04	5.68	23.00	2.25E-07	886	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2101900110	Valvoline LLC	4,259,998	357,600	KY	44.6	2.02	0.05	10.18	0.12	0.26	2.30E-07	892	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #2						**44.5**	**2.08**	**0.05**	**10.22**	**5.79**	**23.26**	**4.55E-07**	**889**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
3	54-099-00013	Columbia Gas - Ceredo Compressor Station	4,248,000	366,000	WV	44.5	314.70	0.53	66.76	3.91	3.91	--	890	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00081	Appalachian Power Company - CEREDO ELECTRIC GENERATING STATION	4,247,500	366,000	WV	44.6	90.10	1.47	86.10	33.28	33.28	4.15E-02	892	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #3						**44.6**	**404.80**	**2.00**	**152.86**	**37.19**	**37.19**	**4.15E-02**	**891**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
4	54-039-00669	Liberty ONE Methanol Plant	4,249,117	431,773	WV	44.6	53.12	5.40	--	4.25	4.25	--	892	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-039-00005	UNION CARBIDE CORPORATION-INSTITUTE	4,248,800	431,900	WV	44.8	4.84	7.00E-03	5.82	0.63	0.63	--	896	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-039-00734	MC (US) 3 LLC - Institute	4,248,754	432,189	WV	45.2	0.05	2.55E-04	0.23	1.58E-03	1.58E-03	--	904	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-039-00682	Specialty Products - Institute	4,248,754	432,189	WV	45.2	0.99	5.63E-03	5.35	0.04	0.04	--	904	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-039-00692	Altivia - Institute	4,248,310	432,000	WV	45.3	29.36	0.56	32.05	4.81	4.81	2.00E-04	906	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #4						**45.0**	**88.35**	**5.97**	**43.46**	**9.73**	**9.73**	**2.00E-04**	**900**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
5	2101900044	Coal Equity Inc - Transload Terminal (810-8023)	4,248,873	360,752	KY	47.8	--	--	--	0.25	0.84	--	956	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00053	Markwest Hydrocarbon, LLC-Kenova Facility	4,248,400	360,966	WV	47.9	14.94	0.06	5.15	9.62E-03	9.62E-03	--	958	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2101900004	MPLX Terminals LLC - Catlettsburg Refining	4,248,880	360,490	KY	48.0	1,010.65	189.75	763.19	166.95	174.33	--	960	Exclude - Outside ROI	Include - >20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00014	Columbia Gas - Kenova Compressor Station	4,248,000	361,000	WV	48.1	373.34	0.15	23.74	2.06	2.06	--	962	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00009	AOC MATERIALS LLC. - NEAL, WV	4,247,778	360,879	WV	48.3	0.71	0.32	226.58	0.49	0.49	--	966	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00118	Marathon Petroleum - Neal Propane Cavern	4,247,736	360,688	WV	48.6	0.01	8.29E-08	2.53E-03	4.71E-03	0.04	--	972	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2101900117	Air Products & Chemicals Inc - Catlettsburg Hydrogen Plant	4,248,641	359,874	KY	48.6	75.40	0.30	6.81	4.05	4.05	--	972	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00112	Marathon Petroleum - Butane Cavern	4,247,200	360,600	WV	49.0	--	--	--	0.03	0.25	--	980	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00010	BRASKEM AMERICA NEAL PLANT	4,246,300	360,600	WV	49.4	20.83	0.38	20.78	49.85	52.69	1.30E-04	988	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00090	American Asphalt of West Virginia, LLC, Kenova	4,246,103	360,862	WV	49.5	2.74	0.50	--	--	--	--	990	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2101900121	Union Tank Car Co - Catlettsburg Mini Shop	4,246,661	360,301	KY	49.6	6.50E-03	0.02	1.63E-03	6.50E-04	6.50E-04	--	992	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00080	BIG SANDY PEAKER PLANT	4,245,000	360,900	WV	50.1	136.81	0.97	20.98	10.62	10.62	--	1,002	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00016	Docks Creek LLC, Kenova	4,244,246	361,742	WV	50.1	--	--	--	--	--	--	1,002	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2101900014	Calgon Carbon Corp	4,244,424	361,110	KY	50.4	244.85	80.96	55.50	16.83	158.94	1.18E-03	1,008	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #5						**49.0**	**1,880.30**	**273.40**	**1,122.72**	**251.12**	**404.32**	**1.31E-03**	**979**	**Exclude - Outside ROI**	**Include - >20D**	**Exclude - Outside ROI**	**Include - >20D**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
Cluster #5 (Excluding MPLX Catlettsburg Refining)						**49.0**	**869.65**	**83.65**	**359.54**	**84.17**	**229.98**	**1.31E-03**	**981**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
6	2101900035	SNR River Ops LLC - Lockwood Dock Facility	4,243,178	362,014	KY	50.6	--	--	--	7.45E-05	5.14E-04	--	1,012	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-099-00020	Argus Energy WV, LLC, Wayne County River Terminals	4,242,379	362,660	WV	50.8	--	--	--	--	--	--	1,016	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2101900079	Riverway South Inc (810-8030)	4,242,777	362,032	KY	50.9	--	--	--	0.15	0.93	--	1,018	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2101900093	CW Coal Sales Inc (810-8042)	4,242,320	362,251	KY	51.1	--	--	--	1.29	2.83	--	1,022	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #6						**50.9**	**--**	**--**	**--**	**1.44**	**3.76**	**--**	**1,017**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
7	54-099-00122	Sandy River Dock	4,240,799	362,400	WV	52.1	8.95E-03	0.22	0.11	--	--	--	1,042	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2101900098	Big Sandy Development Co (810-8040)	4,241,175	361,907	KY	52.1	--	--	--	0.13	0.81	--	1,042	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #7						**52.1**	**8.95E-03**	**0.22**	**0.11**	**0.13**	**0.81**	**--**	**1,042**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**

NSWV
PSD Air Dispersion Modeling
Regional Source Inventory

Table C-5. List of Clusters

Cluster ID	Facility ID	Name	UTM N (m)	UTM E (m)	State	Distance from Site (km)	2-yr Annual Averaged Actual Emissions (tpy) NO$_x$	SO$_2$	CO	PM$_{2.5}$	PM$_{10}$	Lead	20D	Include in NAAQS Analysis? 1-hr NO$_2$	Annual NO$_2$	1-hr SO$_2$	8-hr CO	24-hr PM2.5	Annual PM2.5	24-hr PM10
8	54-039-00618	Univation Technologies, LLC, South Charleston Catalyst Plant	4,245,454	438,402	WV	52.0	0.16	7.00E-04	0.47	0.02	0.02	--	1,040	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-039-00004	UNION CARBIDE CORPORATION - UCC TECHNOLOGY PARK OPERATIONS	4,245,397	438,589	WV	52.2	4.04	0.02	3.39	0.31	0.31	--	1,044	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #8						**52.1**	**4.20**	**0.02**	**3.86**	**0.33**	**0.33**	**--**	**1,042**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
9	54-039-00102	Covestro LLC - SOUTH CHARLESTON	4,247,090	440,308	WV	52.5	3.71	--	6.50E-04	--	0.01	--	1,050	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
	54-039-00003	UNION CARBIDE CORP -SO CHARLESTON FAC.	4,247,012	440,327	WV	52.6	71.18	0.50	47.74	5.31	5.31	4.00E-04	1,052	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #9						**52.6**	**74.89**	**0.50**	**47.74**	**5.31**	**5.33**	**4.00E-04**	**1,051**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
10	2108900036	Great Lakes Minerals LLC	4,268,714	346,446	KY	52.6	--	--	--	3.69	19.73	--	1,052	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2108900049	Marquet Terminals Inc	4,268,660	346,082	KY	53.0	0.11	6.30E-04	0.09	0.45	0.45	5.25E-07	1,060	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
	2108900037	Vesuvius USA	4,268,529	346,078	KY	53.0	--	--	--	1.36	3.82	--	1,060	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - <20D
Cluster #10						**52.9**	**0.11**	**6.30E-04**	**0.09**	**5.50**	**24.01**	**5.25E-07**	**1,057**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - <20D**
11	0744000150	Hanging Rock Power Company, LLC	4,270,785	344,622	OH	54.1	286.01	21.21	72.31	185.42	200.51	--	1,082	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI
	0744000173	Americas Styrenics	4,271,136	343,999	OH	54.6	6.00	3.22	3.54	0.45	0.49	--	1,092	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI
Cluster #11						**54.4**	**292.02**	**24.43**	**75.84**	**185.87**	**201.00**	**--**	**1,087**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - Outside ROI**
12	2108900014	Pregis LLC	4,268,819	344,221	KY	54.8	0.07	4.08E-04	0.06	1.29E-03	5.17E-03	--	1,096	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI
	2108900001	Veolia North America Regeneration Services LLC	4,268,914	344,101	KY	54.9	7.88	133.41	0.96	15.08	15.17	--	1,098	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI
Cluster #12						**54.9**	**7.95**	**133.41**	**1.02**	**15.09**	**15.17**	**--**	**1,097**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - Outside ROI**
13	2101900106	TN Gas Pipeline Co Station 114	4,236,979	362,103	KY	55.1	31.51	1.92	32.53	3.75	3.75	2.25E-07	1,102	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI
	2101900013	Huntington Alloys Corp	4,236,364	361,995	KY	55.6	2.91	0.02	2.44	2.35	6.96	1.07E-04	1,112	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - <20D	Exclude - Outside ROI
Cluster #13						**55.4**	**34.42**	**1.94**	**34.97**	**6.10**	**10.72**	**1.08E-04**	**1,107**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - <20D**	**Exclude - Outside ROI**
14	2101900113	Boyd Co Sanitary Landfill	4,248,401	347,611	KY	58.9	9.33	26.92	51.01	2.33	2.36	--	1,178	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI
	2101900134	Big Run Power Producers LLC	4,248,394	347,122	KY	59.3	3.84	0.27	5.82	0.29	0.29	--	1,186	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI
	2101909079	Rumpke of KY Inc - Portable Plant	4,248,635	346,669	KY	59.6	0.12	1.61E-04	0.13	0.08	0.16	--	1,192	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI
	2101900009	The Hyland Co	4,248,582	346,207	KY	60.0	3.94	0.02	3.31	0.17	2.67	--	1,200	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI
	2101900020	SWVA Kentucky LLC	4,248,065	345,833	KY	60.6	10.51	0.92	8.69	0.53	1.09	5.13E-05	1,212	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - <20D	Exclude - Outside ROI
Cluster #14						**59.7**	**27.73**	**28.13**	**68.95**	**3.41**	**6.57**	**5.13E-05**	**1,194**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - <20D**	**Exclude - Outside ROI**
15	2108900034	Green Valley Landfill General Partnership	4,251,482	342,243	KY	62.1	2.10	2.50	2.73	4.86	10.82	--	1,242	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI
	2108900040	East KY Power Cooperative - Green Valley Landfill Station	4,251,365	342,066	KY	62.3	58.94	22.66	129.66	4.70	4.70	--	1,246	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI	Exclude - Outside ROI
Cluster #15						**62.2**	**61.04**	**25.16**	**132.39**	**9.56**	**15.52**	**--**	**1,244**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**	**Exclude - Outside ROI**