CLASS II AREA AIR QUALITY MODELING REPORT
SANTEE COOPER ▪ PEE DEE, SOUTH CAROLINA
VOLUME II OF II

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1. EXECUTIVE SUMMARY

South Carolina Public Service Authority, also known as Santee Cooper, is planning to construct a new coal-fired power plant located near Kingsburg, South Carolina. The plant would consist of combustion boiler technology and ancillary equipment to produce steam for the generation of electricity.

The scope of the project will require an air quality permit issued under the Prevention of Significant Deterioration (PSD) permitting rules as facility emissions exceed the major source threshold for several PSD pollutants. Volume I of the construction permit application was submitted on May 31, 2005. This report (Volume II) provides details of the air quality dispersion modeling conducted in support of the application.

Air quality modeling analyses of impacts on nearby areas is an important part of a PSD permit application. The following sections detail the methods and models used to demonstrate that the proposed power plant will not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS), PSD Class II Increment, South Carolina Department of Health and Environmental Control (DHEC) Standard 2 – Ambient Air Quality Standards (AAQS) or DHEC Standard 7. The modeling methods used are consistent with U.S. EPA's *Guideline on Air Quality Mo*dels (*Guideline*),[1] DHEC's Guidelines,[2,3]and communication between Santee Cooper, Trinity Consultants (Trinity) and DHEC.[4]

The remainder of this modeling protocol is organized as follows. Section 2 provides a brief description of the facility and the proposed project. Section 3 describes dispersion modeling requirements. Section 4 describes the approach for modeling, including the data resources and technical modeling options used in the AERMOD analyses. Section 5 provides the results of the analyses.

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[1] 40 CFR 51, Appendix W, *Guideline on Air Quality Models*.

[2] South Carolina DHEC, *Air Quality Modeling Guidelines* (July 2001).

[3] http://www.scdhec.gov/eqc/baq/pubs/Standard2and7ModelingExemptionandDeferralGuidelines.doc

[4] Modeling protocol submitted to DHEC on July 12, 2006. Several meetings between DHEC, Santee Cooper, and Trinity Consultants.

2. PROJECT DESCRIPTION

Santee Cooper proposes to construct two pulverized coal boilers at the Pee Dee facility. An area map depicting the area surrounding the facility is included as Figure B-1. The boilers will nominally provide 660 MW of power each. They will be identical pulverized coal-fired boilers each with a nominal heat input capacity of 5,700 MMBtu/hr. Steam produced by each boiler will feed a steam turbine generator. Power produced by the steam generators will be sold to the grid.

The proposed project also calls for construction of two 1,500 kW diesel-fired emergency generators, a 380 hp fire pump, a 215 MMBtu/hr auxiliary boiler, two multi-cell cooling towers (one for each new boiler), multiple storage tanks, and coal, petcoke, limestone, and solid waste handling equipment. Figures B-2 and B-3 include a building and emission point layout.

Per DHEC's *Updated Standard 2 and 7 Exemption and Deferral Guidelines*[5], Trinity excluded emissions from the emergency generators and fire pump as these units will operate less than 500 hours per year.

The cooling towers and material handling sources that exceed the DHEC exemption thresholds (greater than one lb/hr uncontrolled) are also included in the modeling analyses despite the fact that the emissions from these sources are expected to be very low and the majority of the emissions will be fugitive in nature. In addition, the auxiliary boiler is modeled at the hourly emission rate for all averaging periods although it will operate infrequently and when the main boilers are not operating at full load. A complete list of modeled sources and modeled emissions is included in Table 2-1 and Table 2-2, respectively.[6]

Trinity excluded the following sources since each has an uncontrolled emission rate below one lb/hr (emission rates are included in Table A-1):

- Gypsum Material Transfer Sources
  - Conveyor to stockout
  - Truck loading
- Petcoke Storage Pile
- Bottom Ash Transfer Point
- Limestone Storage Pile
- Limestone Material Transfer Sources
  - Truck unloading to limestone pile
  - Emergency limestone reclaim hopper loading
  - Limestone platform conveyor drop to crusher feed conveyor
  - Emergency limestone reclaim hopper drop to emergency reclaim conveyor

[5] http://www.scdhec.gov/eqc/baq/pubs/Standard2and7ModelingExemptionandDeferralGuidelines.doc

[6] Note that modeled emission rates for the boilers differ slightly from potential emissions. Please refer to the permit application report for additional details.

- Limestone drop to crusher house and overland conveyors
- Limestone emergency reclaim conveyor drop to overland conveyors
- Limestone overland conveyor drop to cross conveyor
- Limestone cross conveyor drop to Limestone Silo #1
- Limestone overland conveyor drop to Limestone Silo #2

Trinity also excluded the following sources which will operate less than 500 hours per year:

- Emergency Generator No. 1
- Emergency Generator No. 2
- Fire Pump

TABLE 2-1. MODELED SOURCE LIST

Source Type	Application ID	Model ID*	Description
Utility Boilers	B01	B01	Boiler No. 1
	B02	B02	Boiler No. 2
Auxiliary Boiler	AB01	AB01	Auxiliary Boiler
Material Transfer - Coal			
	MT01	MT01	Railcar Unloading
	MT01	MT02	Conveyor Transfer to Stacker/Reclaim
	MT01	MT03	Emergency Stockout drop to Pile
	MT01	MT04	Transfer Tower Conveyors
	MT01	MT05	Emergency Reclaim
	MT01	MT06	Dumper to Sample/Transfer Tower
	MT01	MT07	Sample/Transfer Tower
	MT01	MT08	Stacker/Reclaimer Stockout
	MT01	MT09	Stacker/Reclaimer Reclaim
	MT01	MT10	Conveyor to Crusher Tower
	MT01	MT11	Conveyor to Transfer Tower
	MT01	S01-S12	Silos (12 total)
Material Transfer - Pet Coke			
	MT02	MT13	Front end loading
	MT02	MT14	Hopper loading
	MT02	MT15	Conveyor Transfer
Material Transfer - Fly Ash			
	MT05	MT16	Truck loadout 1
	MT05	MT17	Truck loadout 2
	MT05	MT18	Silo 1
	MT05	MT19	Silo 2
Crusher	CR01	CR01	Coal Crusher
	CR02	CR02	Limestone Crusher
Storage Piles	SP02	ST01	Gypsum Storage Pile
	SP03	ST02	Coal Storage Pile
Cooling Towers	CT01, CT02	CT01A-CT02L	Cooling Towers

*Model ID may differ from permit form application ID due to the number of sources that make up an emission unit.

TABLE 2-2. MODELED FACILITY EMISSIONS

Unit ID	PM_{10} (lb/hr)	NO_x (lb/hr)	SO_x (lb/hr)	CO (lb/hr)	TSP (lb/hr)	Pb (lb/hr)	Fluorides (lb/hr)	H_2SO_4 (lb/hr)
B01	102.60	342.00	627.00	912.00	102.60	0.11	1.94	34.20
B02	102.60	342.00	627.00	912.00	102.60	0.11	1.94	34.20
AB01	5.38	21.50	11.18	67.06	5.38	0.00	-	0.11
MT01	0.01	-	-	-	0.02	-	-	-
MT02	0.01	-	-	-	0.02	-	-	-
MT03	0.82	-	-	-	1.73	-	-	-
MT04	0.01	-	-	-	0.02	-	-	-
MT05	0.01	-	-	-	0.02	-	-	-
MT06	0.01	-	-	-	0.02	-	-	-
MT07	0.01	-	-	-	0.02	-	-	-
MT08	0.82	-	-	-	1.73	-	-	-
MT09	0.01	-	-	-	0.02	-	-	-
MT10	0.82	-	-	-	1.73	-	-	-
MT11	0.01	-	-	-	0.02	-	-	-
S01-S12	0.10	-	-	-	0.21	-	-	-
MT13	0.82	-	-	-	1.73	-	-	-
MT14	0.82	-	-	-	1.73	-	-	-
MT15	0.01	-	-	-	0.02	-	-	-
MT16	0.01	-	-	-	0.01	-	-	-
MT17	0.01	-	-	-	0.01	-	-	-
MT18	0.01	-	-	-	0.01	-	-	-
MT19	0.01	-	-	-	0.01	-	-	-
ST01	0.99	-	-	-	1.65	-	-	-
ST02	1.10	-	-	-	1.83	-	-	-
CR01	0.23	-	-	-	0.07	-	-	-
CR02	0.02	-	-	-	0.01	-	-	-
CT01A-CT02L	9.32	-	-	-	9.32	-	-	-

The Pee Dee facility is located in Florence County, which has been designated by the U.S. EPA as "attainment" or "unclassifiable" for all criteria pollutants. As such, PSD regulations apply to any new major stationary source or major modifications to an existing major stationary source. A stationary source is considered "major" if it has the potential to emit either (1) 100 tons per year or more of a regulated pollutant if the source is classified as one of 28 designated industrial source categories, or (2) 250 tons per year or more of any regulated pollutant for unlisted sources. The Pee Dee facility is included in the listed industrial categories because it is a fossil-fuel fired steam electric plant with heat input capacity greater than 250 MMBtu/hr. Potential emissions of oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter less than 10 micrometers aerodynamic diameter (PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC) will be greater than 100 tons per year.[7] Therefore, the Pee Dee facility will be a new PSD major stationary source and PSD review, including dispersion modeling, will be required for the proposed project.

Appendix C illustrates the steps that were taken in completing the required Class II PSD air quality analysis for this permit action. The techniques proposed for this analysis are consistent with current U.S. EPA policy[8] and South Carolina DHEC Guidelines[9,10] and the modeling protocol submitted to DHEC.[11]

3.1 LOAD MODELING ANALYSIS

The *Guideline on Air Quality Models* states that modeling should contain sufficient detail to determine the maximum ambient concentration of the pollutant under consideration, and that this will likely involve modeling several operating loads or production rates. For some types of sources, operating at a reduced load translates into reduced stack gas exit velocities leading to different and potentially higher impact characteristics. This situation is not expected to apply to the proposed coal-fired boilers since the impact of reducing emissions will overshadow the impact of decreasing exhaust flowrate or temperature with decreasing load.

3.2 SIGNIFICANCE ANALYSIS

Initially, a Significance Analysis is completed to determine if the emissions increases at the Pee Dee facility will result in a significant impact upon the area surrounding the facility. Maximum ground-

[7] Note that $PM_{2.5}$ is also a PSD-regulated pollutant. However, $PM_{2.5}$ is currently regulated as PM_{10} and therefore, no additional analyses were conducted related to $PM_{2.5}$

[8] 40 CFR 51, Appendix W, *Guideline on Air Quality Models*.

[9] South Carolina DHEC, *Air Quality Modeling Guidelines* (July 2001).

[10] http://www.scdhec.gov/eqc/baq/pubs/Standard2and7ModelingExemptionandDeferralGuidelines.doc

[11] Modeling protocol submitted to DHEC on July 12, 2006.

level concentrations for each pollutant and averaging period were compared to the U.S. EPA-established Class II Modeling Significance Levels (MSL) provided in Table 3-1. If a significant impact (i.e., an ambient impact above the applicable MSL) does not result, no further modeling analyses are completed for that pollutant. If a significant impact does result, further refined modeling was completed to determine whether the proposed project will cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS) or consume more than the available Class II Increment.

TABLE 3-1. CLASS II MODELING SIGNIFICANCE LEVELS

Pollutant	Averaging Period	MSL ($\mu g/m^3$)
CO	1-hour	2,000
	8-hour	500
SO_2	3-Hour	25
	24-Hour	5
	Annual	1
NO_2	Annual	1
PM_{10}	24-Hour	5
	Annual	1

The Significance Analysis was limited to PM_{10}, NO_x, SO_2, and CO. Ambient impacts of total suspended particulate (TSP), fluorides, lead (Pb) and sulfate (H_2SO_4) associated with the proposed project will also be assessed; however, no MSL exists for these pollutants. Modeling of VOC emissions using reactive plume modeling to estimate ozone impacts is rarely conducted on a source-by-source basis in the Southeast, as the region is generally NO_x limited with regard to ozone formation. Further, South Carolina DHEC has historically not required any assessment of VOC ambient impacts in PSD air quality analyses. Thus, no modeling will be conducted to evaluate potential impacts on ambient ozone.

The significance analysis is also used to demonstrate compliance with South Carolina Standard 2 (Ambient Air Quality Standards) and Standard 7 (PSD). The Standard 2 analysis will also include appropriate background concentrations.

Table 3-2 includes the results of the significance analysis. NO_X, PM_{10}, and SO_2 have significant impacts. Therefore, NAAQS and Increment modeling were conducted for these pollutants.

TABLE 3-2. SIGNIFICANCE ANALYSIS RESULTS

Pollutant	Avg. Period	Max Impact ($\mu g/m^3$)	MSL ($\mu g/m^3$)	Exceeds?	SIA (km)
SO_2	3-Hour	35.5	25	yes	2.1
	24-Hour	14.5	5	yes	7.0
	Annual	1.7	1	yes	3.2
PM_{10}	24-Hour	29.8	5	yes	2.8
	Annual	5.0	1	yes	2.4
NOx	Annual	1.6	1	yes	2.3
CO	1-Hour	122.1	2,000	no	N/A
	8-Hour	47.6	500	no	N/A

3.3 AMBIENT MONITORING REQUIREMENTS

Under current U.S. EPA policies, the maximum impacts due to the emissions increases from a project are also assessed against monitoring *de minimis* levels to determine whether pre-construction monitoring should be considered. If either the predicted modeled impact from an emission increase or the existing ambient concentration is less than the monitoring *de minimis* concentration, the permitting agency has the discretionary authority to exempt an applicant from pre-construction ambient monitoring.

Ambient monitoring data representative of the area surrounding the Pee Dee facility are available from existing monitoring stations. To satisfy the PSD pre-construction monitoring requirements, Trinity presumes that data from South Carolina DHEC-run monitoring stations already in place within the state provide reasonable estimates of the background concentrations of all pollutants of concern. Further, Trinity added background concentrations provided by South Carolina DHEC to pollutant impacts predicted in the modeling analysis conducted to demonstrate compliance with the NAAQS and DHEC Standard No. 2. Accordingly, Trinity proposes that pre-construction monitoring not be required for this project. Based on a review of ambient monitoring data, the values in Table 3-3 are used as representative background concentrations.

TABLE 3-3. BACKGROUND CONCENTRATIONS

Site Name	UTM East (km)	UTM North (km)	Distance (km)	TSP Annual (ug/m^3)	CO 1-Hour (ug/m^3)	CO 8-Hour (ug/m^3)	SO_2 3-Hour (ug/m^3)	SO_2 24-Hour (ug/m^3)	SO_2 Annual (ug/m^3)	NO_X Annual (ug/m^3)	PM_{10} 24-Hour (ug/m^3)	PM_{10} Annual (ug/m^3)
H L Sneed Middle School	606.0	3,781.1	42.4	10.1								
Winyah	659.5	3,693.9	64.2								48.0	21.2
Georgetown CMS	658.7	3,692.5	65.2				102.1	20.9	5.0			
Cape Romain	625.5	3,645.5	110.1		3,893.0	801.5						
Boyer	551.9	3,684.4	112.1							8.3		

3.4 AMBIENT RATIO METHOD FOR NO_X

The Ambient Ratio Method (ARM) has evolved from previous representations (e.g., Ozone Limiting Method) of the oxidation of nitric oxide (NO) by ambient ozone and other photochemical oxidants. The ARM is a *Guideline* approach contained in Section 6.2.3, *Models for Nitrogen Dioxide (Annual Average)*, of 40 CFR Part 51, Appendix W. The *Guideline* provides that:

> *a. A tiered screening approach is recommended to obtain annual average estimates of NO_2 from point sources for New Source Review analysis, including PSD…. For Tier 1 … use an appropriate Gaussian model to estimate the maximum annual average concentration and assume a total conversion of NO to NO_2. If the concentration exceeds the NAAQS and/or PSD increments for NO_2, proceed to the 2nd level screen.*
>
> *b. For Tier 2 (2nd level) screening analysis, multiply the Tier 1 estimate(s) by an empirically derived NO_2/NO_x value of 0.75 (annual national default). An annual NO_2/NO_x ratio differing from 0.75 may be used if it can be shown that such a ratio is based on data likely to be representative of the location where maximum annual impact occurs from the individual source under review occurs. In the case where several sources contribute to consumption of PSD increment, a* locally derived annual NO_2/NO_x ratio should also be shown *to be representative of the location where the maximum collective impact from the new plus existing sources occurs.*

Trinity did not utilize the ARM at the Tier-2 default ratio of 75% NO_2/NO_X for the NAAQS and PSD Increment modeling analyses, as compliance can be demonstrated without its use.

3.5 REGIONAL SOURCE INVENTORIES

For off-site pollutant impacts calculated in the Significance Analysis that exceeded the applicable Class II MSL, a Significant Impact Area (SIA) was determined for each pollutant for which an exceedance is predicted. The SIA encompasses a circle centered on the Pee Dee facility with a radius extending out to either (1) the farthest location where the predicted ambient impact of a pollutant from the project exceeds the Class II MSL, or (2) a distance of 50 km, whichever is less. All sources within a distance of 50 km of the edge of a SIA are assumed to potentially contribute to ground-level concentrations within the SIA and will be evaluated for possible inclusion in the NAAQS and PSD Increment analyses.

As shown in Table 3-2, the SIA is 2.3 km, 2.8 km and 7.0 km for NO_X, PM_{10}, and SO_2, respectively. A regional source inventory was compiled for NO_X, PM_{10}, and SO_2 for NAAQS and PSD Increment analyses. Source location, stack parameters, and potential emissions data were obtained from South Carolina DHEC.[12] Trinity compiled these data and calculated the distance of each source from the Pee Dee facility. To conservatively include sources, all sources less than 50 km from the facility

[12] Sources in North Carolina were reviewed and none are located less than 65 km from the facility.

were included and sources between 50 and 65 km distant were included based on the "20D" rule.[13] Using this procedure, sources outside the area of significant impact can be excluded from the inventory if the entire facility's emissions (tpy) are less than 20 times the distance (km) from the facility to the nearest edge of the SIA. A list of the NAAQS and PSD Increment regional inventory sources is provided in Tables A-2 through A-7.

Note that subsequent to the model runs, a minor error in the stack parameters for SO_2 source FLO107 was noted. The source emits a small amount of PM_{10} and SO_2 and is a flare. It was modeled with the dispersion parameters listed in the DHEC data set, not with calculated flare parameters. The calculated impact from this source alone using the flare parameters is less than 0.2 $\mu g/m^3$ for all pollutants and averaging periods and therefore does not impact the NAAQS and Increment results.

3.6 NAAQS ANALYSIS

For NO_X, PM_{10}, and SO_2 a NAAQS analysis is required. The NAAQS analysis included the potential emissions from all proposed emission units at the Pee Dee facility. Impacts attributable to facility-wide emissions were then combined with the impacts attributable to the regional source inventory. The resulting impacts, added to appropriate background concentrations, are assessed against the applicable NAAQS to demonstrate compliance. For the annual average NO_2, PM_{10}, and SO_2 NAAQS, the highest modeled concentrations among five consecutive years of meteorological data are assessed. For the short-term PM_{10}, and SO_2 standards, high-second-high concentrations are calculated and compared in Section 5.

3.7 CLASS II PSD INCREMENT ANALYSIS

The PSD Increments were established to "prevent deterioration" of air quality in certain areas of the country where air quality was better than the NAAQS. To achieve this goal, U.S. EPA established PSD Increments for certain pollutants. The sum of the PSD Increment concentration and a baseline concentration defines a "reduced" ambient standard, either lower than or equal to the NAAQS that must be met in an attainment area. U.S. EPA has established PSD Increments for PM_{10}, NO_x, and SO_2. There are no PSD Increments established for CO, and thus, CO is not included in this analysis.

To demonstrate compliance with the Class II PSD Increments, the Increment-affecting emissions from the Pee Dee facility and those from sources in the regional inventory were modeled. For short-term averaging periods, the highest-second-high incremental impact is compared to the applicable PSD Increment to assess compliance. For annual average standards the highest incremental impact is assessed.

The determination of whether an emissions change at a given source consumes or expands Increment is based on the source definition and the time the change occurs in relation to baseline dates. The

[13] Federal Register, Volume 57, No. 45, March 6, 1992, p. 8079.

major source baseline date for PM_{10} and SO_2, is January 6, 1975.[14] The major source baseline date for NO_X is February 9, 1988. Emission changes at major sources that occur after the major source baseline date affect Increment. In contrast, emission changes at minor sources only affect Increment after the minor source baseline date, which is set at the time when the first PSD application is completed in a given area, usually arranged on a county-by-county basis. Per the South Carolina DHEC website, the minor source baseline date in Florence County is September 28, 1978 for PM_{10} and SO_2, but has not been triggered for NO_X.

The inventory provided to Trinity by DHEC includes details necessary to model increment affecting major and minor sources. Because the proposed sources at the Pee Dee facility will be constructed after the applicable baseline date, all potential emissions from the Pee Dee facility affect the available Increment.

3.8 CLASS I REQUIREMENTS

Emissions from the proposed project may potentially impact the Cape Romain National Wildlife Refuge, a Class I area located approximately 100 km from the Pee Dee facility. The Class I Increment analysis, which is required by the PSD program, was addressed in a separate modeling report submitted along with the Air Quality Related Value (AQRV) analyses.

3.9 ADDITIONAL IMPACTS ANALYSIS

PSD regulations require that three additional impact analyses be performed as part of a PSD permit action. These are a growth analysis, a soil and vegetation analysis, and a visibility analysis. The effect of the proposed project's PM_{10}, NO_x, SO_2, and CO emissions on local soils and vegetation is addressed through comparison of modeled impacts to secondary NAAQS and other relevant screening criteria that have been developed by U.S. EPA to provide protection for public welfare, including protection against decreased visibility, damage to animals, crops, vegetation and buildings.[15]

Trinity asserts that no quantitative analysis of growth impacts is warranted for this project. Any workforce growth and associated residential and commercial growth that would be associated with this project will not cause a quantifiable impact on the air quality of the area surrounding the Pee Dee facility.

Visibility impacts on Class I areas were addressed through the AQRV analyses. U.S. EPA Region 4 has recently requested visibility analyses for Class II areas of interest in addition to any Class I visibility analyses. Trinity has determined that Lake City Municipal Airport is the closest sensitive

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[14] January 6, 1975, is the major source baseline data for particulate matter; however, South Carolina DHEC does not track Increment consumption for Total Suspended Particulate Matter and only PM_{10} Increment consumption is currently evaluated. For this analysis, PM_{10} emission changes at major sources that occurred after January 6, 1975, are assumed to affect the available PM_{10} Increment.

[15] U.S. EPA, *A Screening Procedure for the Impacts of Air Polltuion Sources on Plants, Soils and Animals* (EPA 450/2-81-078). 1981.

visibility receptor (27 km from the Pee Dee site). VISCREEN was used to evaluate plume blight at Lake City.

3.10 ADDITIONAL SOUTH CAROLINA STATE REQUIREMENTS

In addition to federal modeling requirements, South Carolina has state-only requirements. DHEC Standard No. 2 and No. 7 were addressed in previous sections of this report.

The state of South Carolina regulates the emissions of toxic air pollutants (TAP) via South Carolina Regulation 62.5, Standard No. 8, *Toxic Air Pollutants*. As noted in Standard 8, toxic air pollutant modeling is not required for sources burning only virgin fuel. As such, modeling is not required to show compliance with Standard 8.

4.1 SELECTION OF MODEL

Two levels of air quality dispersion models exist: screening and refined dispersion modeling. Normally, screening modeling is performed to determine the need for refined modeling. When results from a screening model indicate potentially adverse impacts, a refined modeling analysis is performed. A refined modeling analysis can provide a more accurate estimate of a source's impact and requires more detailed and precise input data than does a screening model. Due to the likelihood that a screening model would result in requirements for further modeling, refined models are used in the modeling analysis for this PSD permit application unless otherwise stated.

The latest version (04300) of the AERMOD model is used to estimate maximum ground-level concentrations in all near-field air pollutant analyses conducted for this application. AERMOD is a refined, steady-state, multiple source, Gaussian dispersion model and was promulgated in December 2005 as the preferred model to use for industrial sources in this type of air quality analysis.[16] Following procedures outlined in the *Guideline on Air Quality Models*, the AERMOD modeling will be performed using the regulatory default option. The AERMOD model has the Plume Rise Modeling Enhancements (PRIME) incorporated in the regulatory version, so the direction-specific building downwash dimensions used as input are determined by the Building Profile Input Program, PRIME version (BPIP PRIME), version 04274.[17]

4.2 TREATMENT OF TERRAIN

Complex terrain is defined as any terrain elevation exceeding stacktop height. Complex terrain is further sub-categorized into intermediate terrain (terrain elevation less than final plume rise height) and true complex terrain (terrain elevation greater than final plume rise height). The AERMOD model simplifies the treatment of terrain, as it does not have different algorithms for varying source-receptor elevation relationships described above. Through the use of the AERMOD terrain preprocessor (AERMAP), AERMOD incorporates not only the receptor heights, but also an effective height (hill height scale) that represents the significant terrain features surrounding a given receptor that could lead to plume recirculation and other terrain interaction.18

Receptor terrain elevations input to the model were interpolated from Digital Elevation Model (DEM) data obtained from the U.S. Geological Survey (USGS). DEM data consist of arrays of regularly spaced elevations and correspond to the 1:24,000 scale topographic quadrangle map series. The array

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[16] 40 CFR 51, Appendix W–*Guideline on Air Quality Models*, Appendix A.1– AMS/EPA Regulatory Model (AERMOD).

[17] Earth Tech, Inc., *Addendum to the ISC3 User's Guide, The PRIME Plume Rise and Building Downwash Model,* Concord, MA.

[18] US EPA' *Users Guide for the AERMOD Terrain Preprocessor (AERMAP)*, EPA-454/B-03-003, Research Triangle Park, NC.

elevations are at 30-meter intervals and were interpolated using Trinity's *BREEZE®-AIR* software to determine elevations at the defined receptor intervals. All data obtained from the DEM files were checked for completeness and spot-checked for accuracy against elevations on corresponding USGS 1:24,000 scale topographical quadrangle maps.

4.3 METEOROLOGICAL DATA

Per the South Carolina DHEC's July 2001 *Air Quality Modeling Guidelines*, all analyses were performed using 1987 through 1991 preprocessed meteorological data based on surface observations taken from Columbia, South Carolina (Station No. 13883), and upper air observations from Athens, GA (Station No. 13873).[19] The height of the meteorological profile base (met station elevation above sea-level, used in computation of the potential temperature) is listed on the National Climatic Data Center (NCDC) website as 64.9 meters.[20] The meteorological data set suitable for use with AERMOD was obtained from the South Carolina dispersion modeling website.[21]

4.4 RECEPTOR GRIDS

In the Class II air dispersion modeling analyses, ground-level concentrations were calculated within two Cartesian receptor grids. The Cartesian grid will cover a region at a minimum extending from all edges of the Pee Dee facility boundary past where impacts from the proposed project are no longer significant. The modeling grid contains 100-meter spaced receptors extending approximately 5 km from the source and 500-meter spaced receptors extending from 5-10 km. Due to the long run-times associated with AERMOD as compared to ISC, the number of receptors was minimized. In addition, receptors are placed 50 m apart along the fenceline. A plot of receptor locations and elevations is provided in Figure B-4.

4.5 LAND USE ANALYSIS

AERMOD meteorological data include landuse specific parameters. When processing the datasets in the preprocessing program, AERMET, the user must supply values for the albedo, Bowen ratio, and surface roughness. Each of these values varies with differing landuse and has an effect on the meteorological data that is used in AERMOD (especially the surface roughness length). Therefore, it is important to ensure that the landuse regime surrounding the meteorological data collection site is representative of the landuse surrounding the project site. Per conversation with South Carolina DHEC,[22] the landuse between the Pee Dee site and the Columbia data collection site are appropriately similar and thus the meteorological data from Columbia constitute representative data. Figure B-5 shows a landuse plot containing both the Columbia and Pee Dee sites.

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[19] South Carolina DHEC, *Air Quality Modeling Guidelines* (July 2001), Section 5.2.1.1.

[20] Note that the DHEC website lists the base elevation as 245 feet (74.7 m). However, this appears to be the base elevation plus the anemometer height.

[21] South Carolina DHEC website: http://www.scdhec.net/eqc/baq/html/modeling.html

[22] Personal communication between Mr. Paul Martin (DHEC) and Ms. Maria Zufall (Trinity), December 15, 2005.

4.6 BUILDING DOWNWASH

The emission units at the Pee Dee facility were evaluated in terms of their proximity to nearby structures. The purpose of this evaluation is to determine if stack discharges might become caught in the turbulent wakes of these structures leading to downwash of the plumes. Wind blowing around a building creates zones of turbulence that are greater than if the building were absent. The current version of the AERMOD dispersion model treats building wake effects following the algorithms developed by Schulman and Scire.[23] This approach requires the modeler to input wind direction-specific building dimensions for structures located within 5*L* of a stack, where *L* is the lesser of the height or projected width of a nearby structure. Stacks taller than the structure height plus 1.5*L* are not subject to the effects of downwash in the AERMOD model.

For these modeling analyses, the direction-specific building dimensions used as input to the AERMOD model were calculated using the *BREEZE®-AIR* software, developed by Trinity. This software incorporates the algorithms of the U.S. EPA sanctioned Building Profile Input Program, PRIME version (BPIP PRIME), version 04274.[13] 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.[24]

Output from the BPIP PRIME downwash analysis is provided in the electronic files included with this report. The output contains a summary of the dominant structure for each emissions unit and the actual building height and projected widths for all wind directions. Building downwash was not considered for any regional sources for the NAAQS or PSD Increment analyses.

4.7 REPRESENTATION OF EMISSION SOURCES

4.7.1 COORDINATE SYSTEM

In all modeling analyses input and output files, the location of emission sources, structures, and receptors will be 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 meridian of a particular zone, which is set at 500 km). The central location of the Pee Dee facility is approximately 639 km East and 3,754 km North in Zone 17.

Because the area of the Pee Dee facility where structures and emissions units are located is flat, a single base elevation was used in the model data files for all facility sources. The base elevation for the facility is approximately 62 feet (19 meters) above mean sea level.

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[23] Earth Tech, Inc., *Addendum to the ISC3 User's Guide, The PRIME Plume Rise and Building Downwash Model,* Concord, MA.

[24] 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.

4.7.2 SOURCE TYPES

The AERMOD dispersion model allows for emissions units to be represented as point, area, or volume sources. For point sources with unobstructed vertical releases, it is appropriate to use actual stack parameters (i.e., height, diameter, exhaust gas temperature, and gas exit velocity) in the modeling analyses. The Pee Dee boiler emission units will be modeled as point sources using actual stack parameters. The ancillary sources at the facility (storage piles, material handling sources, and cooling towers) will be represented as a combination of point and volume source emissions. Tables 6 and 7 detail source parameters for point and volume sources, respectively.

TABLE 4-1. POINT SOURCE LIST

Unit	Unit ID	Stack Diameter (ft)	Stack Diameter (m)	Stack Height (ft)	Stack Height (m)	Stack Velocity (ft/s)	Stack Velocity (m/s)	Temperature °F	Temperature (K)
Main Boilers	B01-02	25.00	7.62	650	198.1	60.00	18.29	122.00	323.15
Auxiliary Boiler	AB01	4.76	1.45	100	30.5	49.21	15.00	300.00	422.04
Coal Silo Baghouse	S01-S12	10.00	3.05	170	51.8	2.86	0.87	Ambient	
Coal-Petcoke Crusher	CR01	5.00	1.52	30	9.1	10.31	3.14	Ambient	
Limestone Crusher	CR02	5.00	1.52	30	9.1	10.31	3.14	Ambient	
Cooling Tower	CT01-CT24	3.00	0.91	146	44.5	24.40	7.44	Ambient	

TABLE 4-2. VOLUME SOURCE LIST

	Unit ID	Release Height (ft)	Release Height (m)	Length of Side (ft)	Length of Side (m)
Coal Material Handling					
Railcar Unloading	MT01	10.0	3.0	4	1.2
Conveyor Transfer to Stacker/Reclaim	MT02	30.0	9.1	4	1.2
Emergency Stockout drop to Pile	MT03	30.0	9.1	4	1.2
Transfer Tower Conveyors	MT04	80.0	24.4	4	1.2
Emergency Reclaim	MT05	30.0	9.1	4	1.2
Dumper to Sample/Transfer Tower	MT06	80.0	24.4	4	1.2
Sample/Transfer Tower	MT07	80.0	24.4	4	1.2
Stacker/Reclaimer Stockout	MT08	30.0	9.1	4	1.2
Stacker/Reclaimer Reclaim	MT09	30.0	9.1	4	1.2
Conveyor to Crusher Tower	MT10	80.0	24.4	4	1.2
Conveyor to Transfer Tower	MT11	80.0	24.4	4	1.2
Pet Coke Material Handling					
Front end loading	MT13	5.0	1.5	4	1.2
Hopper loading	MT14	5.0	1.5	4	1.2
Conveyor Transfer	MT15	5.0	1.5	4	1.2
Fly Ash Material Handling					
Truck loadout 1	MT16	5.0	1.5	4	1.2
Truck loadout 2	MT17	5.0	1.5	4	1.2
Silo 1	MT18	80.0	24.4	4	1.2
Silo 2	MT19	80.0	24.4	4	1.2
Gypsum Storage Pile	ST01	30.0	9.1	489	149
Coal Storage Pile	ST02	30.0	9.1	1,662	507

4.7.3 GEP STACK HEIGHT ANALYSIS

The U.S. EPA has promulgated stack height regulations that restrict the use of stack heights in excess of "Good Engineering Practice" (GEP) in air dispersion modeling analyses. The GEP height of a stack is the greater of (1) 65 meters (measured from the base elevation of the stack) and (2) the value returned from the following equation:[25]

$$H_g = H + 1.5 * (L)$$

where H_g = GEP stack height
H = height of nearby structure
L = lesser dimension, height or projected width, of nearby structure

Under the regulations, that portion of a stack that is in excess of the GEP stack height is generally not creditable when modeling to determine source impacts, preventing the use of

[25] 40 CFR 51.100(ii).

excessively tall stacks to reduce ground-level pollutant concentrations. A GEP analysis was conducted for each stack included in these modeling analyses. Stacks that have a release height lower than their GEP value were modeled at their actual release height. The dominant downwash structures at the Pee Dee Facility are the boiler buildings which both have a height of 275 feet. Based on the GEP formula above, that equates to a GEP height for the boiler stack of 687.5 feet. The actual stack height is 650 feet, which is below the GEP value and thus the boiler stacks were modeled at the actual release height.

This section summarizes the results of the Class II dispersion modeling analyses and demonstrates that the Pee Dee facility does not cause or contribute to an exceedance of the NAAQS or Class II Increment.

5.1 SIGNIFICANCE ANALYSIS, STANDARD 2 AND STANDARD 7

As discussed in Section 3, a significance analysis was conducted to determine the need for further pollutant modeling and to address DHEC Standard No. 2 and No. 7. The significance modeling included all emissions from the Pee Dee facility. The results of the significance analysis for each pollutant is provided in Tables 5-1 through 5-4. Impacts from the significance analysis for CO, NO_X, PM_{10}, and SO_2 are presented in Figures B-6 through B-13. Note that the high-first-high value is shown in each table below.[26]

TABLE 5-1. CO SIGNIFICANCE AND STANDARD 2 AND 7 RESULTS

					Significance			Standard 2 and 7			
Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact (μg/m³)	MSL (μg/m³)	Exceeds MSL?	Standard 7 (μg/m³)	Background Concentration (μg/m³)	Impact plus Background Concentration (μg/m³)	Standard 2 (μg/m³)	Exceeds Std. 2 or 7?
1-Hour	1987	639.1	3,754.0	101.3	2,000	No	N/A	3,893.00	3,994.32	40,000	No
	1988	638.9	3,754.0	99.6	2,000	No	N/A	3,893.00	3,992.64	40,000	No
	1989	638.9	3,754.0	102.1	2,000	No	N/A	3,893.00	3,995.10	40,000	No
	1990	638.9	3,754.0	122.1	2,000	No	N/A	3,893.00	4,015.14	40,000	No
	1991	639.0	3,754.0	101.8	2,000	No	N/A	3,893.00	3,994.77	40,000	No
	MAX	638.9	3,754.0	122.1	2,000	No	N/A	3,893.00	4,015.14	40,000	No
8-Hour	1987	639.8	3,755.5	45.1	500	No	N/A	801.50	846.60	10,000	No
	1988	640.3	3,755.3	46.7	500	No	N/A	801.50	848.17	10,000	No
	1989	638.8	3,754.0	47.1	500	No	N/A	801.50	848.58	10,000	No
	1990	639.9	3,755.3	47.6	500	No	N/A	801.50	849.15	10,000	No
	1991	638.3	3,754.2	46.7	500	No	N/A	801.50	848.23	10,000	No
	MAX	639.9	3,755.3	47.6	500	No	N/A	801.50	849.15	10,000	No

[26] Note that for comparison to Standard 2 and 7, the high-second-high value could have been used for short-term averaging periods.

TABLE 5-2. NO_X SIGNIFICANCE AND STANDARD 2 AND 7 RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact ($\mu g/m^3$)	Significance MSL ($\mu g/m^3$)	Significance Exceeds MSL?	Standard 7 ($\mu g/m^3$)	Standard 2 and 7 Background Concentration ($\mu g/m^3$)	Standard 2 and 7 Impact plus Background Concentration ($\mu g/m^3$)	Standard 2 and 7 Standard 2 ($\mu g/m^3$)	Standard 2 and 7 Exceeds Std. 2 or 7?
Annual	1987	639.8	3,755.5	1.6	1	Yes	25	8.28	9.90	100	No
	1988	639.9	3,755.3	1.5	1	Yes	25	8.28	9.83	100	No
	1989	639.9	3,755.3	1.6	1	Yes	25	8.28	9.85	100	No
	1990	640.0	3,755.2	1.6	1	Yes	25	8.28	9.91	100	No
	1991	640.0	3,755.2	1.6	1	Yes	25	8.28	9.83	100	No
	MAX	640.0	3,755.2	1.6	1	Yes	25	8.28	9.91	100	No

TABLE 5-3. PM_{10} SIGNIFICANCE AND STANDARD 2 AND 7 RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact ($\mu g/m^3$)	Significance MSL ($\mu g/m^3$)	Significance Exceeds MSL?	Standard 7 ($\mu g/m^3$)	Standard 2 and 7 Background Concentration ($\mu g/m^3$)	Standard 2 and 7 Impact plus Background Concentration ($\mu g/m^3$)	Standard 2 and 7 Standard 2 ($\mu g/m^3$)	Standard 2 and 7 Exceeds Std. 2 or 7?
24-Hour	1987	639.7	3,755.6	22.6	5	Yes	30	48.00	70.56	150	No
	1988	639.9	3,755.3	29.8	5	Yes	30	48.00	77.83	150	No
	1989	639.8	3,755.4	25.0	5	Yes	30	48.00	73.01	150	No
	1990	639.8	3,755.5	27.0	5	Yes	30	48.00	75.00	150	No
	1991	639.9	3,755.3	23.6	5	Yes	30	48.00	71.60	150	No
	MAX	639.9	3,755.3	29.8	5	Yes	30	48.00	77.83	150	No
Annual	1987	639.8	3,755.5	5.0	1	Yes	17	21.20	26.24	50	No
	1988	639.8	3,755.4	4.8	1	Yes	17	21.20	25.98	50	No
	1989	639.8	3,755.4	4.3	1	Yes	17	21.20	25.53	50	No
	1990	639.8	3,755.4	4.8	1	Yes	17	21.20	26.03	50	No
	1991	639.8	3,755.4	4.7	1	Yes	17	21.20	25.86	50	No
	MAX	639.8	3,755.5	5.0	1	Yes	17	21.20	26.24	50	No

TABLE 5-4. SO_2 SIGNIFICANCE AND STANDARD 2 AND 7 RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact (μg/m³)	Significance MSL (μg/m³)	Significance Exceeds MSL?	Standard 7 (μg/m³)	Standard 2 and 7 Background Concentration (μg/m³)	Standard 2 and 7 Impact plus Background Concentration (μg/m³)	Standard 2 (μg/m³)	Exceeds Std. 2 or 7?
3-Hour	1987	640.4	3,754.8	34.8	25	Yes	512	102.10	136.91	1,300	No
	1988	640.3	3,755.6	34.7	25	Yes	512	102.10	136.80	1,300	No
	1989	638.5	3,754.0	35.5	25	Yes	512	102.10	137.59	1,300	No
	1990	639.3	3,753.9	35.5	25	Yes	512	102.10	137.61	1,300	No
	1991	639.2	3,753.7	34.2	25	Yes	512	102.10	136.29	1,300	No
	MAX	639.3	3,753.9	35.5	25	Yes	512	102.10	137.61	1,300	No
24-Hour	1987	640.0	3,755.6	12.7	5	Yes	91	20.94	33.60	365	No
	1988	637.8	3,754.7	12.2	5	Yes	91	20.94	33.11	365	No
	1989	640.7	3,755.4	12.1	5	Yes	91	20.94	33.03	365	No
	1990	640.5	3,754.8	14.5	5	Yes	91	20.94	35.47	365	No
	1991	637.9	3,755.3	13.0	5	Yes	91	20.94	33.95	365	No
	MAX	640.5	3,754.8	14.5	5	Yes	91	20.94	35.47	365	No
Annual	1987	640.4	3,755.7	1.7	1	Yes	20	4.97	6.67	80	No
	1988	640.5	3,755.6	1.7	1	Yes	20	4.97	6.71	80	No
	1989	640.6	3,755.5	1.7	1	Yes	20	4.97	6.67	80	No
	1990	640.5	3,755.4	1.7	1	Yes	20	4.97	6.68	80	No
	1991	640.4	3,755.4	1.6	1	Yes	20	4.97	6.56	80	No
	MAX	640.5	3,755.6	1.7	1	Yes	20	4.97	6.71	80	No

As shown in the tables NO_X, PM_{10}, and SO_2 are significant and further analysis is required to demonstrated compliance with NAAQS and Class II Increment. CO is below the significance level and no further modeling is required to demonstrate compliance with the air quality standards. Compliance is also demonstrated for DHEC Standards No. 2 and No. 7 for NO_X, PM_{10}, and SO_2.

Additional pollutants that do not require a significance analysis, but include only facility sources were also modeled. These pollutants are included in DHEC Standard No. 2 (TSP, fluorides, lead) and the NAAQS (lead, H_2SO_4). Tables 5-5 through 5-8 include the results of these analyses and demonstrated that no adverse impact on air quality is expected. Note that there is no DHEC Standard No.2 or No. 7 for H_2SO_4, results are listed for information only.

TABLE 5-5. TSP ANALYSIS RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact (μg/m³)	Background Concentration (μg/m³)	Impact plus Background Concentration (μg/m³)	Standard 2 (μg/m³)	Exceeds Std. 2?
Annual	1987	639.8	3,755.5	9.2	10.10	19.30	75	No
	1988	639.8	3,755.4	8.7	10.10	18.80	75	No
	1989	639.8	3,755.4	8.0	10.10	18.08	75	No
	1990	639.8	3,755.4	9.0	10.10	19.06	75	No
	1991	639.8	3,755.4	8.6	10.10	18.70	75	No
	MAX	639.8	3,755.5	9.2	10.10	19.30	75	No

TABLE 5-6. SULFATE ANALYSIS RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact ($\mu g/m^3$)
1-Hour	1987	636.9	3,753.1	2.3
	1988	637.8	3,752.8	2.4
	1989	637.6	3,753.0	2.6
	1990	636.0	3,750.9	2.7
	1991	639.1	3,753.3	2.3
	MAX	636.0	3,750.9	2.7

TABLE 5-7. FLUORIDES ANALYSIS RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact ($\mu g/m^3$)	Standard 2 ($\mu g/m^3$)	Exceeds Std. 2 ?
12-Hour	1987	640.2	3,755.7	0.05	3.7	No
	1988	638.1	3,755.8	0.04	3.7	No
	1989	640.5	3,754.7	0.05	3.7	No
	1990	640.4	3,754.8	0.05	3.7	No
	1991	640.5	3,755.1	0.06	3.7	No
	MAX	640.5	3,755.1	0.06	3.7	No
24-Hour	1987	638.1	3,755.6	0.04	2.9	No
	1988	640.5	3,755.5	0.04	2.9	No
	1989	640.7	3,755.3	0.04	2.9	No
	1990	640.6	3,754.8	0.04	2.9	No
	1991	637.8	3,755.4	0.04	2.9	No
	MAX	640.6	3,754.8	0.04	2.9	No
1-Week	1987	638.1	3,755.6	0.04	1.6	No
	1988	640.5	3,755.5	0.04	1.6	No
	1989	640.7	3,755.3	0.04	1.6	No
	1990	640.6	3,754.8	0.04	1.6	No
	1991	637.8	3,755.4	0.04	1.6	No
	MAX	640.6	3,754.8	0.04	1.6	No
1-Month	1987	640.4	3,755.7	1.00E-02	0.8	No
	1988	640.4	3,755.7	1.00E-02	0.8	No
	1989	640.6	3,755.3	9.00E-03	0.8	No
	1990	638.0	3,755.4	9.00E-03	0.8	No
	1991	639.5	3,756.0	9.00E-03	0.8	No
	MAX	640.4	3,755.7	1.00E-02	0.8	No

Note that weekly impacts were conservatively estimated from the 24-hour impacts.

TABLE 5-8. LEAD ANALYSIS RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact ($\mu g/m^3$)	NAAQS/ Standard 2 ($\mu g/m^3$)	Exceeds Std. 2?
Quarterly	1987	636.9	3,753.1	2.1E-03	1.5	No
	1988	637.8	3,752.8	2.4E-03	1.5	No
	1989	637.6	3,753.0	2.4E-03	1.5	No
	1990	636.3	3,751.2	2.7E-03	1.5	No
	1991	639.1	3,753.3	2.1E-03	1.5	No
	MAX	636.3	3,751.2	2.7E-03	1.5	No

Note that quarterly impacts are calculated from 0.3 times the hourly impact.

5.2 NAAQS

As shown in Tables 5-9 through 5-11, the Pee Dee facility will not cause or contribute to an exceedance of the NAAQS. Note that values presented in the tables are the high-second-high values for the 3-hour and 24-hour averaging period.

TABLE 5-9. NO_X NAAQS RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Impact plus Background Concentration ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	Exceeds NAAQS?
Annual	1987	644.3	3,744.8	4.8	8.28	13.05	100	No
	1988	644.3	3,744.8	5.3	8.28	13.55	100	No
	1989	644.3	3,744.8	5.2	8.28	13.52	100	No
	1990	643.8	3,744.8	5.2	8.28	13.47	100	No
	1991	644.3	3,744.8	4.7	8.28	13.02	100	No
	MAX	644.3	3,744.8	5.3	8.28	13.55	100	No

TABLE 5-10. PM_{10} NAAQS RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact (μg/m³)	Background Concentration (μg/m³)	Impact plus Background Concentration (μg/m³)	NAAQS (μg/m³)	Exceeds NAAQS?
24-Hour	1987	639.8	3,755.5	21.9	48.00	69.93	150	No
	1988	639.8	3,755.4	23.6	48.00	71.61	150	No
	1989	639.8	3,755.4	21.5	48.00	69.48	150	No
	1990	639.8	3,755.5	26.2	48.00	74.22	150	No
	1991	639.8	3,755.4	20.9	48.00	68.90	150	No
	MAX	639.8	3,755.5	26.2	48.00	74.22	150	No
Annual	1987	639.8	3,755.5	5.4	21.20	26.55	50	No
	1988	639.8	3,755.4	5.1	21.20	26.29	50	No
	1989	643.8	3,744.3	4.9	21.20	26.08	50	No
	1990	639.8	3,755.4	5.2	21.20	26.38	50	No
	1991	639.8	3,755.4	5.0	21.20	26.23	50	No
	MAX	639.8	3,755.5	5.4	21.20	26.55	50	No

TABLE 5-11. SO_2 NAAQS RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact (μg/m³)	Background Concentration (μg/m³)	Impact plus Background Concentration (μg/m³)	NAAQS (μg/m³)	Exceeds NAAQS?
3-Hour	1987	631.8	3,762.8	80.9	102.10	182.95	1,300	No
	1988	631.8	3,762.8	89.8	102.10	191.88	1,300	No
	1989	631.8	3,762.8	85.1	102.10	187.21	1,300	No
	1990	631.8	3,762.8	86.1	102.10	188.17	1,300	No
	1991	631.8	3,762.8	87.2	102.10	189.34	1,300	No
	MAX	631.8	3,762.8	89.8	102.10	191.88	1,300	No
24-Hour	1987	631.8	3,762.8	51.4	20.94	72.30	365	No
	1988	631.8	3,762.8	51.0	20.94	71.96	365	No
	1989	631.8	3,762.8	52.5	20.94	73.41	365	No
	1990	631.8	3,762.8	50.9	20.94	71.86	365	No
	1991	631.8	3,762.8	50.9	20.94	71.87	365	No
	MAX	631.8	3,762.8	52.5	20.94	73.41	365	No
Annual	1987	631.8	3,762.8	9.8	4.97	14.73	80	No
	1988	631.8	3,762.8	9.9	4.97	14.89	80	No
	1989	631.8	3,762.8	11.4	4.97	16.40	80	No
	1990	631.8	3,762.8	8.6	4.97	13.60	80	No
	1991	631.8	3,762.8	8.6	4.97	13.60	80	No
	MAX	631.8	3,762.8	11.4	4.97	16.40	80	No

5.3 CLASS II INCREMENT

As shown in Tables 5-12 through 5-14, the Pee Dee facility will not cause or contribute to an exceedance of the Class II Increment. Note that values presented in the tables are the high-second-high values for the 3-hour and 24-hour averaging period.

TABLE 5-12. NO_X INCREMENT RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact ($\mu g/m^3$)	Class II Increment ($\mu g/m^3$)	Exceeds Increment?
Annual	1987	639.8	3,755.5	1.6	25	No
	1988	639.9	3,755.3	1.6	25	No
	1989	639.9	3,755.3	1.6	25	No
	1990	640.0	3,755.2	1.7	25	No
	1991	640.0	3,755.2	1.6	25	No
	MAX	640.0	3,755.2	1.7	25	No

TABLE 5-13. PM_{10} INCREMENT RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact ($\mu g/m^3$)	Class II Increment ($\mu g/m^3$)	Exceeds Increment?
24-Hour	1987	639.7	3,755.5	21.3	30	No
	1988	639.8	3,755.4	22.5	30	No
	1989	639.8	3,755.4	21.0	30	No
	1990	639.8	3,755.5	25.2	30	No
	1991	639.8	3,755.4	20.1	30	No
	MAX	639.8	3,755.5	25.2	30	No
Annual	1987	639.8	3,755.5	5.0	17	No
	1988	639.8	3,755.4	4.7	17	No
	1989	639.8	3,755.4	4.3	17	No
	1990	639.8	3,755.4	4.8	17	No
	1991	639.8	3,755.4	4.6	17	No
	MAX	639.8	3,755.5	5.0	17	No

TABLE 5-14. SO_2 INCREMENT RESULTS

Averaging Period	Year	UTM East (km)	UTM North (km)	Highest Impact ($\mu g/m^3$)	Class II Increment ($\mu g/m^3$)	Exceeds Increment?
3-Hour	1987	643.8	3,744.8	39.6	512	No
	1988	643.8	3,744.8	38.7	512	No
	1989	643.8	3,744.8	40.5	512	No
	1990	643.8	3,744.8	40.4	512	No
	1991	643.8	3,744.8	36.1	512	No
	MAX	643.8	3,744.8	40.5	512	No
24-Hour	1987	644.3	3,744.8	12.0	91	No
	1988	643.8	3,744.8	13.4	91	No
	1989	643.8	3,744.8	14.7	91	No
	1990	643.8	3,744.8	17.0	91	No
	1991	643.8	3,744.8	13.9	91	No
	MAX	643.8	3,744.8	17.0	91	No
Annual	1987	644.3	3,744.8	2.5	20	No
	1988	644.3	3,744.8	2.8	20	No
	1989	644.3	3,744.8	2.8	20	No
	1990	643.8	3,744.8	2.7	20	No
	1991	644.3	3,744.8	2.4	20	No
	MAX	644.3	3,744.8	2.8	20	No

5.4 ADDITIONAL IMPACTS

PSD regulations require that three additional impact analyses be performed as part of a PSD permit action. These evaluations include a growth analysis, a soil and vegetation analysis, and a visibility analysis. Any workforce growth and associated residential and commercial growth that would be associated with this project will not cause a quantifiable impact on the air quality of the area surrounding the Pee Dee facility.

5.4.1 SOILS, VEGETATION, AND ANIMALS

The modeling results from the PSD NAAQS can be assessed against the secondary NAAQS standards and other relevant screening criteria that have been developed by U.S. EPA to provide protection for public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.[27] Table 5-15 compares the

[27] U.S. EPA, *A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils, and Animals* (EPA 450/2-81-078), 1981.

maximum predicted offsite impacts to the Secondary NAAQS and EPA screening levels. There are no adverse impacts expected on soils or vegetation based on facility emissions.

TABLE 5-15. SOIL AND VEGETATION IMPACTS

Pollutant	Averaging Period	EPA Screening Concentration ($\mu g/m^3$)	Secondary NAAQS ($\mu g/m^3$)	Facility/Regional Source Impacts* ($\mu g/m^3$)	Exceeds?
CO	1-Week†	1,800,000	N/A	849.1	No
NO_X	4-Hour†	3,760	N/A	271.0	No
	8-Hour†	3,760	N/A	271.0	No
	1-Month†	564	N/A	271.0	No
	Annual	94	100	13.5	No
PM_{10}	24-Hour	N/A	150	74.2	No
	Annual	N/A	50	26.6	No
SO_2	1-Hour†	917	N/A	213.2	No
	3-Hour	786	1,300	191.9	No
	Annual	18	N/A	16.4	No

*As CO did not exceed the MSL, only facility impacts are included.

†Non-standard averaging periods were conservatively estimated as follows:

1-Week CO: 8-hour average

All short-term NO_X periods: Annual * 20 (DHEC Guidelines for 1-Hour)

1-Hour SO_2: 3-Hour divided by 0.9 (DHEC Guidelines)

5.4.2 PLUME VISIBILITY

The remainder of the additional impacts analysis addresses impacts on visibility resulting from coherent plumes emanating from the Pee Dee facility. The primary variables that affect whether a plume is visible or not at a certain location are (1) quantity of emissions, (2) types of emissions, (3) relative location of source and observer, and (4) the background visibility range. To assess potential plume impairment, the U.S. EPA's VISCREEN model was utilized following the guidelines published in the *Workbook for Plume Visual Impact Screening and Analysis*[28] The VISCREEN model is designed to apply a screening methodology to determine whether a plume from a facility may be visible from a given vantage point. VISCREEN can be applied in two successive levels of screening (Levels 1 and 2). The first level provides a conservative approach using worst-case meteorological conditions and pollutant dispersion assumptions. The second level of VISCREEN modeling allows the user to adjust the worst-case meteorological assumptions based on an analysis of prevailing meteorological conditions.

[28] U.S. Environmental Protection Agency, *Workbook for Plume Visual Impact Screening and Analysis*, EPA-450/4-88-015, 1988.

The assessment of plume visibility impacts is a requirement of the federal PSD rules for air quality analyses. A nearby sensitive receptor, such as a state park or local/regional airport, is analyzed to determine if an impact is expected. The Lake City airport, located 27 km southwest of the Pee Dee facility was selected for this analysis.

A Level 2 analysis was conducted, using the 1% worst case meteorological condition in the direction from the Pee Dee facility to the airport (between 240° and 263°). The meteorological data for 1987 to 1991 was reviewed year by year and the 1% worst case was determined to be an E stability at 5 m/s. Parameters used in the VISCREEN analysis are summarized in Table 5-16. The ozone level of 37.7 ppb was calculated as the daytime average (6am – 6pm) from the ozone stations used in the CALPUFF modeling analysis (2001-2003 data provided as part of the Regional Haze Rule modeling in the southeast). All other parameters are specified by the VISCREEN user's manual.[29] As directed in the *Workbook*, a background visual range of 25 km was used for the area of South Carolina where the facility is located.

TABLE 5-16. INPUTS TO THE VISCREEN MODEL FOR THE LEVEL-1 VISIBILITY IMPAIRMENT ANALYSIS.

Parameter	Input Value
Particulate Emission Rate	205.2 lb/hr
NO_X Emission Rate	684 lb/hr
Primary Sulfate	68.4 lb/hr
Background ozone	0.0377 ppm
Plume-source-observer angle	11.25°
Background visual range	25 km

For views at the Lake City Airport, calculations were 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.

[29] U.S. Environmental Protection Agency, *Tutorial Package for the VISCREEN Model*, U.S. EPA OAQPS, Research Triangle Park, NC, June 1992.

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 *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.

As demonstrated in Table 5-17, plume impairment values are below screening thresholds for the Lake City Airport "inside" the area of interest.

TABLE 5-17. SUMMARY OF VISIBILITY SCREENING ANALYSIS

Background	Theta	Azi	Distance (km)	Alpha	ΔE Critical	ΔE Plume	Contrast Critical	Contrast Plume
Sky	10	95	28	74	2.0	0.80	0.05	0.005
Terrain	140	95	28	74	2.0	0.37	0.05	-0.009
Sky	10	84	27	84	2.0	0.76	0.05	0.010
Terrain	140	84	27	84	2.0	0.17	0.05	0.008

APPENDIX A

SUPPORTING TABLES

Table A-1. Criteria Pollutant Modeling Emissions Summary

Source Type	Description	Uncontrolled TSP (lb/hr)	TSP (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	NOx (lb/hr)	SOx (lb/hr)	CO (lb/hr)	Model?
Utility Boilers	Boiler No. 1	102.60	102.60	102.60	102.60	399.00	855.00	912.00	Yes
	Boiler No. 2	102.60	102.60	102.60	102.60	399.00	855.00	912.00	Yes
	Main Boiler Total (24-hour average)	205.20	205.20	205.20	205.20	684.00	1,254.00	1,824.00	Yes
Auxiliary Boiler	Auxiliary Boiler	5.38	5.38	5.38	5.38	21.50	11.18	67.06	Yes
Fire Pump	Fire Pump			Operates less than 500 hrs/year					No
Generator	Generator No. 1			Operates less than 500 hrs/year					No
	Generator No. 2								
Material Transfer	Material Transfer - Coal								
	Rotary Railcar Dumper	1.73	0.02	0.01	0.00				Yes
	Conveyor Transfer to Stacker/Reclaim	1.73	0.02	0.01	0.00				Yes
	Emergency Stockout drop to Pile	1.73	1.73	0.82	0.12				Yes
	Transfer Tower Conveyors	1.73	0.02	0.01	0.00				Yes
	Emergency Reclaim	1.73	0.02	0.01	0.00				Yes
	Dumper to Sample/Transfer Tower	1.73	0.02	0.01	0.00				Yes
	Sample/Transfer Tower	1.73	0.02	0.01	0.00				Yes
	Stacker/Reclaimer Stockout	1.73	1.73	0.82	0.12				Yes
	Stacker/Reclaimer Reclaim	1.73	0.02	0.01	0.00				Yes
	Conveyor to Crusher Tower	1.73	1.73	0.82	0.12				Yes
	Conveyor to Transfer Tower	1.73	0.02	0.01	0.00				Yes
	Silos (12 total)	20.82	0.21	0.10	0.01				Yes
				0.01					
	Material Transfer - Pet Coke								
	Front end loading	1.73	1.73	0.82	0.12				Yes
	Hopper loading	1.73	1.73	0.82	0.12				Yes
	Conveyor Transfer	1.73	0.02	0.01	0.00				Yes
	Material Transfer - Limestone								
	Truck unloading to limestone pile	0.13	0.13	0.06	0.01				No
	Emergency limestone reclaim hopper loading	0.13	0.13	0.06	0.01				No
	Limestone platform conveyor drop to crusher Feed conveyor	0.13	1.32E-03	6.25E-04	9.46E-05				No
	Emergency Limestone reclaim hopper drop to emergency reclaim conveyor	0.13	1.32E-03	6.25E-04	9.46E-05				No
	Limestone drop to crusher house and overland conveyors	0.13	0.13	0.06	0.01				No
	Limestone emergency reclaim conveyor drop to overland conveyors	0.13	1.32E-03	6.25E-04	9.46E-05				No
	Limestone overland conveyor drop to cross conveyor	0.13	1.32E-03	6.25E-04	9.46E-05				No
	Limestone cross conveyor drop to Limestone Silo #1	0.13	1.32E-03	6.25E-04	9.46E-05				No
	Limestone overland conveyor drop to Limestone Silo #2	0.13	1.32E-03	6.25E-04	9.46E-05				No
	Material Transfer - Gypsum								No
	Conveyor to stockout	0.25	2.54E-01	1.20E-01	1.82E-02				No
	Truck loading	0.25	2.54E-01	1.20E-01	1.82E-02				
	Material Transfer - Fly Ash								
	Truck loadout 1	1.08	1.08E-02	5.11E-03	7.73E-04				Yes
	Truck loadout 2	1.08	1.08E-02	5.11E-03	7.73E-04				Yes
	Silo 1	1.08	1.08E-02	5.11E-03	7.73E-04				Yes
	Silo 2	1.08	1.08E-02	5.11E-03	7.73E-04				Yes
	Material Transfer - Bottom Ash								
	Bottom Ash Transfer Point	0.32	3.17E-01	1.50E-01	2.27E-02				No
Crusher	Coal Crusher	58.5	0.59	0.23	-				Yes
	Limestone Crusher	4.875	0.05	0.02	-				Yes
Storage Piles	Limestone Storage Pile	7.94E-02	7.94E-02	4.76E-02	0.00E+00				No
	Gypsum Storage Pile	1.65E+00	1.65E+00	9.91E-01	0.00E+00				Yes
	Coal Storage Pile	1.83E+00	1.83E+00	1.10E+00	0.00E+00				Yes
	Petcoke Storage Pile	8.58E-01	8.58E-01	5.15E-01	0.00E+00				No
Tanks	Fuel Oil Tank #2				Emit VOC Only				Yes
	Lubricating Oil Tank 3				Emit VOC Only				Yes
	Lubricating Oil Tank 4				Emit VOC Only				Yes
Cooling Towers	Cooling Towers	9.32	9.32	9.32	9.32				Yes

Table A-2. NO_X NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
DAR01	Nucor Steel	5.29E+00	601,809	3,804,275	22.86	366.48	22.59	6.40
DAR02	Nucor Steel Darlington	5.29E+00	601,813	3,804,543	34.44	293.15	9.17	0.23
DAR03	Nucor Steel Darlington	0.00E+00	601,813	3,804,543	22.86	366.48	16.12	6.40
DAR04	Nucor Steel	2.14E+00	601,570	3,804,053	22.86	638.15	18.41	1.52
DAR05	Nucor Steel	2.14E+00	601,572	3,803,963	22.86	638.15	18.41	1.52
DAR06	Nucor Steel	2.14E+00	601,719	3,804,080	22.86	638.15	18.41	1.52
DAR07	*Nucor Steel*	*9.00E-01*	*601,769*	*3,804,158*	*37.67*	*7.32*	*15.58*	
DAR08	*Nucor Steel*	*4.16E-01*	*601,639*	*3,804,117*	*19.20*	*18.59*	*8.93*	
DAR09	Nucor Steel	0.00E+00	599,868	3,804,333	18.29	305.37	17.37	1.07
DAR10	*Nucor Steel*	*5.00E-01*	*601,202*	*3,804,201*	*17.07*	*0.57*	*7.10*	
DAR11	*Nucor Steel*	*0.00E+00*	*602,047*	*3,804,175*	*10.00*	*319.00*	*167.00*	
DAR41	Darlington Veneer	2.52E+00	604,702	3,795,873	23.47	477.59	6.10	1.10
DAR42	Darlington Veneer	4.31E-01	604,702	3,795,873	9.14	507.04	6.10	0.61
DAR58	Wellman -- Palmetto Plant	1.34E+01	609,762	3,792,529	24.99	422.04	10.70	0.93
DAR59	Wellman -- Palmetto Plant	2.27E+00	609,754	3,792,534	30.48	449.82	9.45	3.66
DAR60	Wellman, Inc.	2.27E+00	609,804	3,792,578	24.99	422.04	15.25	0.93
DAR61	Wellman, Inc.	2.99E+01	609,810	3,792,566	30.48	449.82	9.45	3.66
DAR62	Wellman, Inc.	0.00E+00	609,631	3,792,622	13.11	755.37	0.01	0.25
DAR63	Wellman, Inc.	0.00E+00	609,784	3,792,430	15.24	298.71	0.01	0.41
DAR64	Wellman, Inc.	0.00E+00	609,780	3,792,425	15.24	322.04	0.01	0.46
DAR65	Wellman, Inc.	2.65E+00	610,046	3,792,925	3.05	313.71	0.01	0.15
DAR66	Wellman, Inc.	1.32E+00	609,775	3,792,764	5.49	313.71	0.01	0.15
DAR67	Wellman, Inc.	1.80E+00	609,801	3,792,740	22.86	455.37	15.70	1.20
DAR68	Wellman, Inc.	1.80E+00	609,812	3,792,750	22.86	455.37	15.70	1.20
DAR69	Wellman, Inc.	6.30E-01	609,839	3,792,784	22.86	465.93	23.16	1.20
DAR70	Darlington Shredding Co.	4.25E+00	601,149	3,803,165	7.38	664.26	54.25	0.20
DAR71	Darlington Shredding Co.	4.25E+00	601,149	3,803,165	7.38	664.26	54.25	0.20
DAR72	Darlington Shredding Co.	0.00E+00	601,149	3,803,165	13.99	292.98	14.81	0.90
DAR73	HRS Textiles, Inc.	1.13E-01	600,270	3,785,042	7.32	477.59	5.49	0.48
DAR74	HRS Textiles, Inc.	1.13E-01	600,270	3,785,042	7.32	477.59	5.49	0.48
DAR75	HRS Textiles, Inc.	1.46E-01	600,270	3,785,042	8.23	435.98	0.01	11.00
DAR76	Chesterfield Lumber	7.19E-01	604,751	3,793,878	24.55	475.37	16.76	0.71
DAR77	Chesterfield Lumber	0.00E+00	604,541	3,793,868	15.24	293.15	0.01	0.91
DAR78	Chesterfield Lumber	2.70E-01	604,753	3,793,871	19.99	474.26	16.79	0.70
DAR79	Chesterfield Lumber	7.09E-01	604,754	3,793,878	24.55	475.37	16.76	0.71
DAR80	PowerSecure, Inc.	8.47E+00	609,179	3,792,693	5.03	653.15	77.90	0.36
DIL01	Lockamy Scrap Metal	0.00E+00	649,415	3,807,745	16.15	293.15	14.63	1.22
DIL02	Lockamy Scrap Metal	7.91E+00	649,415	3,807,745	16.15	293.15	14.63	1.22
DIL03	Lockamy Scrap Metal	7.91E+00	649,415	3,807,745	16.15	293.15	14.63	1.22
DIL04	Paperboard Industries Corp.	2.26E-01	643,750	3,799,194	9.14	410.93	0.01	0.51
DIL05	Paperboard Industries Corp.	2.26E-01	643,750	3,799,194	9.14	410.93	0.01	0.51
FLO01	Talon, Inc.	0.00E+00	614,192	3,746,291	13.39	449.82	11.34	1.01
FLO02	Talon, Inc.	0.00E+00	614,192	3,746,294	14.05	449.82	11.34	0.97
FLO03	A.C. Monk	0.00E+00	615,250	3,748,000	11.49	444.26	8.23	0.61
FLO04	Stone Container	1.73E+01	632,600	3,779,600	52.73	453.82	30.82	1.88
FLO05	Stone Container	2.28E+01	632,600	3,779,600	40.23	459.98	16.99	2.13
FLO06	Stone Container	1.68E+01	632,600	3,779,600	54.56	456.82	21.98	2.74
FLO07	Stone Container	7.31E+00	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO08	Stone Container	7.31E+00	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO09	Stone Container	2.39E+00	632,600	3,779,600	45.72	340.93	9.39	1.22
FLO10	Stone Container	8.42E+01	632,600	3,779,600	76.20	459.21	19.75	3.66
FLO11	Stone Container	1.13E+00	632,600	3,779,600	30.48	362.04	3.69	1.07
FLO12	Carter Manufacturing	1.51E-01	615,624	3,753,919	21.34	422.04	0.01	0.91
FLO13	Wellman	4.04E+00	643,884	3,744,592	15.24	337.15	15.70	1.07
FLO14	Wellman	0.00E+00	643,952	3,744,641	10.06	293.15	0.01	1.22
FLO15	Wellman	0.00E+00	643,934	3,744,634	10.06	293.15	0.01	1.22
FLO16	Wellman	0.00E+00	643,938	3,744,638	10.06	293.15	0.01	1.22
FLO17	Wellman	0.00E+00	643,946	3,744,647	10.06	293.15	0.01	1.22
FLO18	Wellman	0.00E+00	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO19	Wellman	0.00E+00	644,014	3,744,510	10.52	293.15	0.01	1.22
FLO20	Wellman	0.00E+00	644,000	3,744,523	10.52	293.15	0.01	1.22
FLO21	Wellman	0.00E+00	644,011	3,744,520	10.52	293.15	0.01	1.22
FLO22	Wellman	0.00E+00	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO23	Wellman	0.00E+00	643,948	3,744,627	19.05	293.15	0.01	0.61
FLO24	Wellman	0.00E+00	643,960	3,744,638	19.05	293.15	0.01	0.61
FLO25	Wellman	0.00E+00	643,955	3,744,623	19.05	292.98	0.01	0.91
FLO26	Wellman	0.00E+00	643,959	3,744,626	19.05	292.98	0.01	0.91
FLO27	Wellman	0.00E+00	643,932	3,744,630	19.05	292.98	0.01	0.91
FLO28	Wellman	0.00E+00	643,965	3,744,633	19.05	292.98	0.01	0.91
FLO29	Wellman	0.00E+00	643,967	3,744,650	21.34	293.15	0.01	0.91
FLO30	Wellman	0.00E+00	643,971	3,744,654	21.34	293.15	0.01	0.91
FLO31	Wellman	0.00E+00	643,973	3,744,656	21.34	293.15	0.01	0.91
FLO32	Wellman	0.00E+00	643,981	3,744,660	21.34	293.15	0.01	0.91
FLO33	Wellman	0.00E+00	643,984	3,744,656	21.34	293.15	0.01	0.91
FLO34	Wellman	0.00E+00	643,986	3,744,653	21.34	293.15	0.01	0.91
FLO35	Wellman	0.00E+00	643,972	3,744,640	21.34	293.15	0.01	0.91
FLO36	Wellman	0.00E+00	643,975	3,744,643	21.34	293.15	0.01	0.91
FLO37	Wellman	0.00E+00	643,976	3,744,649	21.34	293.15	0.01	0.91
FLO38	Wellman	0.00E+00	643,981	3,744,648	21.34	293.15	0.01	0.91

Table A-2. NO_X NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
FLO39	Wellman	0.00E+00	643,981	3,744,664	21.49	293.15	0.01	0.61
FLO40	Wellman	0.00E+00	643,989	3,744,659	21.49	293.15	0.01	0.61
FLO41	Wellman	0.00E+00	644,001	3,744,500	7.32	293.15	0.01	1.22
FLO42	Wellman	0.00E+00	643,868	3,744,574	7.62	322.04	0.01	38.31
FLO43	Wellman	0.00E+00	643,910	3,744,152	5.85	293.15	0.01	0.94
FLO44	Tyler Plywood Corporation	8.14E-02	611,972	3,784,650	9.75	560.93	15.24	0.76
FLO45	Tyler Plywood Corporation	3.06E-01	611,972	3,784,650	9.14	472.04	5.30	0.76
FLO46	Koppers Industries	2.14E+00	616,994	3,785,299	10.97	458.71	12.71	0.91
FLO47	Koppers Industries	2.12E-01	616,975	3,785,299	8.23	472.04	5.39	0.76
FLO48	Koppers Industries	0.00E+00	616,994	3,785,299	10.97	449.82	6.10	0.91
FLO49	*Koppers Industries*	*2.97E-01*	*616,673*	*3,785,494*	*6.10*	*0.12*	*2.83*	
FLO50	Marsh Lumber Company	1.86E-01	631,809	3,762,880	11.13	516.48	26.40	0.48
FLO51	Marsh Lumber Company	1.55E-01	631,809	3,762,880	11.13	510.93	23.38	0.48
FLO52	Marsh Lumber Company	2.63E-01	631,809	3,762,880	8.71	505.37	0.01	33.15
FLO53	The ESAB Group	6.80E-02	605,540	3,783,005	6.10	380.37	12.70	0.91
FLO54	The ESAB Group	0.00E+00	605,539	3,783,004	7.47	292.98	0.01	0.91
FLO55	The ESAB Group	1.06E-01	605,539	3,783,004	7.62	422.04	0.01	0.30
FLO56	The ESAB Group	4.41E-01	605,539	3,783,004	6.71	422.04	10.03	0.61
FLO57	The ESAB Group	4.41E-01	605,539	3,783,004	6.71	422.04	10.03	0.61
FLO58	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO59	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO60	Dupont-Florence	7.50E+00	630,885	3,784,747	38.10	449.82	8.17	1.52
FLO61	Dupont-Florence	6.48E-01	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO62	Dupont-Florence	6.48E-01	630,835	3,784,795	38.10	533.15	4.63	1.05
FLO63	Dupont-Florence	6.48E-01	630,848	3,784,778	38.10	533.15	2.32	1.05
FLO64	Dupont-Florence	6.48E-01	630,855	3,784,771	38.10	533.15	2.32	1.05
FLO65	Dupont-Florence	6.48E-01	630,863	3,784,764	38.10	533.15	2.32	1.05
FLO66	Dupont-Florence	0.00E+00	630,780	3,784,740	14.63	333.15	24.38	0.23
FLO67	Dupont-Florence	0.00E+00	630,675	3,784,970	15.24	310.93	15.24	0.61
FLO68	Dupont-Florence	0.00E+00	630,762	3,784,682	9.14	294.26	0.01	0.30
FLO69	Dupont-Florence	0.00E+00	630,712	3,784,980	18.29	294.26	0.01	1.38
FLO70	Dupont-Florence	0.00E+00	630,841	3,784,804	38.10	449.82	8.11	1.52
FLO71	Dupont-Florence	0.00E+00	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO72	Dupont-Florence	0.00E+00	630,848	3,784,778	38.10	533.15	5.79	1.05
FLO73	Dupont-Florence	0.00E+00	630,855	3,784,771	38.10	533.15	5.79	1.05
FLO74	Dupont-Florence	2.14E+00	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO75	Dupont-Florence	2.14E+00	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO76	*Charles Ingram Lumber Co*	*8.00E-02*	*629,592*	*3,772,923*	*4.36*	*4.27*	*4.05*	
FLO77	*Charles Ingram Lumber Co*	*1.38E-01*	*629,592*	*3,772,923*	*4.36*	*5.03*	*4.05*	
FLO78	*Charles Ingram Lumber Co*	*1.05E-01*	*629,592*	*3,772,923*	*4.36*	*3.72*	*4.05*	
FLO79	*Charles Ingram Lumber Co*	*1.05E-01*	*629,592*	*3,772,923*	*4.36*	*3.72*	*4.05*	
FLO80	La-Z-Boy East	2.65E-01	613,622	3,785,748	7.62	533.15	0.01	0.51
FLO82	McLeod Regional Medical Center	0.00E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO83	McLeod Regional Medical Center	0.00E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO84	McLeod Regional Medical Center	0.00E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO85	McLeod Regional Medical Center	1.51E-01	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO86	McLeod Regional Medical Center	1.51E-01	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO87	McLeod Regional Medical Center	7.85E-01	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO88	McLeod Regional Medical Center	7.85E-01	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO89	Sara Lee Hosiery	2.61E-01	618,392	3,766,573	8.23	522.04	13.29	0.51
FLO90	Asea Brown Boveri	2.95E-01	612,043	3,789,426	9.14	410.93	5.12	0.56
FLO91	Vulcraft-Div. of Nucor	3.75E-01	612,076	3,786,654	19.51	533.15	9.30	0.71
FLO92	*Vulcraft-Div. of Nucor*	*6.30E-02*	*612,076*	*3,786,654*	*1.83*	*106.13*	*56.14*	
FLO93	Maytag Florence Operations	1.30E-01	611,275	3,789,417	13.11	410.93	4.63	0.67
FLO94	Maytag Florence Operations	2.32E-01	611,275	3,789,417	13.11	866.48	5.21	0.46
FLO95	Nan Ya Plastics	0.00E+00	614,396	3,744,362	16.00	303.15	0.01	0.21
FLO96	McCall Farms	0.00E+00	614,987	3,768,359	6.71	293.98	11.89	0.60
FLO97	McCall Farms	1.36E+00	614,855	3,768,666	13.72	449.82	12.80	0.91
FLO98	McCall Farms	8.40E-01	614,855	3,768,666	12.19	325.93	24.99	0.61
FLO99	McCall Farms	9.63E-01	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO100	McCall Farms	1.23E-01	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO101	McCall Farms	1.16E+00	614,987	3,768,359	10.97	449.82	10.61	0.91
FLO102	McCall Farms	4.45E-01	614,855	3,768,666	8.53	449.82	3.78	0.91
FLO103	McCall Farms	1.51E+00	614,987	3,768,359	14.63	449.82	11.89	0.91
FLO104	Roche Carolina	9.70E-01	629,000	3,786,850	15.54	544.26	9.94	1.28
FLO105	Roche Carolina	1.39E+00	628,939	3,786,580	48.77	349.82	12.19	0.51
FLO106	Roche Carolina	1.39E+00	628,920	3,786,560	15.24	810.93	5.76	0.51
FLO107	Roche Carolina	2.52E-01	629,020	3,786,870	3.05	255.37	0.00	0.00
FLO108	Florence Wastewater Treatment	2.13E+00	615,180	3,781,886	3.66	724.82	44.20	0.20
FLO109	Florence Wastewater Treatment	4.02E+00	615,180	3,781,886	3.66	738.71	69.80	0.25
FLO110	Florence Wastewater Treatment	4.02E+00	615,180	3,781,886	3.66	722.04	80.77	0.20
FLO111	Francis Marion University	1.51E-01	624,275	3,784,375	7.01	408.15	6.51	0.40
FLO112	Francis Marion University	1.51E-01	624,275	3,784,375	7.01	408.15	6.81	0.40
FLO113	Francis Marion University	1.51E-01	624,275	3,784,375	7.01	408.15	7.12	0.40
FLO114	Carolinas Hospital System	2.26E-01	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO115	Carolinas Hospital System	2.26E-01	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO116	Carolinas Hospital System	2.26E-01	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO117	Honda	2.47E-01	600,175	3,774,660	6.10	449.82	15.24	0.46
FLO118	Duquesne Energy	2.20E-01	612,726	3,790,077	25.91	344.26	26.12	0.84

Table A-2. NO_X NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
FLO119	Southern Impressions, LLC	1.36E-01	597,834	3,753,226	7.32	499.26	9.74	0.51
FLO120	Southern Impressions, LLC	1.78E-01	597,834	3,753,226	6.71	394.26	17.10	0.58
FLO121	Gatewood Products, LLC	3.53E+00	616,130	3,783,777	3.12	810.93	1.63	2.92
FLO122	Crenlo, Inc	2.33E-01	621,000	3,792,000	16.70	430.37	6.79	0.56
FLO123	Crenlo, Inc	2.15E-01	621,000	3,792,000	16.70	488.71	11.06	0.69
FLO124	Flav-O-Rich	1.69E-01	614,229	3,782,213	9.45	477.59	0.01	0.41
FLO125	Flav-O-Rich	1.69E-01	614,229	3,782,213	9.45	477.59	0.01	0.41
GEO01	International Paper - Pulp & Paper Mill	0.00E+00	658,200	3,692,500	21.34	560.93	12.19	2.44
GEO02	International Paper - Pulp & Paper Mill	0.00E+00	658,150	3,692,600	60.96	516.48	18.29	4.42
GEO03	International Paper - Pulp & Paper Mill	0.00E+00	658,050	3,692,550	30.48	349.82	10.00	1.83
GEO04	International Paper - Pulp & Paper Mill	0.00E+00	658,040	3,692,560	30.48	349.82	10.00	1.83
GEO05	International Paper - Pulp & Paper Mill	0.00E+00	658,180	3,692,540	60.96	516.48	18.29	4.42
GEO06	International Paper - Pulp & Paper Mill	5.52E+01	658,220	3,692,587	85.34	462.04	12.20	5.20
GEO07	International Paper - Pulp & Paper Mill	1.99E+01	658,275	3,692,581	71.63	435.93	17.25	2.40
GEO08	International Paper - Pulp & Paper Mill	1.99E+01	658,217	3,692,622	76.20	344.26	12.10	3.70
GEO09	International Paper - Pulp & Paper Mill	2.81E-01	658,242	3,692,574	67.06	353.15	9.43	1.10
GEO10	International Paper - Pulp & Paper Mill	3.54E-01	658,242	3,692,595	67.06	353.15	9.43	1.10
GEO11	*International Paper - Pulp & Paper Mill*	*0.00E+00*	*658,000*	*3,693,000*	*21.30*	*1.90*	*2.10*	
GEO12	International Paper - Pulp & Paper Mill	0.00E+00	657,900	3,692,840	21.60	345.93	1.80	0.70
GEO13	International Paper - Pulp & Paper Mill	9.08E+00	658,092	3,692,601	30.50	340.93	6.95	1.50
GEO14	International Paper - Pulp & Paper Mill	9.25E+00	658,105	3,692,592	29.00	343.15	7.01	1.80
GEO15	International Paper - Pulp & Paper Mill	0.00E+00	658,100	3,692,597	21.30	1.90	2.10	
GEO16	International Paper - Pulp & Paper Mill	0.00E+00	657,979	3,692,594	33.53	312.04	14.66	1.20
GEO17	International Paper - Pulp & Paper Mill	0.00E+00	657,935	3,692,570	43.89	324.82	10.78	1.10
GEO18	International Paper - Pulp & Paper Mill	1.01E+01	658,128	3,692,719	20.70	355.93	8.05	1.10
GEO19	International Paper - Pulp & Paper Mill	4.03E-01	657,900	3,692,840	27.20	354.26	13.66	1.20
GEO20	International Paper - Pulp & Paper Mill	4.30E-01	657,900	3,692,840	8.20	483.15	0.01	0.70
GEO21	International Paper - Pulp & Paper Mill	0.00E+00	657,900	3,692,840	3.00	94.80	1.40	
GEO22	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	22.86	355.37	20.42	1.80
GEO23	Georgetown Steel, Inc.	1.48E+01	659,006	3,693,450	9.14	293.15	10.06	0.50
GEO24	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	9.30	293.15	10.52	0.61
GEO25	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	8.53	293.15	12.65	0.50
GEO26	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	31.39	332.04	4.51	10.21
GEO27	Georgetown Steel, Inc.	4.84E+00	659,006	3,693,450	24.38	355.93	0.01	232.75
GEO28	Georgetown Steel, Inc.	9.24E+00	659,006	3,693,450	24.14	514.82	11.16	2.87
GEO29	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	9.14	293.15	27.25	0.50
GEO30	Georgetown Steel, Inc.	5.29E-01	659,006	3,693,450	27.43	422.04	17.04	1.08
GEO31	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	25.30	417.04	5.39	1.72
GEO32	Georgetown Steel, Inc.	1.48E+01	659,006	3,693,450	28.27	417.04	13.69	3.57
GEO46	Oneita Industries	4.57E-01	634,095	3,702,924	6.86	394.26	0.01	0.52
GEO47	Oneita Industries	2.52E+00	633,574	3,702,622	19.20	505.37	0.01	0.79
HOR01	Santee Cooper-Grainger Station	1.05E+02	680,194	3,744,271	91.44	427.04	21.09	3.05
HOR02	Santee Cooper-Grainger Station	1.05E+02	680,221	3,744,286	91.44	430.37	21.34	3.05
HOR03	PPM Cranes, Inc.	0.00E+00	685,572	3,741,495	9.14	297.04	0.01	1.04
HOR04	Wolverine Brass, Inc.	0.00E+00	682,024	3,743,374	9.93	315.93	20.33	0.71
HOR05	Wolverine Brass, Inc.	0.00E+00	682,024	3,743,374	10.26	315.93	20.33	0.56
HOR06	Embers Charcoal Company	8.74E-01	684,030	3,743,977	21.34	1,255.37	2.76	3.05
HOR07	Embers Charcoal Company	9.10E-01	684,030	3,743,977	14.94	560.93	10.85	1.46
HOR08	Embers Charcoal Company	0.00E+00	684,030	3,743,977	12.19	293.15	0.01	0.52
HOR09	Santee Cooper - Myrtle Beach	1.64E+01	692,374	3,731,768	5.33	719.26	21.73	3.16
HOR10	Santee Cooper - Myrtle Beach	1.64E+01	692,374	3,731,768	5.33	719.26	21.73	3.16
HOR11	Santee Cooper - Myrtle Beach	2.37E+01	692,400	3,731,737	12.80	754.26	20.03	3.99
HOR12	Santee Cooper - Myrtle Beach	2.37E+01	692,400	3,731,737	12.80	754.26	20.03	3.99
HOR13	Santee Cooper - Myrtle Beach	3.09E+01	692,400	3,731,737	12.19	755.37	30.48	5.92
HOR14	Uniblend Spinners	4.46E-01	683,667	3,758,197	10.52	449.82	6.61	0.52
HOR15	NewSouth, Inc.	2.15E+00	683,429	3,744,530	15.39	435.93	16.49	1.37
HOR16	Conway Hospital	2.27E-01	685,058	3,739,734	9.14	541.48	6.10	0.55
HOR17	Conway Hospital	2.27E-01	685,058	3,739,734	9.14	541.48	6.10	0.55
HOR18	Allied Signal Metglas Products	5.32E+00	685,874	3,741,199	3.05	825.93	0.01	0.20
HOR19	Horry County	6.55E+00	689,014	3,741,137	0.61	1,477.59	0.61	0.61
HOR20	Grand Strand WW treatment plant	3.36E+00	685,146	3,741,585	3.66	727.59	46.94	0.20
HOR21	Bayshore Concrete Products	3.33E-01	680,194	3,744,271	4.57	477.59	14.55	0.49
HOR22	Bayshore Concrete Products	1.63E-01	680,194	3,744,271	4.88	477.59	9.70	0.40
HOR23	Horry Co. SWA	4.54E-01	688,153	3,743,031	8.84	1,088.71	13.99	0.25
HOR24	Santee Cooper Horry Co. Landfill	1.80E+00	688,153	3,743,031	2.65	803.00	70.00	0.25
MAR01	Fabric Resources Intl. Ltd.	3.31E+00	662,472	3,785,419	15.54	505.37	13.72	0.91
MAR02	Cone Mills-Raytex Finishing	2.68E-01	646,597	3,780,598	11.89	410.93	13.11	0.88
MAR03	Cone Mills-Raytex Finishing	2.27E-01	646,597	3,780,598	12.34	422.04	14.26	0.71
MAR04	Cone Mills-Raytex Finishing	3.63E-01	646,597	3,780,598	10.82	468.71	7.62	0.61
MAR05	Cone Mills-Raytex Finishing	7.94E-01	646,597	3,780,598	11.51	530.37	12.80	0.86
MAR06	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	1.11
MAR07	International Paper	5.67E-01	641,005	3,793,021	24.38	445.37	10.16	1.64
MAR08	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR09	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR10	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR11	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	12.70	0.92
MAR12	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	20.31	1.12
MAR13	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	12.70	1.02
MAR14	Pilliod Furniture	8.52E-02	670,890	3,789,586	12.19	533.15	14.81	0.56

Table A-2. NO_X NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
MAR15	Pilliod Furniture	0.00E+00	670,870	3,789,382	6.71	297.04	18.59	0.61
MAR16	Marion Memorial Hospital	1.15E-01	646,601	3,783,285	6.71	405.37	6.43	0.38
MAR17	Blumenthal Mills, Inc.	8.64E-01	646,273	3,782,473	17.19	449.82	9.33	0.76
MAR18	Blumenthal Mills, Inc.	1.74E-01	646,349	3,782,473	8.47	422.04	6.10	0.94
MAR19	Mullins Hospital	1.20E-01	660,780	3,785,405	9.14	449.82	5.97	0.30
MAR20	AVM of South Carolina	0.00E+00	655,700	3,784,688	6.10	293.71	27.13	0.61
MAR21	Marion Ceramics	1.76E-01	636,481	3,787,562	9.14	422.04	6.10	0.81
MAR22	Piggly Wiggly #54	1.51E-01	647,660	3,784,688	9.75	1,088.71	4.57	0.61
MAR23	Russell Stover Candy	1.41E-01	648,945	3,783,063	12.04	477.59	18.29	0.61
MAR24	SO-PAK-CO, INC.	3.05E-01	661,322	3,786,207	7.47	508.15	14.81	0.61
MAR25	SO-PAK-CO, INC.	3.78E-01	661,322	3,786,207	8.99	508.15	11.43	0.30
MAR26	Wellman, Inc.	2.37E-01	652,677	3,784,762	3.69	699.82	9.10	0.20
MAR27	Sara Lee Hosiery	2.02E-01	644,376	3,783,398	8.84	449.82	0.01	0.51
MAR28	Heritage Sportswear	4.57E-01	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR29	Heritage Sportswear	4.57E-01	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR30	Marion Co. Medical Center	2.01E+00	654,380	3,783,988	7.62	447.04	0.01	0.07
MAR31	Forest Industries International, Inc.	1.21E+00	640,232	3,794,446	22.56	449.82	0.01	1.14
MAR32	Forest Industries International, Inc.	7.41E-01	640,232	3,794,446	12.19	449.82	0.01	0.76
WIL01	Martek	8.50E-01	610,782	3,732,426	14.80	533.15	13.72	1.00
WIL02	Martek	4.50E-01	610,789	3,732,422	14.80	533.15	13.72	0.86
WIL03	Martek	2.27E+00	610,789	3,732,422	14.81	533.15	22.80	0.76
WIL04	Colonial Rubber	1.13E-01	609,670	3,728,650	8.53	449.82	7.13	0.43
WIL05	Colonial Rubber	1.13E-01	609,670	3,728,650	8.53	449.82	7.13	0.43
WIL06	Colonial Rubber	0.00E+00	609,670	3,728,650	5.49	294.26	15.88	1.68
WIL07	Colonial Rubber	0.00E+00	609,670	3,728,650	9.14	294.26	10.36	0.15
WIL08	Colonial Rubber	1.35E+00	609,670	3,728,650	11.58	449.82	16.70	0.61
WIL09	Colonial Rubber	0.00E+00	609,670	3,728,650	24.38	294.26	5.82	0.25
WIL10	Colonial Rubber	0.00E+00	609,670	3,728,650	27.74	294.26	2.93	0.37
WIL11	Colonial Rubber	0.00E+00	609,670	3,728,650	24.08	294.26	11.52	0.20
WIL12	Colonial Rubber	3.40E-03	609,670	3,728,650	8.53	1,033.15	10.36	0.24
WIL13	*Colonial Rubber*	*0.00E+00*	*609,670*	*3,728,650*	*13.20*	*39.62*	*39.62*	
WIL14	Williamsburg Co. Mem. Hospital	6.44E-05	609,459	3,724,952	12.50	408.15	2.53	1.08
WIL15	Burns Philp Food	2.77E-01	609,895	3,729,639	13.72	477.59	14.94	0.76
WIL16	Burns Philp Food	5.67E-01	609,895	3,729,639	15.24	477.59	29.87	0.76
WIL17	Burns Philp Food	3.46E+00	609,895	3,729,639	15.24	538.71	14.94	0.99
WIL18	Don's Scrap Iron & Metal, Inc.	0.00E+00	643,562	3,735,655	4.88	294.26	38.71	0.30
WIL19	Firestone Building Products	0.00E+00	610,153	3,729,519	11.31	293.15	15.09	1.22
WIL20	Firestone Building Products	5.76E-01	610,153	3,729,519	9.91	523.15	19.29	0.61
WIL21	Milliken-Kingstree Plant	2.90E-01	609,537	3,728,458	7.32	423.15	13.72	0.30
WIL22	Nan Ya Plastics	0.00E+00	614,326	3,744,476	9.00	310.93	0.01	1.88
WIL23	Nan Ya Plastics	0.00E+00	614,201	3,744,476	15.39	310.93	0.01	2.37
WIL24	Nan Ya Plastics	0.00E+00	614,700	3,745,000	19.99	308.15	0.01	2.18
WIL25	Nan Ya Plastics	2.73E+00	614,305	3,744,223	39.62	438.71	9.51	1.80
WIL26	Nan Ya Plastics	6.82E+00	614,305	3,744,223	39.62	438.71	12.09	2.49
WIL27	Nan Ya Plastics	0.00E+00	614,159	3,743,972	30.48	292.98	0.01	0.20
WIL28	Nan Ya Plastics	0.00E+00	614,396	3,744,362	16.00	304.00	0.01	0.21

Table A-3. PM_{10} NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
DAR41	Darlington Veneer	6.16E+00	604,702	3,795,873	23.47	477.59	6.10	1.10
DAR42	Darlington Veneer	1.51E-02	604,702	3,795,873	9.14	507.04	6.10	0.61
DAR58	Wellman -- Palmetto Plant	6.92E-01	609,762	3,792,529	24.99	422.04	10.70	0.93
DAR59	Wellman -- Palmetto Plant	1.30E-01	609,754	3,792,534	30.48	449.82	9.45	3.66
DAR60	Wellman, Inc.	1.30E-01	609,804	3,792,578	24.99	422.04	15.25	0.93
DAR61	Wellman, Inc.	1.08E+01	609,810	3,792,566	30.48	449.82	9.45	3.66
DAR62	Wellman, Inc.	0.00E+00	609,631	3,792,622	13.11	755.37	0.01	0.25
DAR63	Wellman, Inc.	0.00E+00	609,784	3,792,430	15.24	298.71	0.01	0.41
DAR64	Wellman, Inc.	0.00E+00	609,780	3,792,425	15.24	322.04	0.01	0.46
DAR65	Wellman, Inc.	1.89E-01	610,046	3,792,925	3.05	313.71	0.01	0.15
DAR66	Wellman, Inc.	9.45E-02	609,775	3,792,764	5.49	313.71	0.01	0.15
DAR67	Wellman, Inc.	1.01E-01	609,801	3,792,740	22.86	455.37	15.70	1.20
DAR68	Wellman, Inc.	1.01E-01	609,812	3,792,750	22.86	455.37	15.70	1.20
DAR69	Wellman, Inc.	9.58E-02	609,839	3,792,784	22.86	465.93	23.16	1.20
DAR73	HRS Textiles, Inc.	5.67E-03	600,270	3,785,042	7.32	477.59	5.49	0.48
DAR74	HRS Textiles, Inc.	5.67E-03	600,270	3,785,042	7.32	477.59	5.49	0.48
DAR75	HRS Textiles, Inc.	7.04E-03	600,270	3,785,042	8.23	435.98	0.01	11.00
DAR76	Chesterfield Lumber	2.90E-01	604,751	3,793,878	24.55	475.37	16.76	0.71
DAR77	Chesterfield Lumber	5.00E-01	604,541	3,793,868	15.24	293.15	0.01	0.91
DAR78	Chesterfield Lumber	6.60E-01	604,753	3,793,871	19.99	474.26	16.79	0.70
DAR79	Chesterfield Lumber	7.90E-01	604,754	3,793,878	24.55	475.37	16.76	0.71
DAR80	PowerSecure, Inc.	2.22E-01	609,179	3,792,693	5.03	653.15	77.90	0.36
DIL01	Lockamy Scrap Metal	1.75E+00	649,415	3,807,745	16.15	293.15	14.63	1.22
DIL02	Lockamy Scrap Metal	6.43E-01	649,415	3,807,745	16.15	293.15	14.63	1.22
DIL03	Lockamy Scrap Metal	2.52E-01	649,415	3,807,745	16.15	293.15	14.63	1.22
DIL04	Paperboard Industries Corp.	2.27E-02	643,750	3,799,194	9.14	410.93	0.01	0.51
DIL05	Paperboard Industries Corp.	2.27E-02	643,750	3,799,194	9.14	410.93	0.01	0.51
FLO01	Talon, Inc.	0.00E+00	614,192	3,746,291	13.39	449.82	11.34	1.01
FLO02	Talon, Inc.	0.00E+00	614,192	3,746,294	14.05	449.82	11.34	0.97
FLO03	A.C. Monk	0.00E+00	615,250	3,748,000	11.49	444.26	8.23	0.61
FLO04	Stone Container	1.22E+01	632,600	3,779,600	52.73	453.82	30.82	1.88
FLO05	Stone Container	1.85E+01	632,600	3,779,600	40.23	459.98	16.99	2.13
FLO06	Stone Container	2.59E+01	632,600	3,779,600	54.56	456.82	21.98	2.74
FLO07	Stone Container	1.60E+00	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO08	Stone Container	1.60E+00	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO09	Stone Container	2.08E+00	632,600	3,779,600	45.72	340.93	9.39	1.22
FLO10	Stone Container	1.20E+01	632,600	3,779,600	76.20	459.21	19.75	3.66
FLO11	Stone Container	2.52E-01	632,600	3,779,600	30.48	362.04	3.69	1.07
FLO12	Carter Manufacturing	7.98E-01	615,624	3,753,919	21.34	422.04	0.01	0.91
FLO13	Wellman	6.31E-01	643,884	3,744,592	15.24	337.15	15.70	1.07
FLO14	Wellman	1.03E-02	643,952	3,744,641	10.06	293.15	0.01	1.22
FLO15	Wellman	1.03E-02	643,934	3,744,634	10.06	293.15	0.01	1.22
FLO16	Wellman	1.03E-02	643,938	3,744,638	10.06	293.15	0.01	1.22
FLO17	Wellman	1.03E-02	643,946	3,744,647	10.06	293.15	0.01	1.22
FLO18	Wellman	5.17E-03	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO19	Wellman	7.18E-03	644,014	3,744,510	10.52	293.15	0.01	1.22
FLO20	Wellman	5.17E-03	644,000	3,744,523	10.52	293.15	0.01	1.22
FLO21	Wellman	3.15E-03	644,011	3,744,520	10.52	293.15	0.01	1.22
FLO22	Wellman	5.17E-03	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO23	Wellman	1.50E-01	643,948	3,744,627	19.05	293.15	0.01	0.61
FLO24	Wellman	1.50E-01	643,960	3,744,638	19.05	293.15	0.01	0.61
FLO25	Wellman	2.58E-03	643,955	3,744,623	19.05	292.98	0.01	0.91
FLO26	Wellman	2.58E-03	643,959	3,744,626	19.05	292.98	0.01	0.91
FLO27	Wellman	2.58E-03	643,932	3,744,630	19.05	292.98	0.01	0.91
FLO28	Wellman	2.58E-03	643,965	3,744,633	19.05	292.98	0.01	0.91
FLO29	Wellman	2.58E-03	643,967	3,744,650	21.34	293.15	0.01	0.91
FLO30	Wellman	2.58E-03	643,971	3,744,654	21.34	293.15	0.01	0.91
FLO31	Wellman	2.58E-03	643,973	3,744,656	21.34	293.15	0.01	0.91
FLO32	Wellman	2.58E-03	643,981	3,744,660	21.34	293.15	0.01	0.91
FLO33	Wellman	2.58E-03	643,984	3,744,656	21.34	293.15	0.01	0.91
FLO34	Wellman	2.58E-03	643,986	3,744,653	21.34	293.15	0.01	0.91
FLO35	Wellman	2.58E-03	643,972	3,744,640	21.34	293.15	0.01	0.91
FLO36	Wellman	2.58E-03	643,975	3,744,643	21.34	293.15	0.01	0.91
FLO37	Wellman	2.58E-03	643,976	3,744,649	21.34	293.15	0.01	0.91
FLO38	Wellman	2.58E-03	643,981	3,744,648	21.34	293.15	0.01	0.91
FLO39	Wellman	1.50E-01	643,981	3,744,664	21.49	293.15	0.01	0.61
FLO40	Wellman	1.50E-01	643,989	3,744,659	21.49	293.15	0.01	0.61
FLO41	Wellman	5.17E-03	644,001	3,744,500	7.32	293.15	0.01	1.22
FLO42	Wellman	1.22E-02	643,868	3,744,574	7.62	322.04	0.01	38.31
FLO43	Wellman	1.79E-01	643,910	3,744,152	5.85	293.15	0.01	0.94
FLO44	Tyler Plywood Corporation	1.18E+00	611,972	3,784,650	9.75	560.93	15.24	0.76
FLO45	Tyler Plywood Corporation	0.00E+00	611,972	3,784,650	9.14	472.04	5.30	0.76
FLO46	Koppers Industries	1.15E+00	616,994	3,785,299	10.97	458.71	12.71	0.91
FLO47	Koppers Industries	1.61E-02	616,975	3,785,299	8.23	472.04	5.39	0.76
FLO48	Koppers Industries	0.00E+00	616,994	3,785,299	10.97	449.82	6.10	0.91
FLO49	*Koppers Industries*	*2.25E-02*	*616,673*	*3,785,494*	*6.10*	*0.12*	*2.83*	
FLO50	Marsh Lumber Company	2.45E-01	631,809	3,762,880	11.13	516.48	26.40	0.48
FLO51	Marsh Lumber Company	2.05E-01	631,809	3,762,880	11.13	510.93	23.38	0.48
FLO52	Marsh Lumber Company	3.02E-02	631,809	3,762,880	8.71	505.37	0.01	33.15

Table A-3. PM_{10} NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
FLO53	The ESAB Group	1.55E-01	605,540	3,783,005	6.10	380.37	12.70	0.91
FLO54	The ESAB Group	2.02E-02	605,539	3,783,004	7.47	292.98	0.01	0.91
FLO55	The ESAB Group	8.06E-03	605,539	3,783,004	7.62	422.04	0.01	0.30
FLO56	The ESAB Group	2.77E-02	605,539	3,783,004	6.71	422.04	10.03	0.61
FLO57	The ESAB Group	2.77E-02	605,539	3,783,004	6.71	422.04	10.03	0.61
FLO58	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO59	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO60	Dupont-Florence	7.50E+00	630,885	3,784,747	38.10	449.82	8.17	1.52
FLO61	Dupont-Florence	9.70E-01	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO62	Dupont-Florence	9.70E-01	630,835	3,784,795	38.10	533.15	4.63	1.05
FLO63	Dupont-Florence	9.70E-01	630,848	3,784,778	38.10	533.15	2.32	1.05
FLO64	Dupont-Florence	9.70E-01	630,855	3,784,771	38.10	533.15	2.32	1.05
FLO65	Dupont-Florence	9.70E-01	630,863	3,784,764	38.10	533.15	2.32	1.05
FLO66	Dupont-Florence	9.32E-01	630,780	3,784,740	14.63	333.15	24.38	0.23
FLO67	Dupont-Florence	1.26E-01	630,675	3,784,970	15.24	310.93	15.24	0.61
FLO68	Dupont-Florence	8.82E-01	630,762	3,784,682	9.14	294.26	0.01	0.30
FLO69	Dupont-Florence	5.92E-01	630,712	3,784,980	18.29	294.26	0.01	1.38
FLO70	Dupont-Florence	0.00E+00	630,841	3,784,804	38.10	449.82	8.11	1.52
FLO71	Dupont-Florence	0.00E+00	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO72	Dupont-Florence	0.00E+00	630,848	3,784,778	38.10	533.15	5.79	1.05
FLO73	Dupont-Florence	0.00E+00	630,855	3,784,771	38.10	533.15	5.79	1.05
FLO74	Dupont-Florence	2.82E-01	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO75	Dupont-Florence	2.82E-01	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO76	*Charles Ingram Lumber Co*	*1.67E-02*	*629,592*	*3,772,923*	*4.36*	*4.27*	*4.05*	
FLO77	*Charles Ingram Lumber Co*	*2.88E-02*	*629,592*	*3,772,923*	*4.36*	*5.03*	*4.05*	
FLO78	*Charles Ingram Lumber Co*	*2.19E-02*	*629,592*	*3,772,923*	*4.36*	*3.72*	*4.05*	
FLO79	*Charles Ingram Lumber Co*	*2.19E-02*	*629,592*	*3,772,923*	*4.36*	*3.72*	*4.05*	
FLO80	La-Z-Boy East	2.65E-02	613,622	3,785,748	7.62	533.15	0.01	0.51
FLO82	McLeod Regional Medical Center	0.00E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO83	McLeod Regional Medical Center	0.00E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO84	McLeod Regional Medical Center	0.00E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO85	McLeod Regional Medical Center	1.26E-02	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO86	McLeod Regional Medical Center	1.26E-02	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO87	McLeod Regional Medical Center	7.61E-02	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO88	McLeod Regional Medical Center	7.61E-02	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO89	Sara Lee Hosiery	1.31E-02	618,392	3,766,573	8.23	522.04	13.29	0.51
FLO90	Asea Brown Boveri	3.02E-02	612,043	3,789,426	9.14	410.93	5.12	0.56
FLO91	Vulcraft-Div. of Nucor	2.03E-02	612,076	3,786,654	19.51	533.15	9.30	0.71
FLO92	*Vulcraft-Div. of Nucor*	*1.29E+00*	*612,076*	*3,786,654*	*1.83*	*106.13*	*56.14*	
FLO93	Maytag Florence Operations	1.03E-02	611,275	3,789,417	13.11	410.93	4.63	0.67
FLO94	Maytag Florence Operations	2.09E-02	611,275	3,789,417	13.11	866.48	5.21	0.46
FLO95	Nan Ya Plastics	1.30E+00	614,396	3,744,362	16.00	303.15	0.01	0.21
FLO96	McCall Farms	1.39E-01	614,987	3,768,359	6.71	293.98	11.89	0.60
FLO97	McCall Farms	2.49E-01	614,855	3,768,666	13.72	449.82	12.80	0.91
FLO98	McCall Farms	1.13E-01	614,855	3,768,666	12.19	325.93	24.99	0.61
FLO99	McCall Farms	9.45E-02	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO100	McCall Farms	1.83E-01	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO101	McCall Farms	2.14E-01	614,987	3,768,359	10.97	449.82	10.61	0.91
FLO102	McCall Farms	4.41E-02	614,855	3,768,666	8.53	449.82	3.78	0.91
FLO103	McCall Farms	3.40E-01	614,987	3,768,359	14.63	449.82	11.89	0.91
FLO104	Roche Carolina	1.39E-01	629,000	3,786,850	15.54	544.26	9.94	1.28
FLO105	Roche Carolina	5.04E-02	628,939	3,786,580	48.77	349.82	12.19	0.51
FLO106	Roche Carolina	2.52E-01	628,920	3,786,560	15.24	810.93	5.76	0.51
FLO107	Roche Carolina	9.07E-01	629,020	3,786,870	25.91	344.26	26.12	0.84
FLO108	Florence Wastewater Treatment	1.45E-01	615,180	3,781,886	3.66	724.82	44.20	0.20
FLO109	Florence Wastewater Treatment	3.47E-01	615,180	3,781,886	3.66	738.71	69.80	0.25
FLO110	Florence Wastewater Treatment	2.74E-01	615,180	3,781,886	3.66	722.04	80.77	0.20
FLO111	Francis Marion University	1.51E-02	624,275	3,784,375	7.01	408.15	6.51	0.40
FLO112	Francis Marion University	1.51E-02	624,275	3,784,375	7.01	408.15	6.81	0.40
FLO113	Francis Marion University	1.51E-02	624,275	3,784,375	7.01	408.15	7.12	0.40
FLO114	Carolinas Hospital System	2.27E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO115	Carolinas Hospital System	2.27E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO116	Carolinas Hospital System	2.27E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO117	Honda	2.42E-02	600,175	3,774,660	6.10	449.82	15.24	0.46
FLO118	Duquesne Energy	7.64E-01	612,726	3,790,077	25.91	344.26	26.12	0.84
FLO119	Southern Impressions, LLC	1.59E-02	597,834	3,753,226	7.32	499.26	9.74	0.51
FLO120	Southern Impressions, LLC	9.01E-03	597,834	3,753,226	6.71	394.26	17.10	0.58
FLO121	Gatewood Products, LLC	4.41E+00	616,130	3,783,777	3.12	810.93	1.63	2.92
FLO122	Crenlo, Inc	1.89E-02	621,000	3,792,000	16.70	430.37	6.79	0.56
FLO123	Crenlo, Inc	1.73E-02	621,000	3,792,000	16.70	488.71	11.06	0.69
FLO124	Flav-O-Rich	2.14E-02	614,229	3,782,213	9.45	477.59	0.01	0.41
FLO125	Flav-O-Rich	2.14E-02	614,229	3,782,213	9.45	477.59	0.01	0.41
GEO01	International Paper - Pulp & Paper Mill	0.00E+00	658,200	3,692,500	21.34	560.93	12.19	2.44
GEO02	International Paper - Pulp & Paper Mill	0.00E+00	658,150	3,692,600	60.96	516.48	18.29	4.42
GEO03	International Paper - Pulp & Paper Mill	0.00E+00	658,050	3,692,550	30.48	349.82	10.00	1.83
GEO04	International Paper - Pulp & Paper Mill	0.00E+00	658,040	3,692,560	30.48	349.82	10.00	1.83
GEO05	International Paper - Pulp & Paper Mill	0.00E+00	658,180	3,692,540	60.96	516.48	18.29	4.42
GEO06	International Paper - Pulp & Paper Mill	1.49E+01	658,220	3,692,587	85.34	462.04	12.20	5.20
GEO07	International Paper - Pulp & Paper Mill	3.44E+00	658,275	3,692,581	71.63	435.93	17.25	2.40

Table A-3. PM_{10} NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
GEO08	International Paper - Pulp & Paper Mill	7.53E+00	658,217	3,692,622	76.20	344.26	12.10	3.70
GEO09	International Paper - Pulp & Paper Mill	2.66E+00	658,242	3,692,574	67.06	353.15	9.43	1.10
GEO10	International Paper - Pulp & Paper Mill	4.58E+00	658,242	3,692,595	67.06	353.15	9.43	1.10
GEO11	*International Paper - Pulp & Paper Mill*	*1.10E+00*	*658,000*	*3,693,000*	*21.30*	*1.90*	*2.10*	
GEO12	International Paper - Pulp & Paper Mill	1.67E-01	657,900	3,692,840	21.60	345.93	1.80	0.70
GEO13	International Paper - Pulp & Paper Mill	3.82E+00	658,092	3,692,601	30.50	340.93	6.95	1.50
GEO14	International Paper - Pulp & Paper Mill	2.82E+00	658,105	3,692,592	29.00	343.15	7.01	1.80
GEO15	*International Paper - Pulp & Paper Mill*	*1.55E+00*	*658,100*	*3,692,597*	*21.30*	*1.90*	*2.10*	
GEO16	International Paper - Pulp & Paper Mill	0.00E+00	657,979	3,692,594	33.53	312.04	14.66	1.20
GEO17	International Paper - Pulp & Paper Mill	0.00E+00	657,935	3,692,570	43.89	324.82	10.78	1.10
GEO18	International Paper - Pulp & Paper Mill	4.60E-03	658,128	3,692,719	20.70	355.93	8.05	1.10
GEO19	International Paper - Pulp & Paper Mill	4.91E-02	657,900	3,692,840	27.20	354.26	13.66	1.20
GEO20	International Paper - Pulp & Paper Mill	3.78E-02	657,900	3,692,840	8.20	483.15	0.01	0.70
GEO21	*International Paper - Pulp & Paper Mill*	*6.18E-01*	*657,900*	*3,692,840*	*3.00*	*94.80*	*1.40*	
GEO22	Georgetown Steel, Inc.	7.16E-01	659,006	3,693,450	22.86	355.37	20.42	1.80
GEO23	Georgetown Steel, Inc.	4.88E-02	659,006	3,693,450	9.14	293.15	10.06	0.50
GEO24	Georgetown Steel, Inc.	1.81E-01	659,006	3,693,450	9.30	293.15	10.52	0.61
GEO25	Georgetown Steel, Inc.	8.62E-02	659,006	3,693,450	8.53	293.15	12.65	0.50
GEO26	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	31.39	332.04	4.51	10.21
GEO27	Georgetown Steel, Inc.	3.47E+00	659,006	3,693,450	24.38	355.93	0.01	232.75
GEO28	Georgetown Steel, Inc.	3.78E+00	659,006	3,693,450	24.14	514.82	11.16	2.87
GEO29	Georgetown Steel, Inc.	1.59E-01	659,006	3,693,450	9.14	293.15	27.25	0.50
GEO30	Georgetown Steel, Inc.	5.29E-02	659,006	3,693,450	27.43	422.04	17.04	1.08
GEO31	Georgetown Steel, Inc.	8.13E-01	659,006	3,693,450	25.30	417.04	5.39	1.72
GEO32	Georgetown Steel, Inc.	1.65E-02	659,006	3,693,450	28.27	417.04	13.69	3.57
GEO41	International Paper - Sampit Lumber	4.80E+00	644,267	3,698,949	21.31	546.48	17.13	0.39
GEO42	International Paper - Sampit Lumber	2.41E-01	644,260	3,698,945	9.11	294.26	0.01	0.61
GEO43	International Paper - Sampit Lumber	3.99E-01	644,270	3,698,950	2.40	294.26	0.01	0.60
GEO44	International Paper - Sampit Lumber	1.70E+00	644,263	3,698,940	21.31	294.26	0.01	1.20
GEO45	International Paper - Sampit Lumber	1.45E+00	644,267	3,698,940	15.85	491.48	12.89	0.91
HOR01	Santee Cooper-Grainger Station	6.64E+01	680,194	3,744,271	91.44	427.04	21.09	3.05
HOR02	Santee Cooper-Grainger Station	6.64E+01	680,221	3,744,286	91.44	430.37	21.34	3.05
HOR03	PPM Cranes, Inc.	4.06E-01	685,572	3,741,495	9.14	297.04	0.01	1.04
HOR04	Wolverine Brass, Inc.	2.61E-01	682,024	3,743,374	9.93	315.93	20.33	0.71
HOR05	Wolverine Brass, Inc.	3.18E-01	682,024	3,743,374	10.26	315.93	20.33	0.56
HOR06	Embers Charcoal Company	1.72E+00	684,030	3,743,977	21.34	1,255.37	2.76	3.05
HOR07	Embers Charcoal Company	1.79E+00	684,030	3,743,977	14.94	560.93	10.85	1.46
HOR08	Embers Charcoal Company	2.06E-01	684,030	3,743,977	12.19	293.15	0.01	0.52
HOR09	Santee Cooper - Myrtle Beach	8.91E-01	692,374	3,731,768	5.33	719.26	21.73	3.16
HOR10	Santee Cooper - Myrtle Beach	8.91E-01	692,374	3,731,768	5.33	719.26	21.73	3.16
HOR11	Santee Cooper - Myrtle Beach	1.29E+00	692,400	3,731,737	12.80	754.26	20.03	3.99
HOR12	Santee Cooper - Myrtle Beach	1.29E+00	692,400	3,731,737	12.80	754.26	20.03	3.99
HOR13	Santee Cooper - Myrtle Beach	1.68E+00	692,400	3,731,737	12.19	755.37	30.48	5.92
HOR14	Uniblend Spinners	6.00E-02	683,667	3,758,197	10.52	449.82	6.61	0.52
HOR15	NewSouth, Inc.	2.13E+00	683,429	3,744,530	15.39	435.93	16.49	1.37
HOR16	Conway Hospital	2.27E-02	685,058	3,739,734	9.14	541.48	6.10	0.55
HOR17	Conway Hospital	2.27E-02	685,058	3,739,734	9.14	541.48	6.10	0.55
HOR18	Allied Signal Metglas Products	3.78E-01	685,874	3,741,199	3.05	825.93	0.01	0.20
HOR19	Horry County	9.34E+00	689,014	3,741,137	0.61	1,477.59	0.61	0.61
HOR20	Grand Strand WW treatment plant	2.39E-01	685,146	3,741,585	3.66	727.59	46.94	0.20
HOR21	Bayshore Concrete Products	2.61E-02	680,194	3,744,271	4.57	477.59	14.55	0.49
HOR22	Bayshore Concrete Products	1.80E-02	680,194	3,744,271	4.88	477.59	9.70	0.40
HOR23	Horry Co. SWA	9.45E-02	688,153	3,743,031	8.84	1,088.71	13.99	0.25
HOR24	Santee Cooper Horry Co. Landfill	3.20E-01	688,153	3,743,031	2.65	803.00	70.00	0.25
MAR01	Fabric Resources Intl. Ltd.	9.58E-01	662,472	3,785,419	15.54	505.37	13.72	0.91
MAR02	Cone Mills-Raytex Finishing	2.65E-02	646,597	3,780,598	11.89	410.93	13.11	0.88
MAR03	Cone Mills-Raytex Finishing	2.27E-02	646,597	3,780,598	12.34	422.04	14.26	0.71
MAR04	Cone Mills-Raytex Finishing	3.65E-02	646,597	3,780,598	10.82	468.71	7.62	0.61
MAR05	Cone Mills-Raytex Finishing	7.94E-02	646,597	3,780,598	11.51	530.37	12.80	0.86
MAR06	International Paper	4.21E-01	641,005	3,793,021	12.19	299.82	12.70	1.11
MAR07	International Paper	1.38E+00	641,005	3,793,021	24.38	445.37	10.16	1.64
MAR08	International Paper	1.26E-01	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR09	International Paper	2.10E-01	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR10	International Paper	2.10E-01	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR11	International Paper	1.89E-01	641,005	3,793,021	15.24	299.82	12.70	0.92
MAR12	International Paper	4.41E-01	641,005	3,793,021	15.24	299.82	20.31	1.12
MAR13	International Paper	2.32E-01	641,005	3,793,021	15.24	299.82	12.70	1.02
MAR14	Pilliod Furniture	2.22E-01	670,890	3,789,586	12.19	533.15	14.81	0.56
MAR15	Pilliod Furniture	1.39E-01	670,870	3,789,382	6.71	297.04	18.59	0.61
MAR16	Marion Memorial Hospital	5.80E-03	646,601	3,783,285	6.71	405.37	6.43	0.38
MAR17	Blumenthal Mills, Inc.	4.64E-01	646,273	3,782,473	17.19	449.82	9.33	0.76
MAR18	Blumenthal Mills, Inc.	6.30E-02	646,349	3,782,473	8.47	422.04	6.10	0.94
MAR19	Mullins Hospital	6.02E-03	660,780	3,785,405	9.14	449.82	5.97	0.30
MAR20	AVM of South Carolina	1.83E-01	655,700	3,784,688	6.10	293.71	27.13	0.61
MAR21	Marion Ceramics	3.78E-03	636,481	3,787,562	9.14	422.04	6.10	0.81
MAR22	Piggly Wiggly #54	2.37E-01	647,660	3,784,688	9.75	1,088.71	4.57	0.61
MAR23	Russell Stover Candy	1.41E-02	648,945	3,783,063	12.04	477.59	18.29	0.61
MAR24	SO-PAK-CO, INC.	1.64E-02	661,322	3,786,207	7.47	508.15	14.81	0.61
MAR25	SO-PAK-CO, INC.	2.02E-02	661,322	3,786,207	8.99	508.15	11.43	0.30

Table A-3. PM_{10} NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
MAR26	Wellman, Inc.	1.64E-02	652,677	3,784,762	3.69	699.82	9.10	0.20
MAR27	Sara Lee Hosiery	2.32E-02	644,376	3,783,398	8.84	449.82	0.01	0.51
MAR28	Heritage Sportswear	7.31E-02	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR29	Heritage Sportswear	7.31E-02	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR30	Marion Co. Medical Center	3.53E-03	654,380	3,783,988	7.62	447.04	0.01	0.07
MAR31	Forest Industries International, Inc.	8.89E-01	640,232	3,794,446	22.56	449.82	0.01	1.14
MAR32	Forest Industries International, Inc.	5.44E-01	640,232	3,794,446	12.19	449.82	0.01	0.76
WIL01	Martek	1.00E-01	610,782	3,732,426	14.80	533.15	13.72	1.00
WIL02	Martek	5.20E-02	610,789	3,732,422	14.80	533.15	13.72	0.86
WIL03	Martek	2.62E-01	610,789	3,732,422	14.81	533.15	22.80	0.76
WIL04	Colonial Rubber	1.26E-02	609,670	3,728,650	8.53	449.82	7.13	0.43
WIL05	Colonial Rubber	1.26E-02	609,670	3,728,650	8.53	449.82	7.13	0.43
WIL06	Colonial Rubber	1.26E-01	609,670	3,728,650	5.49	294.26	15.88	1.68
WIL07	Colonial Rubber	3.15E-01	609,670	3,728,650	9.14	294.26	10.36	0.15
WIL08	Colonial Rubber	1.70E-02	609,670	3,728,650	11.58	449.82	16.70	0.61
WIL09	Colonial Rubber	2.52E-01	609,670	3,728,650	24.38	294.26	5.82	0.25
WIL10	Colonial Rubber	2.52E-01	609,670	3,728,650	27.74	294.26	2.93	0.37
WIL11	Colonial Rubber	1.51E-01	609,670	3,728,650	24.08	294.26	11.52	0.20
WIL12	Colonial Rubber	1.51E-02	609,670	3,728,650	8.53	1,033.15	10.36	0.24
WIL13	*Colonial Rubber*	*2.28E-04*	*609,670*	*3,728,650*	*13.20*	*39.62*	*39.62*	
WIL14	Williamsburg Co. Mem. Hospital	7.53E-03	609,459	3,724,952	12.50	408.15	2.53	1.08
WIL15	Burns Philp Food	1.98E+00	609,895	3,729,639	13.72	477.59	14.94	0.76
WIL16	Burns Philp Food	3.97E+00	609,895	3,729,639	15.24	477.59	29.87	0.76
WIL17	Burns Philp Food	6.05E-01	609,895	3,729,639	15.24	538.71	14.94	0.99
WIL18	Don's Scrap Iron & Metal, Inc.	5.17E-01	643,562	3,735,655	4.88	294.26	38.71	0.30
WIL19	Firestone Building Products	2.88E-01	610,153	3,729,519	11.31	293.15	15.09	1.22
WIL20	Firestone Building Products	7.06E-02	610,153	3,729,519	9.91	523.15	19.29	0.61
WIL21	Milliken-Kingstree Plant	1.18E-01	609,537	3,728,458	7.32	423.15	13.72	0.30
WIL22	Nan Ya Plastics	1.40E-01	614,326	3,744,476	9.00	310.93	0.01	1.88
WIL23	Nan Ya Plastics	1.40E-01	614,201	3,744,476	15.39	310.93	0.01	2.37
WIL24	Nan Ya Plastics	3.81E-01	614,700	3,745,000	19.99	308.15	0.01	2.18
WIL25	Nan Ya Plastics	3.28E-01	614,305	3,744,223	39.62	438.71	9.51	1.80
WIL26	Nan Ya Plastics	7.66E-01	614,305	3,744,223	39.62	438.71	12.09	2.49
WIL27	Nan Ya Plastics	1.32E-01	614,159	3,743,972	30.48	292.98	0.01	0.20
WIL28	Nan Ya Plastics	3.82E-01	614,396	3,744,362	16.00	304.00	0.01	0.21

Note: Area and Volume sources are listed in italics.

Table A-4 SO_2 NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
BER01	Prouvost USA	1.02E+01	622,554	3,684,017	19.81	463.71	4.57	1.22
DAR01	Nucor Steel	3.59E+01	601,809	3,804,275	22.86	366.48	22.59	6.40
DAR02	Nucor Steel Darlington	3.59E+01	601,813	3,804,543	34.44	293.15	9.17	0.23
DAR03	Nucor Steel Darlington	0.00E+00	601,813	3,804,543	22.86	366.48	16.12	6.40
DAR04	Nucor Steel	1.40E-02	601,570	3,804,053	22.86	638.15	18.41	1.52
DAR05	Nucor Steel	1.40E-02	601,572	3,803,963	22.86	638.15	18.41	1.52
DAR06	Nucor Steel	1.40E-02	601,719	3,804,080	22.86	638.15	18.41	1.52
DAR07	*Nucor Steel*	*7.41E-02*	*601,769*	*3,804,158*	*37.67*	*7.32*	*15.58*	
DAR08	*Nucor Steel*	*2.47E-03*	*601,639*	*3,804,117*	*19.20*	*18.59*	*8.93*	
DAR09	Nucor Steel	0.00E+00	599,868	3,804,333	18.29	305.37	17.37	1.07
DAR10	*Nucor Steel*	*3.02E-03*	*601,202*	*3,804,201*	*17.07*	*0.57*	*7.10*	
DAR11	*Nucor Steel*	*0.00E+00*	*602,047*	*3,804,175*	*10.00*	*319.00*	*167.00*	
DAR30	Hartsville Oil Mill	6.69E+00	603,104	3,794,930	34.44	523.15	5.43	0.91
DAR31	Hartsville Oil Mill	5.38E-01	603,104	3,794,930	7.62	458.15	0.01	0.46
DAR32	Hartsville Oil Mill	0.00E+00	603,104	3,794,930	2.44	293.15	0.01	0.48
DAR33	Hartsville Oil Mill	0.00E+00	603,104	3,794,930	10.21	293.15	0.01	0.43
DAR58	Wellman -- Palmetto Plant	4.72E-02	609,762	3,792,529	24.99	422.04	10.70	0.93
DAR59	Wellman -- Palmetto Plant	5.67E-03	609,754	3,792,534	30.48	449.82	9.45	3.66
DAR60	Wellman, Inc.	5.67E-03	609,804	3,792,578	24.99	422.04	15.25	0.93
DAR61	Wellman, Inc.	1.97E+02	609,810	3,792,566	30.48	449.82	9.45	3.66
DAR62	Wellman, Inc.	0.00E+00	609,631	3,792,622	13.11	755.37	0.01	0.25
DAR63	Wellman, Inc.	0.00E+00	609,784	3,792,430	15.24	298.71	0.01	0.41
DAR64	Wellman, Inc.	0.00E+00	609,780	3,792,425	15.24	322.04	0.01	0.46
DAR65	Wellman, Inc.	1.76E-01	610,046	3,792,925	3.05	313.71	0.01	0.15
DAR66	Wellman, Inc.	8.82E-02	609,775	3,792,764	5.49	313.71	0.01	0.15
DAR67	Wellman, Inc.	7.94E-03	609,801	3,792,740	22.86	455.37	15.70	1.20
DAR68	Wellman, Inc.	7.56E-03	609,812	3,792,750	22.86	455.37	15.70	1.20
DAR69	Wellman, Inc.	7.56E-03	609,839	3,792,784	22.86	465.93	23.16	1.20
DAR73	HRS Textiles, Inc.	4.03E-01	600,270	3,785,042	7.32	477.59	5.49	0.48
DAR74	HRS Textiles, Inc.	4.03E-01	600,270	3,785,042	7.32	477.59	5.49	0.48
DAR75	HRS Textiles, Inc.	1.05E-03	600,270	3,785,042	8.23	435.98	0.01	11.00
DAR80	PowerSecure, Inc.	1.34E-01	609,179	3,792,693	5.03	653.15	77.90	0.36
DIL04	Paperboard Industries Corp.	8.03E-01	643,750	3,799,194	9.14	410.93	0.01	0.51
DIL05	Paperboard Industries Corp.	8.03E-01	643,750	3,799,194	9.14	410.93	0.01	0.51
FLO04	Stone Container	4.00E+01	632,600	3,779,600	52.73	453.82	30.82	1.88
FLO05	Stone Container	7.72E+01	632,600	3,779,600	40.23	459.98	16.99	2.13
FLO06	Stone Container	8.25E+01	632,600	3,779,600	54.56	456.82	21.98	2.74
FLO07	Stone Container	1.89E-02	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO08	Stone Container	1.89E-02	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO09	Stone Container	7.56E-01	632,600	3,779,600	45.72	340.93	9.39	1.22
FLO10	Stone Container	1.44E+02	632,600	3,779,600	76.20	459.21	19.75	3.66
FLO11	Stone Container	5.67E-01	632,600	3,779,600	30.48	362.04	3.69	1.07
FLO12	Carter Manufacturing	7.56E-03	615,624	3,753,919	21.34	422.04	0.01	0.91
FLO13	Wellman	2.42E+00	643,884	3,744,592	15.24	337.15	15.70	1.07
FLO14	Wellman	0.00E+00	643,952	3,744,641	10.06	293.15	0.01	1.22
FLO15	Wellman	0.00E+00	643,934	3,744,634	10.06	293.15	0.01	1.22
FLO16	Wellman	0.00E+00	643,938	3,744,638	10.06	293.15	0.01	1.22
FLO17	Wellman	0.00E+00	643,946	3,744,647	10.06	293.15	0.01	1.22
FLO18	Wellman	0.00E+00	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO19	Wellman	0.00E+00	644,014	3,744,510	10.52	293.15	0.01	1.22
FLO20	Wellman	0.00E+00	644,000	3,744,523	10.52	293.15	0.01	1.22
FLO21	Wellman	0.00E+00	644,011	3,744,520	10.52	293.15	0.01	1.22
FLO22	Wellman	0.00E+00	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO23	Wellman	0.00E+00	643,948	3,744,627	19.05	293.15	0.01	0.61
FLO24	Wellman	0.00E+00	643,960	3,744,638	19.05	293.15	0.01	0.61
FLO25	Wellman	0.00E+00	643,955	3,744,623	19.05	292.98	0.01	0.91
FLO26	Wellman	0.00E+00	643,959	3,744,626	19.05	292.98	0.01	0.91
FLO27	Wellman	0.00E+00	643,932	3,744,630	19.05	292.98	0.01	0.91
FLO28	Wellman	0.00E+00	643,965	3,744,633	19.05	292.98	0.01	0.91
FLO29	Wellman	0.00E+00	643,967	3,744,650	21.34	293.15	0.01	0.91
FLO30	Wellman	0.00E+00	643,971	3,744,654	21.34	293.15	0.01	0.91
FLO31	Wellman	0.00E+00	643,973	3,744,656	21.34	293.15	0.01	0.91
FLO32	Wellman	0.00E+00	643,981	3,744,660	21.34	293.15	0.01	0.91
FLO33	Wellman	0.00E+00	643,984	3,744,656	21.34	293.15	0.01	0.91
FLO34	Wellman	0.00E+00	643,986	3,744,653	21.34	293.15	0.01	0.91
FLO35	Wellman	0.00E+00	643,972	3,744,640	21.34	293.15	0.01	0.91
FLO36	Wellman	0.00E+00	643,975	3,744,643	21.34	293.15	0.01	0.91
FLO37	Wellman	0.00E+00	643,976	3,744,649	21.34	293.15	0.01	0.91
FLO38	Wellman	0.00E+00	643,981	3,744,648	21.34	293.15	0.01	0.91
FLO39	Wellman	0.00E+00	643,981	3,744,664	21.49	293.15	0.01	0.61
FLO40	Wellman	0.00E+00	643,989	3,744,659	21.49	293.15	0.01	0.61
FLO41	Wellman	0.00E+00	644,001	3,744,500	7.32	293.15	0.01	1.22
FLO42	Wellman	0.00E+00	643,868	3,744,574	7.62	322.04	0.01	38.31
FLO43	Wellman	0.00E+00	643,910	3,744,152	5.85	293.15	0.01	0.94
FLO44	Tyler Plywood Corporation	1.61E-02	611,972	3,784,650	9.75	560.93	15.24	0.76
FLO45	Tyler Plywood Corporation	1.09E+00	611,972	3,784,650	9.14	472.04	5.30	0.76
FLO46	Koppers Industries	7.81E-02	616,994	3,785,299	10.97	458.71	12.71	0.91
FLO47	Koppers Industries	1.26E-03	616,975	3,785,299	8.23	472.04	5.39	0.76
FLO48	Koppers Industries	0.00E+00	616,994	3,785,299	10.97	449.82	6.10	0.91
FLO49	*Koppers Industries*	*1.26E-03*	*616,673*	*3,785,494*	*6.10*	*0.12*	*2.83*	
FLO50	Marsh Lumber Company	2.11E-02	631,809	3,762,880	11.13	516.48	26.40	0.48
FLO51	Marsh Lumber Company	1.76E-02	631,809	3,762,880	11.13	510.93	23.38	0.48

Table A-4 SO_2 NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
FLO52	Marsh Lumber Company	9.33E-01	631,809	3,762,880	8.71	505.37	0.01	33.15
FLO53	The ESAB Group	2.52E-04	605,540	3,783,005	6.10	380.37	12.70	0.91
FLO54	The ESAB Group	0.00E+00	605,539	3,783,004	7.47	292.98	0.01	0.91
FLO55	The ESAB Group	4.03E-04	605,539	3,783,004	7.62	422.04	0.01	0.30
FLO56	The ESAB Group	1.26E-02	605,539	3,783,004	6.71	422.04	10.03	0.61
FLO57	The ESAB Group	1.13E-03	605,539	3,783,004	6.71	422.04	10.03	0.61
FLO58	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO59	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO60	Dupont-Florence	3.91E+01	630,885	3,784,747	38.10	449.82	8.17	1.52
FLO61	Dupont-Florence	5.67E+00	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO62	Dupont-Florence	5.67E+00	630,835	3,784,795	38.10	533.15	4.63	1.05
FLO63	Dupont-Florence	5.67E+00	630,848	3,784,778	38.10	533.15	2.32	1.05
FLO64	Dupont-Florence	5.67E+00	630,855	3,784,771	38.10	533.15	2.32	1.05
FLO65	Dupont-Florence	5.67E+00	630,863	3,784,764	38.10	533.15	2.32	1.05
FLO66	Dupont-Florence	0.00E+00	630,780	3,784,740	14.63	333.15	24.38	0.23
FLO67	Dupont-Florence	0.00E+00	630,675	3,784,970	15.24	310.93	15.24	0.61
FLO68	Dupont-Florence	0.00E+00	630,762	3,784,682	9.14	294.26	0.01	0.30
FLO69	Dupont-Florence	0.00E+00	630,712	3,784,980	18.29	294.26	0.01	1.38
FLO70	Dupont-Florence	0.00E+00	630,841	3,784,804	38.10	449.82	8.11	1.52
FLO71	Dupont-Florence	0.00E+00	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO72	Dupont-Florence	0.00E+00	630,848	3,784,778	38.10	533.15	5.79	1.05
FLO73	Dupont-Florence	0.00E+00	630,855	3,784,771	38.10	533.15	5.79	1.05
FLO74	Dupont-Florence	4.01E+00	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO75	Dupont-Florence	4.01E+00	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO76	*Charles Ingram Lumber Co*	*1.58E-02*	*629,592*	*3,772,923*	*4.36*	*4.27*	*4.05*	
FLO77	*Charles Ingram Lumber Co*	*2.73E-02*	*629,592*	*3,772,923*	*4.36*	*5.03*	*4.05*	
FLO78	*Charles Ingram Lumber Co*	*2.08E-02*	*629,592*	*3,772,923*	*4.36*	*3.72*	*4.05*	
FLO79	*Charles Ingram Lumber Co*	*2.08E-02*	*629,592*	*3,772,923*	*4.36*	*3.72*	*4.05*	
FLO80	La-Z-Boy East	9.32E-01	613,622	3,785,748	7.62	533.15	0.01	0.51
FLO82	McLeod Regional Medical Center	0.00E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO83	McLeod Regional Medical Center	0.00E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO84	McLeod Regional Medical Center	0.00E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO85	McLeod Regional Medical Center	5.44E-01	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO86	McLeod Regional Medical Center	5.44E-01	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO87	McLeod Regional Medical Center	1.63E+00	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO88	McLeod Regional Medical Center	1.63E+00	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO89	Sara Lee Hosiery	9.40E-02	618,392	3,766,573	8.23	522.04	13.29	0.51
FLO90	Asea Brown Boveri	3.94E-01	612,043	3,789,426	9.14	410.93	5.12	0.56
FLO91	Vulcraft-Div. of Nucor	1.33E+00	612,076	3,786,654	19.51	533.15	9.30	0.71
FLO92	*Vulcraft-Div. of Nucor*	*3.65E-04*	*612,076*	*3,786,654*	*1.83*	*106.13*	*56.14*	
FLO93	Maytag Florence Operations	3.00E-03	611,275	3,789,417	13.11	410.93	4.63	0.67
FLO94	Maytag Florence Operations	5.35E-03	611,275	3,789,417	13.11	866.48	5.21	0.46
FLO96	McCall Farms	0.00E+00	614,987	3,768,359	6.71	293.98	11.89	0.60
FLO97	McCall Farms	5.93E+00	614,855	3,768,666	13.72	449.82	12.80	0.91
FLO98	McCall Farms	3.26E+00	614,855	3,768,666	12.19	325.93	24.99	0.61
FLO99	McCall Farms	4.13E-03	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO100	McCall Farms	5.27E+00	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO101	McCall Farms	4.95E+00	614,987	3,768,359	10.97	449.82	10.61	0.91
FLO102	McCall Farms	1.89E-03	614,855	3,768,666	8.53	449.82	3.78	0.91
FLO103	McCall Farms	7.93E+00	614,987	3,768,359	14.63	449.82	11.89	0.91
FLO104	Roche Carolina	3.78E-02	629,000	3,786,850	15.54	544.26	9.94	1.28
FLO105	Roche Carolina	2.20E+00	628,939	3,786,580	48.77	349.82	12.19	0.51
FLO106	Roche Carolina	9.83E-01	628,920	3,786,560	15.24	810.93	5.76	0.51
FLO107	Roche Carolina	8.82E-03	629,020	3,786,870	10.29	1,273.00	20.00	0.63
FLO108	Florence Wastewater Treatment	1.42E-01	615,180	3,781,886	3.66	724.82	44.20	0.20
FLO109	Florence Wastewater Treatment	3.38E-01	615,180	3,781,886	3.66	738.71	69.80	0.25
FLO110	Florence Wastewater Treatment	2.67E-01	615,180	3,781,886	3.66	722.04	80.77	0.20
FLO111	Francis Marion University	2.32E-01	624,275	3,784,375	7.01	408.15	6.51	0.40
FLO112	Francis Marion University	2.32E-01	624,275	3,784,375	7.01	408.15	6.81	0.40
FLO113	Francis Marion University	2.32E-01	624,275	3,784,375	7.01	408.15	7.12	0.40
FLO114	Carolinas Hospital System	8.01E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO115	Carolinas Hospital System	8.01E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO116	Carolinas Hospital System	8.01E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO117	Honda	1.01E-03	600,175	3,774,660	6.10	449.82	15.24	0.46
FLO118	Duquesne Energy	8.82E-04	612,726	3,790,077	25.91	344.26	26.12	0.84
FLO119	Southern Impressions, LLC	5.38E-03	597,834	3,753,226	7.32	499.26	9.74	0.51
FLO120	Southern Impressions, LLC	4.11E-03	597,834	3,753,226	6.71	394.26	17.10	0.58
FLO121	Gatewood Products, LLC	8.82E-02	616,130	3,783,777	3.12	810.93	1.63	2.92
FLO122	Crenlo, Inc	5.39E-03	621,000	3,792,000	16.70	430.37	6.79	0.56
FLO123	Crenlo, Inc	4.96E-03	621,000	3,792,000	16.70	488.71	11.06	0.69
FLO124	Flav-O-Rich	5.38E-01	614,229	3,782,213	9.45	477.59	0.01	0.41
FLO125	Flav-O-Rich	5.38E-01	614,229	3,782,213	9.45	477.59	0.01	0.41
GEO01	International Paper - Pulp & Paper Mill	0.00E+00	658,200	3,692,500	21.34	560.93	12.19	2.44
GEO02	International Paper - Pulp & Paper Mill	0.00E+00	658,150	3,692,600	60.96	516.48	18.29	4.42
GEO03	International Paper - Pulp & Paper Mill	0.00E+00	658,050	3,692,550	30.48	349.82	10.00	1.83
GEO04	International Paper - Pulp & Paper Mill	0.00E+00	658,040	3,692,560	30.48	349.82	10.00	1.83
GEO05	International Paper - Pulp & Paper Mill	0.00E+00	658,180	3,692,540	60.96	516.48	18.29	4.42
GEO06	International Paper - Pulp & Paper Mill	1.79E+02	658,220	3,692,587	85.34	462.04	12.20	5.20
GEO07	International Paper - Pulp & Paper Mill	1.40E+02	658,275	3,692,581	71.63	435.93	17.25	2.40
GEO08	International Paper - Pulp & Paper Mill	1.40E+02	658,217	3,692,622	76.20	344.26	12.10	3.70
GEO09	International Paper - Pulp & Paper Mill	1.36E-01	658,242	3,692,574	67.06	353.15	9.43	1.10
GEO10	International Paper - Pulp & Paper Mill	1.71E-01	658,242	3,692,595	67.06	353.15	9.43	1.10

Table A-4 SO_2 NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
GEO11	*International Paper - Pulp & Paper Mill*	*0.00E+00*	*658,000*	*3,693,000*	*21.30*	*1.90*	*2.10*	
GEO12	International Paper - Pulp & Paper Mill	0.00E+00	657,900	3,692,840	21.60	345.93	1.80	0.70
GEO13	International Paper - Pulp & Paper Mill	1.01E+00	658,092	3,692,601	30.50	340.93	6.95	1.50
GEO14	International Paper - Pulp & Paper Mill	1.09E+00	658,105	3,692,592	29.00	343.15	7.01	1.80
GEO15	*International Paper - Pulp & Paper Mill*	*0.00E+00*	*658,100*	*3,692,597*	*21.30*	*1.90*	*2.10*	
GEO16	International Paper - Pulp & Paper Mill	0.00E+00	657,979	3,692,594	33.53	312.04	14.66	1.20
GEO17	International Paper - Pulp & Paper Mill	0.00E+00	657,935	3,692,570	43.89	324.82	10.78	1.10
GEO18	International Paper - Pulp & Paper Mill	1.15E+00	658,128	3,692,719	20.70	355.93	8.05	1.10
GEO19	International Paper - Pulp & Paper Mill	1.98E-01	657,900	3,692,840	27.20	354.26	13.66	1.20
GEO20	International Paper - Pulp & Paper Mill	9.00E-01	657,900	3,692,840	8.20	483.15	0.01	0.70
GEO21	*International Paper - Pulp & Paper Mill*	*0.00E+00*	*657,900*	*3,692,840*	*3.00*	*94.80*	*1.40*	
GEO22	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	22.86	355.37	20.42	1.80
GEO23	Georgetown Steel, Inc.	3.53E-02	659,006	3,693,450	9.14	293.15	10.06	0.50
GEO24	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	9.30	293.15	10.52	0.61
GEO25	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	8.53	293.15	12.65	0.50
GEO26	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	31.39	332.04	4.51	10.21
GEO27	Georgetown Steel, Inc.	6.58E+00	659,006	3,693,450	24.38	355.93	0.01	232.75
GEO28	Georgetown Steel, Inc.	5.54E+01	659,006	3,693,450	24.14	514.82	11.16	2.87
GEO29	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	9.14	293.15	27.25	0.50
GEO30	Georgetown Steel, Inc.	1.31E+00	659,006	3,693,450	27.43	422.04	17.04	1.08
GEO31	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	25.30	417.04	5.39	1.72
GEO32	Georgetown Steel, Inc.	3.53E-02	659,006	3,693,450	28.27	417.04	13.69	3.57
GEO46	Oneita Industries	2.27E-03	634,095	3,702,924	6.86	394.26	0.01	0.52
GEO47	Oneita Industries	1.54E+01	633,574	3,702,622	19.20	505.37	0.01	0.79
HOR01	Santee Cooper-Grainger Station	3.88E+02	680,194	3,744,271	91.44	427.04	21.09	3.05
HOR02	Santee Cooper-Grainger Station	3.88E+02	680,221	3,744,286	91.44	430.37	21.34	3.05
HOR03	PPM Cranes, Inc.	0.00E+00	685,572	3,741,495	9.14	297.04	0.01	1.04
HOR04	Wolverine Brass, Inc.	0.00E+00	682,024	3,743,374	9.93	315.93	20.33	0.71
HOR05	Wolverine Brass, Inc.	0.00E+00	682,024	3,743,374	10.26	315.93	20.33	0.56
HOR06	Embers Charcoal Company	0.00E+00	684,030	3,743,977	21.34	1,255.37	2.76	3.05
HOR07	Embers Charcoal Company	0.00E+00	684,030	3,743,977	14.94	560.93	10.85	1.46
HOR08	Embers Charcoal Company	0.00E+00	684,030	3,743,977	12.19	293.15	0.01	0.52
HOR09	Santee Cooper - Myrtle Beach	1.18E+01	692,374	3,731,768	5.33	719.26	21.73	3.16
HOR10	Santee Cooper - Myrtle Beach	1.18E+01	692,374	3,731,768	5.33	719.26	21.73	3.16
HOR11	Santee Cooper - Myrtle Beach	1.72E+01	692,400	3,731,737	12.80	754.26	20.03	3.99
HOR12	Santee Cooper - Myrtle Beach	1.72E+01	692,400	3,731,737	12.80	754.26	20.03	3.99
HOR13	Santee Cooper - Myrtle Beach	2.24E+01	692,400	3,731,737	12.19	755.37	30.48	5.92
HOR14	Uniblend Spinners	2.55E+00	683,667	3,758,197	10.52	449.82	6.61	0.52
HOR15	NewSouth, Inc.	2.44E-01	683,429	3,744,530	15.39	435.93	16.49	1.37
HOR16	Conway Hospital	3.22E-01	685,058	3,739,734	9.14	541.48	6.10	0.55
HOR17	Conway Hospital	3.22E-01	685,058	3,739,734	9.14	541.48	6.10	0.55
HOR18	Allied Signal Metglas Products	3.53E-01	685,874	3,741,199	3.05	825.93	0.01	0.20
HOR20	Grand Strand WW treatment plant	2.24E-01	685,146	3,741,585	3.66	727.59	46.94	0.20
HOR23	Horry Co. SWA	8.69E-02	688,153	3,743,031	8.84	1,088.71	13.99	0.25
HOR24	Santee Cooper Horry Co. Landfill	7.60E-01	688,153	3,743,031	2.65	803.00	70.00	0.25
MAR01	Fabric Resources Intl. Ltd.	1.64E+01	662,472	3,785,419	15.54	505.37	13.72	0.91
MAR02	Cone Mills-Raytex Finishing	1.13E-03	646,597	3,780,598	11.89	410.93	13.11	0.88
MAR03	Cone Mills-Raytex Finishing	1.01E-03	646,597	3,780,598	12.34	422.04	14.26	0.71
MAR04	Cone Mills-Raytex Finishing	1.29E+00	646,597	3,780,598	10.82	468.71	7.62	0.61
MAR05	Cone Mills-Raytex Finishing	2.82E+00	646,597	3,780,598	11.51	530.37	12.80	0.86
MAR06	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	1.11
MAR07	International Paper	1.26E-01	641,005	3,793,021	24.38	445.37	10.16	1.64
MAR08	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR09	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR10	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR11	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	12.70	0.92
MAR12	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	20.31	1.12
MAR13	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	12.70	1.02
MAR14	Pilliod Furniture	2.52E-03	670,890	3,789,586	12.19	533.15	14.81	0.56
MAR15	Pilliod Furniture	0.00E+00	670,870	3,789,382	6.71	297.04	18.59	0.61
MAR16	Marion Memorial Hospital	2.41E-01	646,601	3,783,285	6.71	405.37	6.43	0.38
MAR17	Blumenthal Mills, Inc.	3.17E+00	646,273	3,782,473	17.19	449.82	9.33	0.76
MAR18	Blumenthal Mills, Inc.	1.26E-03	646,349	3,782,473	8.47	422.04	6.10	0.94
MAR19	Mullins Hospital	4.28E-01	660,780	3,785,405	9.14	449.82	5.97	0.30
MAR21	Marion Ceramics	7.56E-04	636,481	3,787,562	9.14	422.04	6.10	0.81
MAR22	Piggly Wiggly #54	1.26E-01	647,660	3,784,688	9.75	1,088.71	4.57	0.61
MAR23	Russell Stover Candy	3.04E+00	648,945	3,783,063	12.04	477.59	18.29	0.61
MAR24	SO-PAK-CO, INC.	1.08E+00	661,322	3,786,207	7.47	508.15	14.81	0.61
MAR25	SO-PAK-CO, INC.	1.35E+00	661,322	3,786,207	8.99	508.15	11.43	0.30
MAR26	Wellman, Inc.	1.64E-02	652,677	3,784,762	3.69	699.82	9.10	0.20
MAR27	Sara Lee Hosiery	7.16E-02	644,376	3,783,398	8.84	449.82	0.01	0.51
MAR28	Heritage Sportswear	2.61E+00	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR29	Heritage Sportswear	2.61E+00	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR30	Marion Co. Medical Center	2.77E-04	654,380	3,783,988	7.62	447.04	0.01	0.07
MAR31	Forest Industries International, Inc.	6.17E-02	640,232	3,794,446	22.56	449.82	0.01	1.14
MAR32	Forest Industries International, Inc.	3.78E-02	640,232	3,794,446	12.19	449.82	0.01	0.76
WIL01	Martek	3.01E+00	610,782	3,732,426	14.80	533.15	13.72	1.00
WIL02	Martek	1.60E+00	610,789	3,732,422	14.80	533.15	13.72	0.86
WIL03	Martek	8.06E+00	610,789	3,732,422	14.81	533.15	22.80	0.76
WIL04	Colonial Rubber	1.64E-01	609,670	3,728,650	8.53	449.82	7.13	0.43
WIL05	Colonial Rubber	1.64E-01	609,670	3,728,650	8.53	449.82	7.13	0.43
WIL06	Colonial Rubber	0.00E+00	609,670	3,728,650	5.49	294.26	15.88	1.68

Table A-4 SO_2 NAAQS Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
WIL07	Colonial Rubber	0.00E+00	609,670	3,728,650	9.14	294.26	10.36	0.15
WIL08	Colonial Rubber	1.55E+00	609,670	3,728,650	11.58	449.82	16.70	0.61
WIL09	Colonial Rubber	0.00E+00	609,670	3,728,650	24.38	294.26	5.82	0.25
WIL10	Colonial Rubber	0.00E+00	609,670	3,728,650	27.74	294.26	2.93	0.37
WIL11	Colonial Rubber	0.00E+00	609,670	3,728,650	24.08	294.26	11.52	0.20
WIL12	Colonial Rubber	1.32E-01	609,670	3,728,650	8.53	1,033.15	10.36	0.24
WIL13	*Colonial Rubber*	*0.00E+00*	*609,670*	*3,728,650*	*13.20*	*39.62*	*39.62*	
WIL14	Williamsburg Co. Mem. Hospital	5.34E-01	609,459	3,724,952	12.50	408.15	2.53	1.08
WIL15	Burns Philp Food	6.30E-02	609,895	3,729,639	13.72	477.59	14.94	0.76
WIL16	Burns Philp Food	1.26E-01	609,895	3,729,639	15.24	477.59	29.87	0.76
WIL17	Burns Philp Food	9.89E+00	609,895	3,729,639	15.24	538.71	14.94	0.99
WIL19	Firestone Building Products	0.00E+00	610,153	3,729,519	11.31	293.15	15.09	1.22
WIL20	Firestone Building Products	2.52E-03	610,153	3,729,519	9.91	523.15	19.29	0.61
WIL21	Milliken-Kingstree Plant	1.74E+00	609,537	3,728,458	7.32	423.15	13.72	0.30
WIL22	Nan Ya Plastics	0.00E+00	614,326	3,744,476	9.00	310.93	0.01	1.88
WIL23	Nan Ya Plastics	0.00E+00	614,201	3,744,476	15.39	310.93	0.01	2.37
WIL24	Nan Ya Plastics	0.00E+00	614,700	3,745,000	19.99	308.15	0.01	2.18
WIL25	Nan Ya Plastics	4.19E+00	614,305	3,744,223	39.62	438.71	9.51	1.80
WIL26	Nan Ya Plastics	9.81E+00	614,305	3,744,223	39.62	438.71	12.09	2.49
WIL27	Nan Ya Plastics	0.00E+00	614,159	3,743,972	30.48	292.98	0.01	0.20
WIL28	Nan Ya Plastics	0.00E+00	614,396	3,744,362	16.00	304.00	0.01	0.21

Note: Area and Volume sources are listed in italics.

Table A-5 NO_X Increment Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
DAR01	Nucor Steel	-5.29E+00	601,809	3,804,275	22.86	366.48	22.59	6.40
DAR02	Nucor Steel Darlington	5.29E+00	601,813	3,804,543	34.44	293.15	9.17	0.23
DAR03	Nucor Steel Darlington	0.00E+00	601,813	3,804,543	22.86	366.48	16.12	6.40
DAR04	Nucor Steel	2.14E+00	601,570	3,804,053	22.86	638.15	18.41	1.52
DAR05	Nucor Steel	2.14E+00	601,572	3,803,963	22.86	638.15	18.41	1.52
DAR06	Nucor Steel	2.14E+00	601,719	3,804,080	22.86	638.15	18.41	1.52
DAR07	*Nucor Steel*	*9.00E-01*	*601,769*	*3,804,158*	*37.67*	*7.32*	*15.58*	
DAR08	*Nucor Steel*	*4.16E-01*	*601,639*	*3,804,117*	*19.20*	*18.59*	*8.93*	
DAR09	Nucor Steel	0.00E+00	599,868	3,804,333	18.29	305.37	17.37	1.07
DAR10	*Nucor Steel*	*5.00E-01*	*601,202*	*3,804,201*	*17.07*	*0.57*	*7.10*	
DAR11	*Nucor Steel*	*0.00E+00*	*602,047*	*3,804,175*	*10.00*	*319.00*	*167.00*	
DAR58	Wellman -- Palmetto Plant	0.00E+00	609,762	3,792,529	24.99	422.04	10.70	0.93
DAR59	Wellman -- Palmetto Plant	2.27E+00	609,754	3,792,534	30.48	449.82	9.45	3.66
DAR60	Wellman, Inc.	2.27E+00	609,804	3,792,578	24.99	422.04	15.25	0.93
DAR61	Wellman, Inc.	1.72E+01	609,810	3,792,566	30.48	449.82	9.45	3.66
DAR62	Wellman, Inc.	0.00E+00	609,631	3,792,622	13.11	755.37	0.01	0.25
DAR63	Wellman, Inc.	0.00E+00	609,784	3,792,430	15.24	298.71	0.01	0.41
DAR64	Wellman, Inc.	0.00E+00	609,780	3,792,425	15.24	322.04	0.01	0.46
DAR65	Wellman, Inc.	0.00E+00	610,046	3,792,925	3.05	313.71	0.01	0.15
DAR66	Wellman, Inc.	0.00E+00	609,775	3,792,764	5.49	313.71	0.01	0.15
DAR67	Wellman, Inc.	0.00E+00	609,801	3,792,740	22.86	455.37	15.70	1.20
DAR68	Wellman, Inc.	0.00E+00	609,812	3,792,750	22.86	455.37	15.70	1.20
DAR69	Wellman, Inc.	6.30E-01	609,839	3,792,784	22.86	465.93	23.16	1.20
DAR75	HRS Textiles	1.46E-01	600,270	3,785,042	8.23	435.98	0.01	11.00
DAR76	Chesterfield Lumber	7.19E-01	604,751	3,793,878	24.55	475.37	16.76	0.71
DAR77	Chesterfield Lumber	0.00E+00	604,541	3,793,868	15.24	293.15	0.01	0.91
DAR78	Chesterfield Lumber	2.70E-01	604,753	3,793,871	19.99	474.26	16.79	0.70
DAR79	Chesterfield Lumber	7.09E-01	604,754	3,793,878	24.55	475.37	16.76	0.71
DAR80	PowerSecure, Inc.	8.47E+00	609,179	3,792,693	5.03	653.15	77.90	0.36
FLO58	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO59	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO60	Dupont-Florence	0.00E+00	630,885	3,784,747	38.10	449.82	8.17	1.52
FLO61	Dupont-Florence	0.00E+00	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO62	Dupont-Florence	0.00E+00	630,835	3,784,795	38.10	533.15	4.63	1.05
FLO63	Dupont-Florence	0.00E+00	630,848	3,784,778	38.10	533.15	2.32	1.05
FLO64	Dupont-Florence	0.00E+00	630,855	3,784,771	38.10	533.15	2.32	1.05
FLO65	Dupont-Florence	0.00E+00	630,863	3,784,764	38.10	533.15	2.32	1.05
FLO66	Dupont-Florence	0.00E+00	630,780	3,784,740	14.63	333.15	24.38	0.23
FLO67	Dupont-Florence	0.00E+00	630,675	3,784,970	15.24	310.93	15.24	0.61
FLO68	Dupont-Florence	0.00E+00	630,762	3,784,682	9.14	294.26	0.01	0.30
FLO69	Dupont-Florence	0.00E+00	630,712	3,784,980	18.29	294.26	0.01	1.38
FLO70	Dupont-Florence	0.00E+00	630,841	3,784,804	38.10	449.82	8.11	1.52
FLO71	Dupont-Florence	0.00E+00	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO72	Dupont-Florence	0.00E+00	630,848	3,784,778	38.10	533.15	5.79	1.05
FLO73	Dupont-Florence	0.00E+00	630,855	3,784,771	38.10	533.15	5.79	1.05
FLO74	Dupont-Florence	2.14E+00	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO75	Dupont-Florence	2.14E+00	630,896	3,784,768	16.76	449.82	16.76	1.01

Table A-6. PM_{10} Increment Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
DAR58	Wellman -- Palmetto Plant	0.00E+00	609,762	3,792,529	24.99	422.04	10.70	0.93
DAR59	Wellman -- Palmetto Plant	1.30E-01	609,754	3,792,534	30.48	449.82	9.45	3.66
DAR60	Wellman, Inc.	1.30E-01	609,804	3,792,578	24.99	422.04	15.25	0.93
DAR61	Wellman, Inc.	1.73E+00	609,810	3,792,566	30.48	449.82	9.45	3.66
DAR62	Wellman, Inc.	0.00E+00	609,631	3,792,622	13.11	755.37	0.01	0.25
DAR63	Wellman, Inc.	0.00E+00	609,784	3,792,430	15.24	298.71	0.01	0.41
DAR64	Wellman, Inc.	0.00E+00	609,780	3,792,425	15.24	322.04	0.01	0.46
DAR65	Wellman, Inc.	0.00E+00	610,046	3,792,925	3.05	313.71	0.01	0.15
DAR66	Wellman, Inc.	0.00E+00	609,775	3,792,764	5.49	313.71	0.01	0.15
DAR67	Wellman, Inc.	0.00E+00	609,801	3,792,740	22.86	455.37	15.70	1.20
DAR68	Wellman, Inc.	0.00E+00	609,812	3,792,750	22.86	455.37	15.70	1.20
DAR69	Wellman, Inc.	9.58E-02	609,839	3,792,784	22.86	465.93	23.16	1.20
DAR75	HRS Textiles	7.04E-03	600,270	3,785,042	8.23	435.98	0.01	11.00
DAR80	PowerSecure, Inc.	2.22E-01	609,179	3,792,693	5.03	653.15	77.90	0.36
DIL04	Paperboard Industries Corp.	0.00E+00	643,750	3,799,194	9.14	410.93	0.01	0.51
DIL05	Paperboard Industries Corp.	0.00E+00	643,750	3,799,194	9.14	410.93	0.01	0.51
FLO01	Talon, Inc.	-6.61E-01	614,192	3,746,291	13.39	449.82	11.34	1.01
FLO02	Talon, Inc.	-6.61E-01	614,192	3,746,294	14.05	449.82	11.34	0.97
FLO03	A.C. Monk	-4.54E-02	615,250	3,748,000	11.49	444.26	8.23	0.61
FLO04	Stone Container	1.22E+01	632,600	3,779,600	52.73	453.82	30.82	1.88
FLO05	Stone Container	0.00E+00	632,600	3,779,600	40.23	459.98	16.99	2.13
FLO06	Stone Container	0.00E+00	632,600	3,779,600	54.56	456.82	21.98	2.74
FLO07	Stone Container	0.00E+00	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO08	Stone Container	0.00E+00	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO09	Stone Container	0.00E+00	632,600	3,779,600	45.72	340.93	9.39	1.22
FLO10	Stone Container	6.80E+00	632,600	3,779,600	76.20	459.21	19.75	3.66
FLO11	Stone Container	0.00E+00	632,600	3,779,600	30.48	362.04	3.69	1.07
FLO12	Carter Manufacturing	0.00E+00	615,624	3,753,919	21.34	422.04	0.01	0.91
FLO13	Wellman	6.30E-01	643,884	3,744,592	15.24	337.15	15.70	1.07
FLO14	Wellman	-5.41E-01	643,952	3,744,641	10.06	293.15	0.01	1.22
FLO15	Wellman	-5.41E-01	643,934	3,744,634	10.06	293.15	0.01	1.22
FLO16	Wellman	-5.41E-01	643,938	3,744,638	10.06	293.15	0.01	1.22
FLO17	Wellman	-5.41E-01	643,946	3,744,647	10.06	293.15	0.01	1.22
FLO18	Wellman	-2.72E-01	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO19	Wellman	-2.70E-01	644,014	3,744,510	10.52	293.15	0.01	1.22
FLO20	Wellman	-2.72E-01	644,000	3,744,523	10.52	293.15	0.01	1.22
FLO21	Wellman	-1.61E-01	644,011	3,744,520	10.52	293.15	0.01	1.22
FLO22	Wellman	-2.72E-01	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO23	Wellman	-3.78E-02	643,948	3,744,627	19.05	293.15	0.01	0.61
FLO24	Wellman	-3.78E-02	643,960	3,744,638	19.05	293.15	0.01	0.61
FLO25	Wellman	-1.07E-01	643,955	3,744,623	19.05	292.98	0.01	0.91
FLO26	Wellman	-1.07E-01	643,959	3,744,626	19.05	292.98	0.01	0.91
FLO27	Wellman	-1.07E-01	643,932	3,744,630	19.05	292.98	0.01	0.91
FLO28	Wellman	-1.07E-01	643,965	3,744,633	19.05	292.98	0.01	0.91
FLO29	Wellman	-1.07E-01	643,967	3,744,650	21.34	293.15	0.01	0.91
FLO30	Wellman	-1.07E-01	643,971	3,744,654	21.34	293.15	0.01	0.91
FLO31	Wellman	-1.07E-01	643,973	3,744,656	21.34	293.15	0.01	0.91
FLO32	Wellman	-1.07E-01	643,981	3,744,660	21.34	293.15	0.01	0.91
FLO33	Wellman	-1.07E-01	643,984	3,744,656	21.34	293.15	0.01	0.91
FLO34	Wellman	-1.07E-01	643,986	3,744,653	21.34	293.15	0.01	0.91
FLO35	Wellman	-1.07E-01	643,972	3,744,640	21.34	293.15	0.01	0.91
FLO36	Wellman	-1.07E-01	643,975	3,744,643	21.34	293.15	0.01	0.91
FLO37	Wellman	-1.07E-01	643,976	3,744,649	21.34	293.15	0.01	0.91
FLO38	Wellman	-1.07E-01	643,981	3,744,648	21.34	293.15	0.01	0.91
FLO39	Wellman	1.42E-01	643,981	3,744,664	21.49	293.15	0.01	0.61
FLO40	Wellman	1.35E-01	643,989	3,744,659	21.49	293.15	0.01	0.61
FLO41	Wellman	-2.72E-01	644,001	3,744,500	7.32	293.15	0.01	1.22
FLO42	Wellman	-6.98E-01	643,868	3,744,574	7.62	322.04	0.01	38.31
FLO43	Wellman	1.79E-01	643,910	3,744,152	5.85	293.15	0.01	0.94
FLO44	Tyler Plywood Corporation	0.00E+00	611,972	3,784,650	9.75	560.93	15.24	0.76
FLO45	Tyler Plywood Corporation	0.00E+00	611,972	3,784,650	9.14	472.04	5.30	0.76
FLO46	Koppers Industries	1.15E+00	616,994	3,785,299	10.97	458.71	12.71	0.91
FLO47	Koppers Industries	0.00E+00	616,975	3,785,299	8.23	472.04	5.39	0.76
FLO48	Koppers Industries	-4.81E-01	616,994	3,785,299	10.97	449.82	6.10	0.91
FLO49	Koppers Industries	2.25E-02	616,673	3,785,494	6.10	255.60	0.86	0.00
FLO50	Marsh Lumber Company	0.00E+00	631,809	3,762,880	11.13	516.48	26.40	0.48
FLO51	Marsh Lumber Company	0.00E+00	631,809	3,762,880	11.13	510.93	23.38	0.48
FLO52	Marsh Lumber Company	0.00E+00	631,809	3,762,880	8.71	505.37	0.01	33.15
FLO53	The ESAB Group	1.55E-01	605,540	3,783,005	6.10	380.37	12.70	0.91
FLO54	The ESAB Group	0.00E+00	605,539	3,783,004	7.47	292.98	0.01	0.91
FLO55	The ESAB Group	0.00E+00	605,539	3,783,004	7.62	422.04	0.01	0.30
FLO56	The ESAB Group	0.00E+00	605,539	3,783,004	6.71	422.04	10.03	0.61
FLO57	The ESAB Group	0.00E+00	605,539	3,783,004	6.71	422.04	10.03	0.61
FLO58	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO59	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO60	Dupont-Florence	7.50E+00	630,885	3,784,747	38.10	449.82	8.17	1.52
FLO61	Dupont-Florence	0.00E+00	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO62	Dupont-Florence	0.00E+00	630,835	3,784,795	38.10	533.15	4.63	1.05
FLO63	Dupont-Florence	0.00E+00	630,848	3,784,778	38.10	533.15	2.32	1.05

Table A-6. PM_{10} Increment Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
FLO64	Dupont-Florence	0.00E+00	630,855	3,784,771	38.10	533.15	2.32	1.05
FLO65	Dupont-Florence	0.00E+00	630,863	3,784,764	38.10	533.15	2.32	1.05
FLO66	Dupont-Florence	0.00E+00	630,780	3,784,740	14.63	333.15	24.38	0.23
FLO67	Dupont-Florence	0.00E+00	630,675	3,784,970	15.24	310.93	15.24	0.61
FLO68	Dupont-Florence	0.00E+00	630,762	3,784,682	9.14	294.26	0.01	0.30
FLO69	Dupont-Florence	0.00E+00	630,712	3,784,980	18.29	294.26	0.01	1.38
FLO70	Dupont-Florence	-7.50E+00	630,841	3,784,804	38.10	449.82	8.11	1.52
FLO71	Dupont-Florence	0.00E+00	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO72	Dupont-Florence	0.00E+00	630,848	3,784,778	38.10	533.15	5.79	1.05
FLO73	Dupont-Florence	0.00E+00	630,855	3,784,771	38.10	533.15	5.79	1.05
FLO74	Dupont-Florence	2.82E-01	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO75	Dupont-Florence	2.82E-01	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO76	Charles Ingram Lumber Co	1.67E-02	629,592	3,772,923	4.36	263.15	4.05	0.00
FLO77	Charles Ingram Lumber Co	2.88E-02	629,592	3,772,923	4.36	264.54	4.05	0.00
FLO78	Charles Ingram Lumber Co	2.19E-02	629,592	3,772,923	4.36	262.15	4.05	0.00
FLO79	Charles Ingram Lumber Co	2.19E-02	629,592	3,772,923	4.36	262.15	4.05	0.00
FLO80	La-Z-Boy East	0.00E+00	613,622	3,785,748	7.62	533.15	0.01	0.51
FLO82	McLeod Regional Medical Center	-3.77E-02	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO83	McLeod Regional Medical Center	-3.77E-02	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO84	McLeod Regional Medical Center	-3.77E-02	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO85	McLeod Regional Medical Center	1.26E-02	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO86	McLeod Regional Medical Center	1.26E-02	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO87	McLeod Regional Medical Center	7.61E-02	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO88	McLeod Regional Medical Center	7.61E-02	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO89	Sara Lee Hosiery	1.31E-02	618,392	3,766,573	8.23	522.04	13.29	0.51
FLO90	Asea Brown Boveri	3.02E-02	612,043	3,789,426	9.14	410.93	5.12	0.56
FLO91	Vulcraft-Div. of Nucor	2.02E-02	612,076	3,786,654	19.51	533.15	9.30	0.71
FLO92	Vulcraft-Div. of Nucor	1.29E+00	612,076	3,786,654	1.83	448.82	56.14	0.00
FLO93	Maytag Florence Operations	1.03E-02	611,275	3,789,417	13.11	410.93	4.63	0.67
FLO94	Maytag Florence Operations	2.09E-02	611,275	3,789,417	13.11	866.48	5.21	0.46
FLO95	Nan Ya Plastics	0.00E+00	614,396	3,744,362	16.00	303.15	0.01	0.21
FLO96	McCall Farms	1.39E-01	614,987	3,768,359	6.71	293.98	11.89	0.60
FLO97	McCall Farms	2.49E-01	614,855	3,768,666	13.72	449.82	12.80	0.91
FLO98	McCall Farms	1.13E-01	614,855	3,768,666	12.19	325.93	24.99	0.61
FLO99	McCall Farms	9.45E-02	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO100	McCall Farms	2.47E-01	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO101	McCall Farms	1.01E-01	614,987	3,768,359	10.97	449.82	10.61	0.91
FLO102	McCall Farms	4.41E-02	614,855	3,768,666	8.53	449.82	3.78	0.91
FLO103	McCall Farms	3.40E-01	614,987	3,768,359	14.63	449.82	11.89	0.91
FLO104	Roche Carolina	1.39E-01	629,000	3,786,850	15.54	544.26	9.94	1.28
FLO105	Roche Carolina	5.04E-02	628,939	3,786,580	48.77	349.82	12.19	0.51
FLO106	Roche Carolina	2.52E-01	628,920	3,786,560	15.24	810.93	5.76	0.51
FLO107	Roche Carolina	9.07E-01	629,020	3,786,870	14.97	1,273.00	20.00	0.63
FLO108	Florence Wastewater Treatment	1.45E-01	615,180	3,781,886	3.66	724.82	44.20	0.20
FLO109	Florence Wastewater Treatment	3.47E-01	615,180	3,781,886	3.66	738.71	69.80	0.25
FLO110	Florence Wastewater Treatment	2.74E-01	615,180	3,781,886	3.66	722.04	80.77	0.20
FLO111	Francis Marion University	1.51E-02	624,275	3,784,375	7.01	408.15	6.51	0.40
FLO112	Francis Marion University	1.51E-02	624,275	3,784,375	7.01	408.15	6.81	0.40
FLO113	Francis Marion University	1.51E-02	624,275	3,784,375	7.01	408.15	7.12	0.40
FLO114	Carolinas Hospital System	2.27E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO115	Carolinas Hospital System	2.27E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO116	Carolinas Hospital System	2.27E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO117	Honda	2.39E-02	600,175	3,774,660	6.10	449.82	15.24	0.46
FLO118	Duquesne Energy	7.64E-01	612,726	3,790,077	25.91	344.26	26.12	0.84
FLO119	Southern Impressions, LLC	1.59E-02	597,834	3,753,226	7.32	499.26	9.74	0.51
FLO120	Southern Impressions, LLC	9.01E-03	597,834	3,753,226	6.71	394.26	17.10	0.58
FLO121	Gatewood Products, LLC	0.00E+00	616,130	3,783,777	3.12	810.93	1.63	2.92
FLO122	Crenlo, Inc	1.89E-02	621,000	3,792,000	16.70	430.37	6.79	0.56
FLO123	Crenlo, Inc	1.73E-02	621,000	3,792,000	16.70	488.71	11.06	0.69
FLO124	Flav-O-Rich	2.14E-02	614,229	3,782,213	9.45	477.59	0.01	0.41
FLO125	Flav-O-Rich	2.14E-02	614,229	3,782,213	9.45	477.59	0.01	0.41
GEO01	International Paper - Pulp & Paper Mill	-4.13E+00	658,200	3,692,500	21.34	560.93	12.19	2.44
GEO02	International Paper - Pulp & Paper Mill	-5.45E+01	658,150	3,692,600	60.96	516.48	18.29	4.42
GEO03	International Paper - Pulp & Paper Mill	-2.02E+00	658,050	3,692,550	30.48	349.82	10.00	1.83
GEO04	International Paper - Pulp & Paper Mill	-2.02E+00	658,040	3,692,560	30.48	349.82	10.00	1.83
GEO05	International Paper - Pulp & Paper Mill	-8.08E+00	658,180	3,692,540	60.96	516.48	18.29	4.42
GEO06	International Paper - Pulp & Paper Mill	2.40E+00	658,220	3,692,587	85.34	462.04	12.20	5.20
GEO07	International Paper - Pulp & Paper Mill	0.00E+00	658,275	3,692,581	71.63	435.93	17.25	2.40
GEO08	International Paper - Pulp & Paper Mill	5.36E+00	658,217	3,692,622	76.20	344.26	12.10	3.70
GEO09	International Paper - Pulp & Paper Mill	0.00E+00	658,242	3,692,574	67.06	353.15	9.43	1.10
GEO10	International Paper - Pulp & Paper Mill	0.00E+00	658,242	3,692,595	67.06	353.15	9.43	1.10
GEO11	International Paper - Pulp & Paper Mill	1.07E+00	658,000	3,693,000	21.30	258.83	2.10	0.00
GEO12	International Paper - Pulp & Paper Mill	7.00E-02	657,900	3,692,840	21.60	345.93	1.80	0.70
GEO13	International Paper - Pulp & Paper Mill	0.00E+00	658,092	3,692,601	30.50	340.93	6.95	1.50
GEO14	International Paper - Pulp & Paper Mill	2.65E-03	658,105	3,692,592	29.00	343.15	7.01	1.80
GEO15	International Paper - Pulp & Paper Mill	0.00E+00	658,100	3,692,597	21.30	258.83	2.10	0.00
GEO16	International Paper - Pulp & Paper Mill	0.00E+00	657,979	3,692,594	33.53	312.04	14.66	1.20
GEO17	International Paper - Pulp & Paper Mill	0.00E+00	657,935	3,692,570	43.89	324.82	10.78	1.10
GEO18	International Paper - Pulp & Paper Mill	4.60E-03	658,128	3,692,719	20.70	355.93	8.05	1.10

Table A-6. PM_{10} Increment Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
GEO19	International Paper - Pulp & Paper Mill	4.91E-02	657,900	3,692,840	27.20	354.26	13.66	1.20
GEO20	International Paper - Pulp & Paper Mill	3.78E-02	657,900	3,692,840	8.20	483.15	0.01	0.70
GEO21	International Paper - Pulp & Paper Mill	3.10E-01	657,900	3,692,840	3.00	428.16	1.40	0.00
GEO22	Georgetown Steel, Inc.	7.16E-01	659,006	3,693,450	22.86	355.37	20.42	1.80
GEO23	Georgetown Steel, Inc.	2.23E-02	659,006	3,693,450	9.14	293.15	10.06	0.50
GEO24	Georgetown Steel, Inc.	3.15E-02	659,006	3,693,450	9.30	293.15	10.52	0.61
GEO25	Georgetown Steel, Inc.	-3.93E-01	659,006	3,693,450	8.53	293.15	12.65	0.50
GEO26	Georgetown Steel, Inc.	-1.34E+01	659,006	3,693,450	31.39	332.04	4.51	10.21
GEO27	Georgetown Steel, Inc.	9.05E-01	659,006	3,693,450	24.38	355.93	0.01	232.75
GEO28	Georgetown Steel, Inc.	-1.08E+00	659,006	3,693,450	24.14	514.82	11.16	2.87
GEO29	Georgetown Steel, Inc.	1.59E-01	659,006	3,693,450	9.14	293.15	27.25	0.50
GEO30	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	27.43	422.04	17.04	1.08
GEO31	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	25.30	417.04	5.39	1.72
GEO32	Georgetown Steel, Inc.	1.65E-02	659,006	3,693,450	28.27	417.04	13.69	3.57
GEO41	International Paper - Sampit Lumber	-2.50E+00	644,267	3,698,949	21.31	546.48	17.13	0.39
GEO42	International Paper - Sampit Lumber	-2.41E-01	644,260	3,698,945	9.11	294.26	0.01	0.61
GEO43	International Paper - Sampit Lumber	3.99E-01	644,270	3,698,950	2.40	294.26	0.01	0.60
GEO44	International Paper - Sampit Lumber	0.00E+00	644,263	3,698,940	21.31	294.26	0.01	1.20
GEO45	International Paper - Sampit Lumber	1.45E+00	644,267	3,698,940	15.85	491.48	12.89	0.91
HOR01	Santee Cooper-Grainger Station	0.00E+00	680,194	3,744,271	91.44	427.04	21.09	3.05
HOR02	Santee Cooper-Grainger Station	0.00E+00	680,221	3,744,286	91.44	430.37	21.34	3.05
HOR03	PPM Cranes, Inc.	0.00E+00	685,572	3,741,495	9.14	297.04	0.01	1.04
HOR04	Wolverine Brass, Inc.	0.00E+00	682,024	3,743,374	9.93	315.93	20.33	0.71
HOR05	Wolverine Brass, Inc.	0.00E+00	682,024	3,743,374	10.26	315.93	20.33	0.56
HOR06	Embers Charcoal Company	0.00E+00	684,030	3,743,977	21.34	1,255.37	2.76	3.05
HOR07	Embers Charcoal Company	0.00E+00	684,030	3,743,977	14.94	560.93	10.85	1.46
HOR08	Embers Charcoal Company	0.00E+00	684,030	3,743,977	12.19	293.15	0.01	0.52
HOR14	Uniblend Spinners	0.00E+00	683,667	3,758,197	10.52	449.82	6.61	0.52
HOR15	NewSouth, Inc.	0.00E+00	683,429	3,744,530	15.39	435.93	16.49	1.37
HOR16	Conway Hospital	0.00E+00	685,058	3,739,734	9.14	541.48	6.10	0.55
HOR17	Conway Hospital	0.00E+00	685,058	3,739,734	9.14	541.48	6.10	0.55
HOR18	Allied Signal Metglas Products	0.00E+00	685,874	3,741,199	3.05	825.93	0.01	0.20
HOR20	Grand Strand WW treatment plant	0.00E+00	685,146	3,741,585	3.66	727.59	46.94	0.20
HOR21	Bayshore Concrete Products	0.00E+00	680,194	3,744,271	4.57	477.59	14.55	0.49
HOR22	Bayshore Concrete Products	0.00E+00	680,194	3,744,271	4.88	477.59	9.70	0.40
HOR23	Horry Co. SWA	0.00E+00	688,153	3,743,031	8.84	1,088.71	13.99	0.25
HOR24	Santee Cooper Horry Co. Landfill	0.00E+00	688,153	3,743,031	2.65	803.00	70.00	0.25
MAR01	Fabric Resources Intl. Ltd.	0.00E+00	662,472	3,785,419	15.54	505.37	13.72	0.91
MAR02	Cone Mills-Raytex Finishing	0.00E+00	646,597	3,780,598	11.89	410.93	13.11	0.88
MAR03	Cone Mills-Raytex Finishing	0.00E+00	646,597	3,780,598	12.34	422.04	14.26	0.71
MAR04	Cone Mills-Raytex Finishing	0.00E+00	646,597	3,780,598	10.82	468.71	7.62	0.61
MAR05	Cone Mills-Raytex Finishing	0.00E+00	646,597	3,780,598	11.51	530.37	12.80	0.86
MAR06	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	1.11
MAR07	International Paper	0.00E+00	641,005	3,793,021	24.38	445.37	10.16	1.64
MAR08	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR09	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR10	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR11	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	12.70	0.92
MAR12	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	20.31	1.12
MAR13	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	12.70	1.02
MAR14	Pilliod Furniture	0.00E+00	670,890	3,789,586	12.19	533.15	14.81	0.56
MAR15	Pilliod Furniture	0.00E+00	670,870	3,789,382	6.71	297.04	18.59	0.61
MAR16	Marion Memorial Hospital	0.00E+00	646,601	3,783,285	6.71	405.37	6.43	0.38
MAR17	Blumenthal Mills, Inc.	0.00E+00	646,273	3,782,473	17.19	449.82	9.33	0.76
MAR18	Blumenthal Mills, Inc.	0.00E+00	646,349	3,782,473	8.47	422.04	6.10	0.94
MAR19	Mullins Hospital	0.00E+00	660,780	3,785,405	9.14	449.82	5.97	0.30
MAR20	AVM of South Carolina	0.00E+00	655,700	3,784,688	6.10	293.71	27.13	0.61
MAR21	Marion Ceramics	0.00E+00	636,481	3,787,562	9.14	422.04	6.10	0.81
MAR22	Piggly Wiggly #54	0.00E+00	647,660	3,784,688	9.75	1,088.71	4.57	0.61
MAR23	Russell Stover Candy	0.00E+00	648,945	3,783,063	12.04	477.59	18.29	0.61
MAR24	SO-PAK-CO, INC.	0.00E+00	661,322	3,786,207	7.47	508.15	14.81	0.61
MAR25	SO-PAK-CO, INC.	0.00E+00	661,322	3,786,207	8.99	508.15	11.43	0.30
MAR26	Wellman, Inc.	0.00E+00	652,677	3,784,762	3.69	699.82	9.10	0.20
MAR27	Sara Lee Hosiery	0.00E+00	644,376	3,783,398	8.84	449.82	0.01	0.51
MAR28	Heritage Sportswear	0.00E+00	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR29	Heritage Sportswear	0.00E+00	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR30	Marion Co. Medical Center	0.00E+00	654,380	3,783,988	7.62	447.04	0.01	0.07
MAR31	Forest Industries International, Inc.	0.00E+00	640,232	3,794,446	22.56	449.82	0.01	1.14
MAR32	Forest Industries International, Inc.	0.00E+00	640,232	3,794,446	12.19	449.82	0.01	0.76
WIL01	Martek	0.00E+00	610,782	3,732,426	14.80	533.15	13.72	1.00
WIL02	Martek	0.00E+00	610,789	3,732,422	14.80	533.15	13.72	0.86
WIL03	Martek	0.00E+00	610,789	3,732,422	14.81	533.15	22.80	0.76
WIL04	Colonial Rubber	0.00E+00	609,670	3,728,650	8.53	449.82	7.13	0.43
WIL05	Colonial Rubber	0.00E+00	609,670	3,728,650	8.53	449.82	7.13	0.43
WIL06	Colonial Rubber	0.00E+00	609,670	3,728,650	5.49	294.26	15.88	1.68
WIL07	Colonial Rubber	0.00E+00	609,670	3,728,650	9.14	294.26	10.36	0.15
WIL08	Colonial Rubber	0.00E+00	609,670	3,728,650	11.58	449.82	16.70	0.61
WIL09	Colonial Rubber	0.00E+00	609,670	3,728,650	24.38	294.26	5.82	0.25
WIL10	Colonial Rubber	0.00E+00	609,670	3,728,650	27.74	294.26	2.93	0.37

Table A-6. PM_{10} Increment Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
WIL11	Colonial Rubber	0.00E+00	609,670	3,728,650	24.08	294.26	11.52	0.20
WIL12	Colonial Rubber	0.00E+00	609,670	3,728,650	8.53	1,033.15	10.36	0.24
WIL13	Colonial Rubber	0.00E+00	609,670	3,728,650	13.20	327.59	39.62	0.00
WIL14	Williamsburg Co. Mem. Hospital	0.00E+00	609,459	3,724,952	12.50	408.15	2.53	1.08
WIL15	Burns Philp Food	0.00E+00	609,895	3,729,639	13.72	477.59	14.94	0.76
WIL16	Burns Philp Food	0.00E+00	609,895	3,729,639	15.24	477.59	29.87	0.76
WIL17	Burns Philp Food	0.00E+00	609,895	3,729,639	15.24	538.71	14.94	0.99
WIL18	Don's Scrap Iron & Metal, Inc.	0.00E+00	643,562	3,735,655	4.88	294.26	38.71	0.30
WIL19	Firestone Building Products	0.00E+00	610,153	3,729,519	11.31	293.15	15.09	1.22
WIL20	Firestone Building Products	0.00E+00	610,153	3,729,519	9.91	523.15	19.29	0.61
WIL21	Milliken-Kingstree Plant	0.00E+00	609,537	3,728,458	7.32	423.15	13.72	0.30
WIL22	Nan Ya Plastics	0.00E+00	614,326	3,744,476	9.00	310.93	0.01	1.88
WIL23	Nan Ya Plastics	0.00E+00	614,201	3,744,476	15.39	310.93	0.01	2.37
WIL24	Nan Ya Plastics	0.00E+00	614,700	3,745,000	19.99	308.15	0.01	2.18
WIL25	Nan Ya Plastics	0.00E+00	614,305	3,744,223	39.62	438.71	9.51	1.80
WIL26	Nan Ya Plastics	0.00E+00	614,305	3,744,223	39.62	438.71	12.09	2.49
WIL27	Nan Ya Plastics	0.00E+00	614,159	3,743,972	30.48	292.98	0.01	0.20
WIL28	Nan Ya Plastics	0.00E+00	614,396	3,744,362	16.00	304.00	0.01	0.21

Table A-7 SO_2 Increment Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
DAR01	Nucor Steel	-3.59E+01	601,809	3,804,275	22.86	366.48	22.59	6.40
DAR02	Nucor Steel Darlington	3.59E+01	601,813	3,804,543	34.44	293.15	9.17	0.23
DAR03	Nucor Steel Darlington	0.00E+00	601,813	3,804,543	22.86	366.48	16.12	6.40
DAR04	Nucor Steel	1.40E-02	601,570	3,804,053	22.86	638.15	18.41	1.52
DAR05	Nucor Steel	1.40E-02	601,572	3,803,963	22.86	638.15	18.41	1.52
DAR06	Nucor Steel	1.40E-02	601,719	3,804,080	22.86	638.15	18.41	1.52
DAR07	*Nucor Steel*	*7.41E-02*	*601,769*	*3,804,158*	*37.67*	*7.32*	*15.58*	
DAR08	*Nucor Steel*	*2.47E-03*	*601,639*	*3,804,117*	*19.20*	*18.59*	*8.93*	
DAR09	Nucor Steel	0.00E+00	599,868	3,804,333	18.29	305.37	17.37	1.07
DAR10	*Nucor Steel*	*3.02E-03*	*601,202*	*3,804,201*	*17.07*	*0.57*	*7.10*	
DAR11	*Nucor Steel*	*0.00E+00*	*602,047*	*3,804,175*	*10.00*	*319.00*	*167.00*	
DAR58	Wellman -- Palmetto Plant	0.00E+00	609,762	3,792,529	24.99	422.04	10.70	0.93
DAR59	Wellman -- Palmetto Plant	6.30E-03	609,754	3,792,534	30.48	449.82	9.45	3.66
DAR60	Wellman, Inc.	6.30E-03	609,804	3,792,578	24.99	422.04	15.25	0.93
DAR61	Wellman, Inc.	1.28E+01	609,810	3,792,566	30.48	449.82	9.45	3.66
DAR62	Wellman, Inc.	0.00E+00	609,631	3,792,622	13.11	755.37	0.01	0.25
DAR63	Wellman, Inc.	0.00E+00	609,784	3,792,430	15.24	298.71	0.01	0.41
DAR64	Wellman, Inc.	0.00E+00	609,780	3,792,425	15.24	322.04	0.01	0.46
DAR65	Wellman, Inc.	0.00E+00	610,046	3,792,925	3.05	313.71	0.01	0.15
DAR66	Wellman, Inc.	0.00E+00	609,775	3,792,764	5.49	313.71	0.01	0.15
DAR67	Wellman, Inc.	0.00E+00	609,801	3,792,740	22.86	455.37	15.70	1.20
DAR68	Wellman, Inc.	0.00E+00	609,812	3,792,750	22.86	455.37	15.70	1.20
DAR69	Wellman, Inc.	7.56E-03	609,839	3,792,784	22.86	465.93	23.16	1.20
DAR75	HRS Textiles	1.26E-03	600,270	3,785,042	8.23	435.98	0.01	11.00
DAR80	PowerSecure, Inc.	1.34E-01	609,179	3,792,693	5.03	653.15	77.90	0.36
DIL04	Paperboard Industries Corp.	0.00E+00	643,750	3,799,194	9.14	410.93	0.01	0.51
DIL05	Paperboard Industries Corp.	0.00E+00	643,750	3,799,194	9.14	410.93	0.01	0.51
FLO01	Talon, Inc.	-9.89E+00	614,192	3,746,291	13.39	449.82	11.34	1.01
FLO02	Talon, Inc.	-9.89E+00	614,192	3,746,294	14.05	449.82	11.34	0.97
FLO03	A.C. Monk	-9.58E-01	615,250	3,748,000	11.49	444.26	8.23	0.61
FLO04	Stone Container	4.00E+01	632,600	3,779,600	52.73	453.82	30.82	1.88
FLO05	Stone Container	0.00E+00	632,600	3,779,600	40.23	459.98	16.99	2.13
FLO06	Stone Container	0.00E+00	632,600	3,779,600	54.56	456.82	21.98	2.74
FLO07	Stone Container	0.00E+00	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO08	Stone Container	0.00E+00	632,600	3,779,600	38.10	505.37	9.51	2.44
FLO09	Stone Container	0.00E+00	632,600	3,779,600	45.72	340.93	9.39	1.22
FLO10	Stone Container	1.44E+02	632,600	3,779,600	76.20	459.21	19.75	3.66
FLO11	Stone Container	5.67E-01	632,600	3,779,600	30.48	362.04	3.69	1.07
FLO12	Carter Manufacturing	0.00E+00	615,624	3,753,919	21.34	422.04	0.01	0.91
FLO13	Wellman	2.42E+00	643,884	3,744,592	15.24	337.15	15.70	1.07
FLO14	Wellman	0.00E+00	643,952	3,744,641	10.06	293.15	0.01	1.22
FLO15	Wellman	0.00E+00	643,934	3,744,634	10.06	293.15	0.01	1.22
FLO16	Wellman	0.00E+00	643,938	3,744,638	10.06	293.15	0.01	1.22
FLO17	Wellman	0.00E+00	643,946	3,744,647	10.06	293.15	0.01	1.22
FLO18	Wellman	0.00E+00	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO19	Wellman	0.00E+00	644,014	3,744,510	10.52	293.15	0.01	1.22
FLO20	Wellman	0.00E+00	644,000	3,744,523	10.52	293.15	0.01	1.22
FLO21	Wellman	0.00E+00	644,011	3,744,520	10.52	293.15	0.01	1.22
FLO22	Wellman	0.00E+00	644,011	3,744,501	10.52	293.15	0.01	1.22
FLO23	Wellman	0.00E+00	643,948	3,744,627	19.05	293.15	0.01	0.61
FLO24	Wellman	0.00E+00	643,960	3,744,638	19.05	293.15	0.01	0.61
FLO25	Wellman	0.00E+00	643,955	3,744,623	19.05	292.98	0.01	0.91
FLO26	Wellman	0.00E+00	643,959	3,744,626	19.05	292.98	0.01	0.91
FLO27	Wellman	0.00E+00	643,932	3,744,630	19.05	292.98	0.01	0.91
FLO28	Wellman	0.00E+00	643,965	3,744,633	19.05	292.98	0.01	0.91
FLO29	Wellman	0.00E+00	643,967	3,744,650	21.34	293.15	0.01	0.91
FLO30	Wellman	0.00E+00	643,971	3,744,654	21.34	293.15	0.01	0.91
FLO31	Wellman	0.00E+00	643,973	3,744,656	21.34	293.15	0.01	0.91
FLO32	Wellman	0.00E+00	643,981	3,744,660	21.34	293.15	0.01	0.91
FLO33	Wellman	0.00E+00	643,984	3,744,656	21.34	293.15	0.01	0.91
FLO34	Wellman	0.00E+00	643,986	3,744,653	21.34	293.15	0.01	0.91
FLO35	Wellman	0.00E+00	643,972	3,744,640	21.34	293.15	0.01	0.91
FLO36	Wellman	0.00E+00	643,975	3,744,643	21.34	293.15	0.01	0.91
FLO37	Wellman	0.00E+00	643,976	3,744,649	21.34	293.15	0.01	0.91
FLO38	Wellman	0.00E+00	643,981	3,744,648	21.34	293.15	0.01	0.91
FLO39	Wellman	0.00E+00	643,981	3,744,664	21.49	293.15	0.01	0.61
FLO40	Wellman	0.00E+00	643,989	3,744,659	21.49	293.15	0.01	0.61
FLO41	Wellman	0.00E+00	644,001	3,744,500	7.32	293.15	0.01	1.22
FLO42	Wellman	0.00E+00	643,868	3,744,574	7.62	322.04	0.01	38.31
FLO43	Wellman	0.00E+00	643,910	3,744,152	5.85	293.15	0.01	0.94
FLO46	Koppers Industries	7.81E-02	616,994	3,785,299	10.97	458.71	12.71	0.91
FLO47	Koppers Industries	0.00E+00	616,975	3,785,299	8.23	472.04	5.39	0.76
FLO48	Koppers Industries	0.00E+00	616,994	3,785,299	10.97	449.82	6.10	0.91
FLO49	*Koppers Industries*	*1.26E-03*	*616,673*	*3,785,494*	*6.10*	*0.12*	*2.83*	
FLO58	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO59	Dupont-Florence	0.00E+00	631,020	3,784,586	38.10	438.71	29.26	1.22
FLO60	Dupont-Florence	3.91E+01	630,885	3,784,747	38.10	449.82	8.17	1.52
FLO61	Dupont-Florence	9.32E-01	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO62	Dupont-Florence	9.32E-01	630,835	3,784,795	38.10	533.15	4.63	1.05

Table A-7 SO_2 Increment Sources

Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
FLO63	Dupont-Florence	4.54E+00	630,848	3,784,778	38.10	533.15	2.32	1.05
FLO64	Dupont-Florence	4.54E+00	630,855	3,784,771	38.10	533.15	2.32	1.05
FLO65	Dupont-Florence	4.54E+00	630,863	3,784,764	38.10	533.15	2.32	1.05
FLO66	Dupont-Florence	0.00E+00	630,780	3,784,740	14.63	333.15	24.38	0.23
FLO67	Dupont-Florence	0.00E+00	630,675	3,784,970	15.24	310.93	15.24	0.61
FLO68	Dupont-Florence	0.00E+00	630,762	3,784,682	9.14	294.26	0.01	0.30
FLO69	Dupont-Florence	0.00E+00	630,712	3,784,980	18.29	294.26	0.01	1.38
FLO70	Dupont-Florence	-2.82E+01	630,841	3,784,804	38.10	449.82	8.11	1.52
FLO71	Dupont-Florence	-7.22E+00	630,830	3,784,790	38.10	533.15	4.63	1.05
FLO72	Dupont-Florence	-3.60E+00	630,848	3,784,778	38.10	533.15	5.79	1.05
FLO73	Dupont-Florence	-3.60E+00	630,855	3,784,771	38.10	533.15	5.79	1.05
FLO74	Dupont-Florence	4.01E+00	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO75	Dupont-Florence	4.01E+00	630,896	3,784,768	16.76	449.82	16.76	1.01
FLO76	*Charles Ingram Lumber Co*	*1.58E-02*	*629,592*	*3,772,923*	*4.36*	*4.27*	*4.05*	
FLO77	*Charles Ingram Lumber Co*	*2.73E-02*	*629,592*	*3,772,923*	*4.36*	*5.03*	*4.05*	
FLO78	*Charles Ingram Lumber Co*	*2.08E-02*	*629,592*	*3,772,923*	*4.36*	*3.72*	*4.05*	
FLO79	*Charles Ingram Lumber Co*	*2.08E-02*	*629,592*	*3,772,923*	*4.36*	*3.72*	*4.05*	
FLO80	La-Z-Boy East	0.00E+00	613,622	3,785,748	7.62	533.15	0.01	0.51
FLO82	McLeod Regional Medical Center	-1.36E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO83	McLeod Regional Medical Center	-1.36E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO84	McLeod Regional Medical Center	-1.36E+00	614,200	3,784,500	9.20	477.59	11.50	0.61
FLO85	McLeod Regional Medical Center	5.44E-01	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO86	McLeod Regional Medical Center	5.44E-01	614,200	3,784,500	12.80	477.59	10.30	0.40
FLO87	McLeod Regional Medical Center	1.63E+00	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO88	McLeod Regional Medical Center	1.63E+00	614,200	3,784,500	10.06	457.59	12.30	0.61
FLO89	Sara Lee Hosiery	9.40E-02	618,392	3,766,573	8.23	522.04	13.29	0.51
FLO90	Asea Brown Boveri	3.93E-01	612,043	3,789,426	9.14	410.93	5.12	0.56
FLO91	Vulcraft-Div. of Nucor	1.33E+00	612,076	3,786,654	19.51	533.15	9.30	0.71
FLO92	Vulcraft-Div. of Nucor	0.00E+00	612,076	3,786,654	1.83	106.13	56.14	
FLO93	Maytag Florence Operations	3.00E-03	611,275	3,789,417	13.11	410.93	4.63	0.67
FLO94	Maytag Florence Operations	5.35E-03	611,275	3,789,417	13.11	866.48	5.21	0.46
FLO95	Nan Ya Plastics	0.00E+00	614,396	3,744,362	16.00	303.15	0.01	0.21
FLO96	McCall Farms	0.00E+00	614,987	3,768,359	6.71	293.98	11.89	0.60
FLO97	McCall Farms	5.93E+00	614,855	3,768,666	13.72	449.82	12.80	0.91
FLO98	McCall Farms	3.26E+00	614,855	3,768,666	12.19	325.93	24.99	0.61
FLO99	McCall Farms	9.45E-02	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO100	McCall Farms	3.59E+00	614,855	3,768,666	12.19	477.59	17.68	1.09
FLO101	McCall Farms	4.95E+00	614,987	3,768,359	10.97	449.82	10.61	0.91
FLO102	McCall Farms	4.41E-02	614,855	3,768,666	8.53	449.82	3.78	0.91
FLO103	McCall Farms	7.93E+00	614,987	3,768,359	14.63	449.82	11.89	0.91
FLO104	Roche Carolina	3.78E-02	629,000	3,786,850	15.54	544.26	9.94	1.28
FLO105	Roche Carolina	2.20E+00	628,939	3,786,580	48.77	349.82	12.19	0.51
FLO106	Roche Carolina	9.83E-01	628,920	3,786,560	15.24	810.93	5.76	0.51
FLO107	Roche Carolina	8.82E-03	629,020	3,786,870	14.97	1,273.00	20.00	0.63
FLO108	Florence Wastewater Treatment	1.42E-01	615,180	3,781,886	3.66	724.82	44.20	0.20
FLO109	Florence Wastewater Treatment	3.38E-01	615,180	3,781,886	3.66	738.71	69.80	0.25
FLO110	Florence Wastewater Treatment	2.67E-01	615,180	3,781,886	3.66	722.04	80.77	0.20
FLO111	Francis Marion University	2.32E-01	624,275	3,784,375	7.01	408.15	6.51	0.40
FLO112	Francis Marion University	2.32E-01	624,275	3,784,375	7.01	408.15	6.81	0.40
FLO113	Francis Marion University	2.32E-01	624,275	3,784,375	7.01	408.15	7.12	0.40
FLO114	Carolinas Hospital System	8.01E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO115	Carolinas Hospital System	8.01E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO116	Carolinas Hospital System	8.01E-02	614,967	3,780,435	7.74	507.04	9.98	0.51
FLO117	Honda	1.06E-03	600,175	3,774,660	6.10	449.82	15.24	0.46
FLO118	Duquesne Energy	8.82E-04	612,726	3,790,077	25.91	344.26	26.12	0.84
FLO119	Southern Impressions, LLC	5.38E-03	597,834	3,753,226	7.32	499.26	9.74	0.51
FLO120	Southern Impressions, LLC	4.11E-03	597,834	3,753,226	6.71	394.26	17.10	0.58
FLO121	Gatewood Products, LLC	0.00E+00	616,130	3,783,777	3.12	810.93	1.63	2.92
FLO122	Crenlo, Inc	5.39E-03	621,000	3,792,000	16.70	430.37	6.79	0.56
FLO123	Crenlo, Inc	4.96E-03	621,000	3,792,000	16.70	488.71	11.06	0.69
FLO124	Flav-O-Rich	5.38E-01	614,229	3,782,213	9.45	477.59	0.01	0.41
FLO125	Flav-O-Rich	5.38E-01	614,229	3,782,213	9.45	477.59	0.01	0.41
GEO01	International Paper - Pulp & Paper Mill	-6.14E+01	658,200	3,692,500	21.34	560.93	12.19	2.44
GEO02	International Paper - Pulp & Paper Mill	-4.09E+02	658,150	3,692,600	60.96	516.48	18.29	4.42
GEO03	International Paper - Pulp & Paper Mill	-5.25E+00	658,050	3,692,550	30.48	349.82	10.00	1.83
GEO04	International Paper - Pulp & Paper Mill	-5.24E+00	658,040	3,692,560	30.48	349.82	10.00	1.83
GEO05	International Paper - Pulp & Paper Mill	-1.20E+02	658,180	3,692,540	60.96	516.48	18.29	4.42
GEO06	International Paper - Pulp & Paper Mill	1.21E+02	658,220	3,692,587	85.34	462.04	12.20	5.20
GEO07	International Paper - Pulp & Paper Mill	2.90E+00	658,275	3,692,581	71.63	435.93	17.25	2.40
GEO08	International Paper - Pulp & Paper Mill	7.13E+00	658,217	3,692,622	76.20	344.26	12.10	3.70
GEO09	International Paper - Pulp & Paper Mill	0.00E+00	658,242	3,692,574	67.06	353.15	9.43	1.10
GEO10	International Paper - Pulp & Paper Mill	0.00E+00	658,242	3,692,595	67.06	353.15	9.43	1.10
GEO11	*International Paper - Pulp & Paper Mill*	*0.00E+00*	*658,000*	*3,693,000*	*21.30*	*1.90*	*2.10*	
GEO12	International Paper - Pulp & Paper Mill	0.00E+00	657,900	3,692,840	21.60	345.93	1.80	0.70
GEO13	International Paper - Pulp & Paper Mill	0.00E+00	658,092	3,692,601	30.50	340.93	6.95	1.50
GEO14	International Paper - Pulp & Paper Mill	5.77E-02	658,105	3,692,592	29.00	343.15	7.01	1.80
GEO15	*International Paper - Pulp & Paper Mill*	*0.00E+00*	*658,100*	*3,692,597*	*21.30*	*1.90*	*2.10*	
GEO16	International Paper - Pulp & Paper Mill	0.00E+00	657,979	3,692,594	33.53	312.04	14.66	1.20
GEO17	International Paper - Pulp & Paper Mill	0.00E+00	657,935	3,692,570	43.89	324.82	10.78	1.10

Table A-7 SO_2 Increment Sources

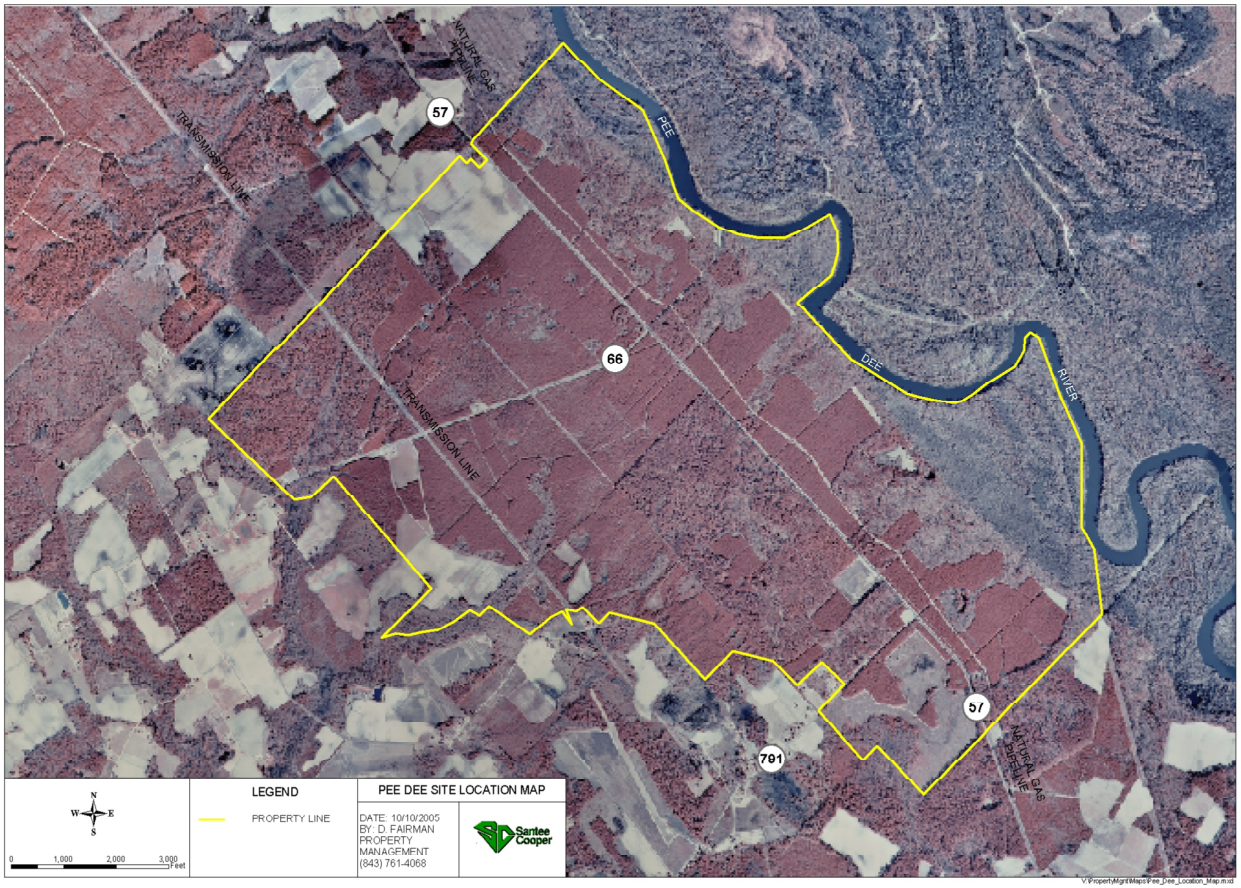
Source ID	Company Name	Emissions (g/s)	UTM East (m)	UTM North (m)	Height (m)	Temp (K)	Velocity (m/s)	Diameter (m)
GEO18	International Paper - Pulp & Paper Mill	1.15E+00	658,128	3,692,719	20.70	355.93	8.05	1.10
GEO19	International Paper - Pulp & Paper Mill	1.98E-01	657,900	3,692,840	27.20	354.26	13.66	1.20
GEO20	International Paper - Pulp & Paper Mill	4.72E-02	657,900	3,692,840	8.20	483.15	0.01	0.70
GEO21	*International Paper - Pulp & Paper Mill*	*0.00E+00*	*657,900*	*3,692,840*	*3.00*	*94.80*	*1.40*	
GEO22	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	22.86	355.37	20.42	1.80
GEO23	Georgetown Steel, Inc.	2.52E-03	659,006	3,693,450	9.14	293.15	10.06	0.50
GEO24	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	9.30	293.15	10.52	0.61
GEO25	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	8.53	293.15	12.65	0.50
GEO26	Georgetown Steel, Inc.	-1.20E+00	659,006	3,693,450	31.39	332.04	4.51	10.21
GEO27	Georgetown Steel, Inc.	4.49E+00	659,006	3,693,450	24.38	355.93	0.01	232.75
GEO28	Georgetown Steel, Inc.	-1.85E+01	659,006	3,693,450	24.14	514.82	11.16	2.87
GEO29	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	9.14	293.15	27.25	0.50
GEO30	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	27.43	422.04	17.04	1.08
GEO31	Georgetown Steel, Inc.	0.00E+00	659,006	3,693,450	25.30	417.04	5.39	1.72
GEO32	Georgetown Steel, Inc.	3.53E-02	659,006	3,693,450	28.27	417.04	13.69	3.57
MAR01	Fabric Resources Intl. Ltd.	0.00E+00	662,472	3,785,419	15.54	505.37	13.72	0.91
MAR02	Cone Mills-Raytex Finishing	1.13E-03	646,597	3,780,598	11.89	410.93	13.11	0.88
MAR03	Cone Mills-Raytex Finishing	1.01E-03	646,597	3,780,598	12.34	422.04	14.26	0.71
MAR04	Cone Mills-Raytex Finishing	-5.58E+00	646,597	3,780,598	10.82	468.71	7.62	0.61
MAR05	Cone Mills-Raytex Finishing	2.82E+00	646,597	3,780,598	11.51	530.37	12.80	0.86
MAR06	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	1.11
MAR07	International Paper	1.26E-01	641,005	3,793,021	24.38	445.37	10.16	1.64
MAR08	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR09	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR10	International Paper	0.00E+00	641,005	3,793,021	12.19	299.82	12.70	0.97
MAR11	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	12.70	0.92
MAR12	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	20.31	1.12
MAR13	International Paper	0.00E+00	641,005	3,793,021	15.24	299.82	12.70	1.02
MAR14	Pilliod Furniture	0.00E+00	670,890	3,789,586	12.19	533.15	14.81	0.56
MAR15	Pilliod Furniture	0.00E+00	670,870	3,789,382	6.71	297.04	18.59	0.61
MAR16	Marion Memorial Hospital	2.41E-01	646,601	3,783,285	6.71	405.37	6.43	0.38
MAR17	Blumenthal Mills, Inc.	3.17E+00	646,273	3,782,473	17.19	449.82	9.33	0.76
MAR18	Blumenthal Mills, Inc.	1.26E-03	646,349	3,782,473	8.47	422.04	6.10	0.94
MAR19	Mullins Hospital	0.00E+00	660,780	3,785,405	9.14	449.82	5.97	0.30
MAR20	AVM of South Carolina	0.00E+00	655,700	3,784,688	6.10	293.71	27.13	0.61
MAR21	Marion Ceramics	7.56E-04	636,481	3,787,562	9.14	422.04	6.10	0.81
MAR22	Piggly Wiggly #54	0.00E+00	647,660	3,784,688	9.75	1,088.71	4.57	0.61
MAR23	Russell Stover Candy	0.00E+00	648,945	3,783,063	12.04	477.59	18.29	0.61
MAR24	SO-PAK-CO, INC.	1.08E+00	661,322	3,786,207	7.47	508.15	14.81	0.61
MAR25	SO-PAK-CO, INC.	1.35E+00	661,322	3,786,207	8.99	508.15	11.43	0.30
MAR26	Wellman, Inc.	1.64E-02	652,677	3,784,762	3.69	699.82	9.10	0.20
MAR27	Sara Lee Hosiery	0.00E+00	644,376	3,783,398	8.84	449.82	0.01	0.51
MAR28	Heritage Sportswear	0.00E+00	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR29	Heritage Sportswear	2.61E+00	645,941	3,781,574	12.19	490.93	8.14	0.51
MAR30	Marion Co. Medical Center	2.77E-04	654,380	3,783,988	7.62	447.04	0.01	0.07
MAR31	Forest Industries International, Inc.	6.17E-02	640,232	3,794,446	22.56	449.82	0.01	1.14
MAR32	Forest Industries International, Inc.	3.78E-02	640,232	3,794,446	12.19	449.82	0.01	0.76

Note: Area and Volume sources are listed in italics.

APPENDIX B

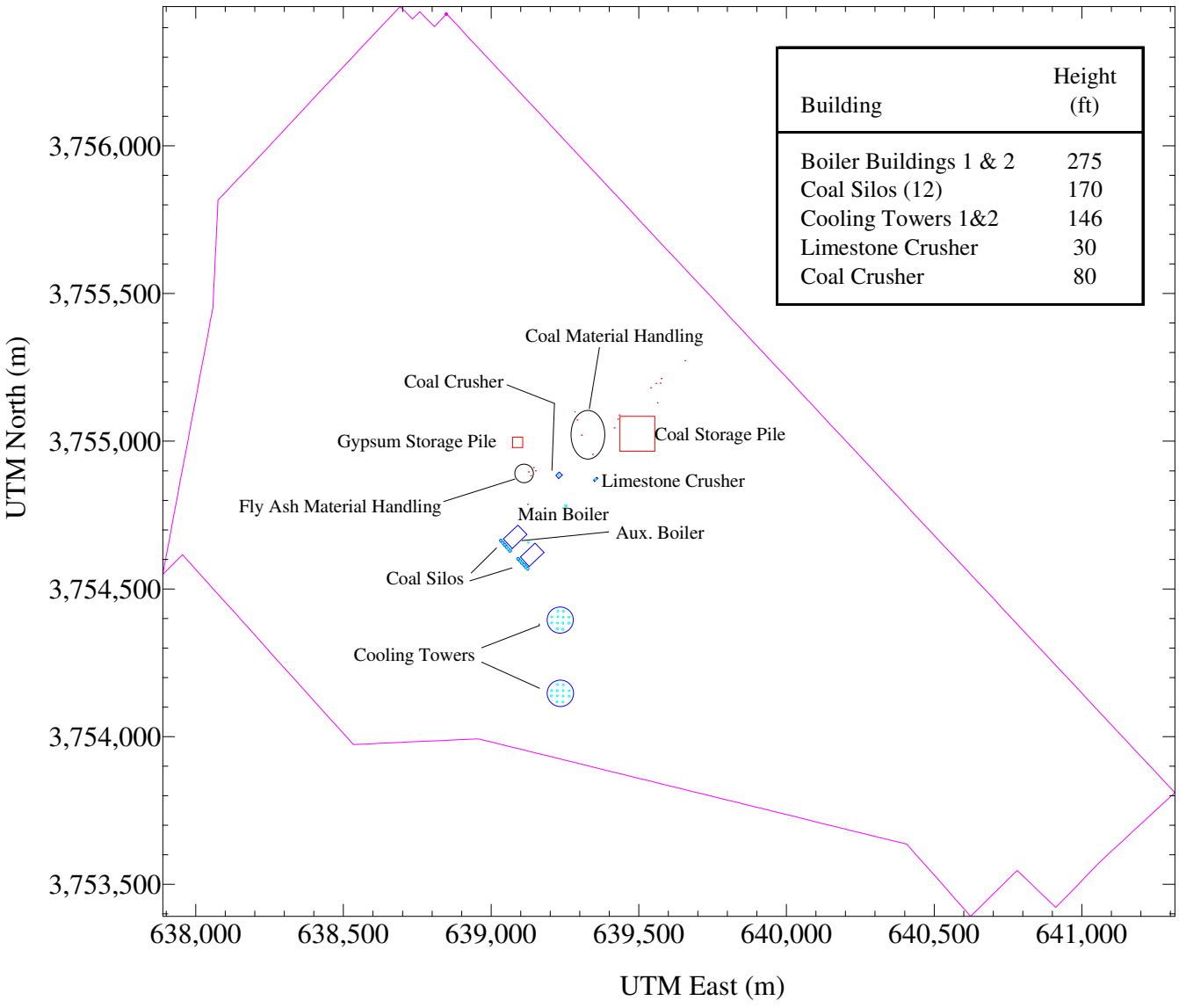
SUPPORTING FIGURES

Figure B-1. Property Line
Pee Dee Facility



Santee Cooper
051101.0107
Property Line.srf

Figure B-2. Building Layout and Fenceline
Pee Dee Facility

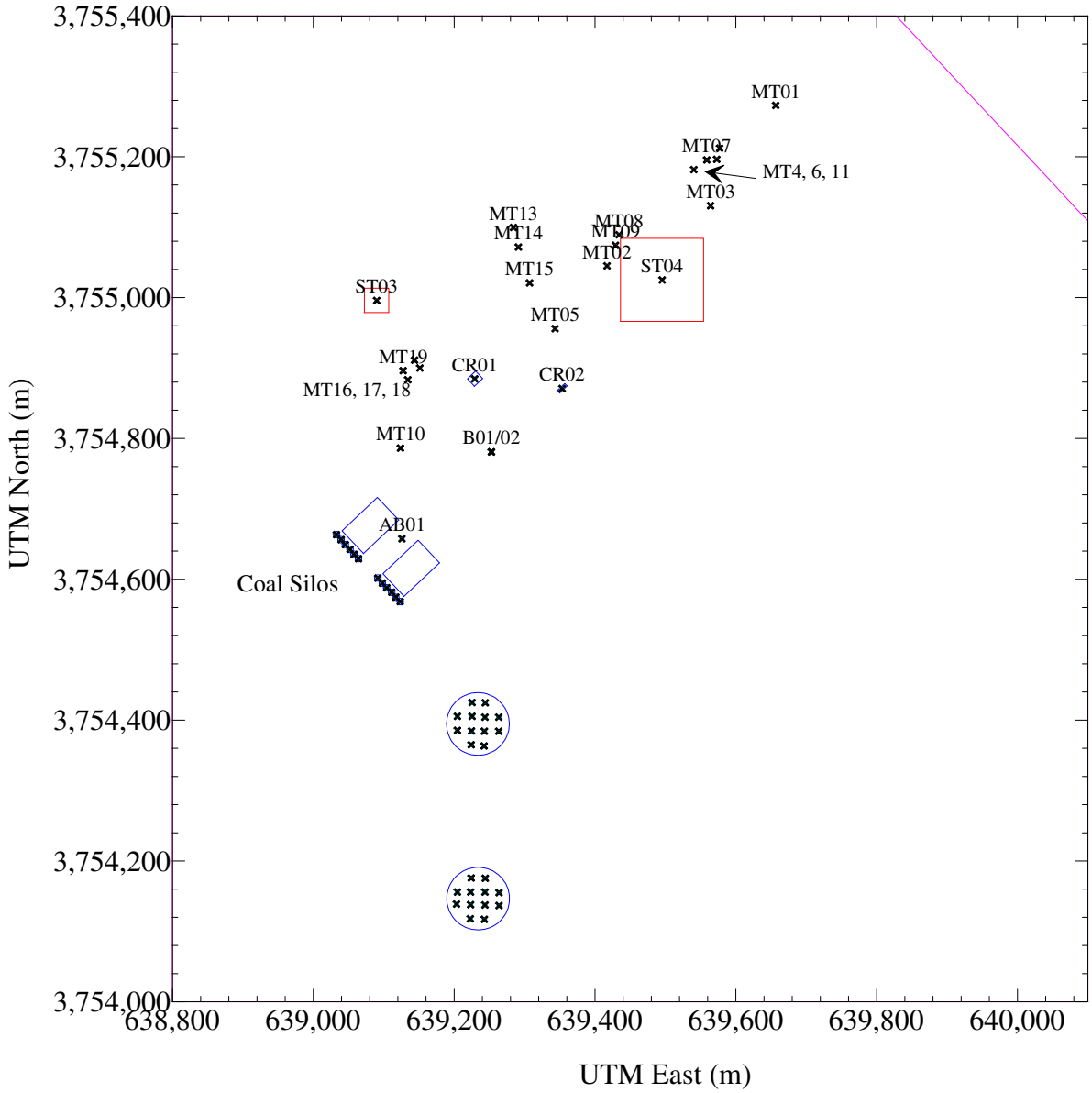


Building	Height (ft)
Boiler Buildings 1 & 2	275
Coal Silos (12)	170
Cooling Towers 1&2	146
Limestone Crusher	30
Coal Crusher	80

Edge markings shown in Universal Transverse Mercator Coordinates, Zone 17, NAD27

Santee Cooper
051101.0107
SiteLayout.srf

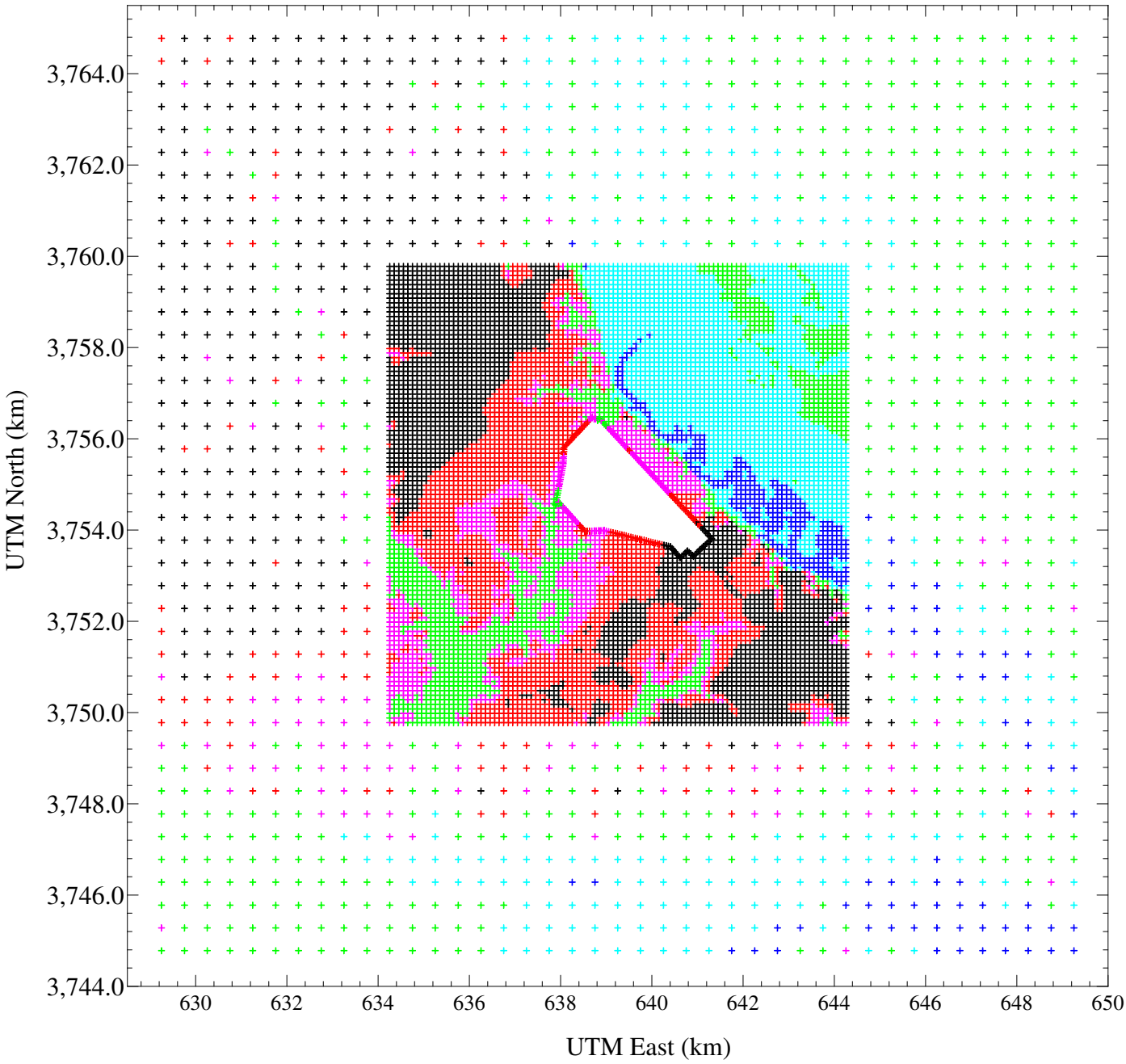
Figure B-3. Emission Points
Pee Dee Facility



Edge markings shown in Universal Transverse Mercator Coordinates, Zone 17, NAD27

Santee Cooper
051101.0107
SiteLayout with Emission Points.srf

Figure B-4. Receptor Grid
Pee Dee Facility

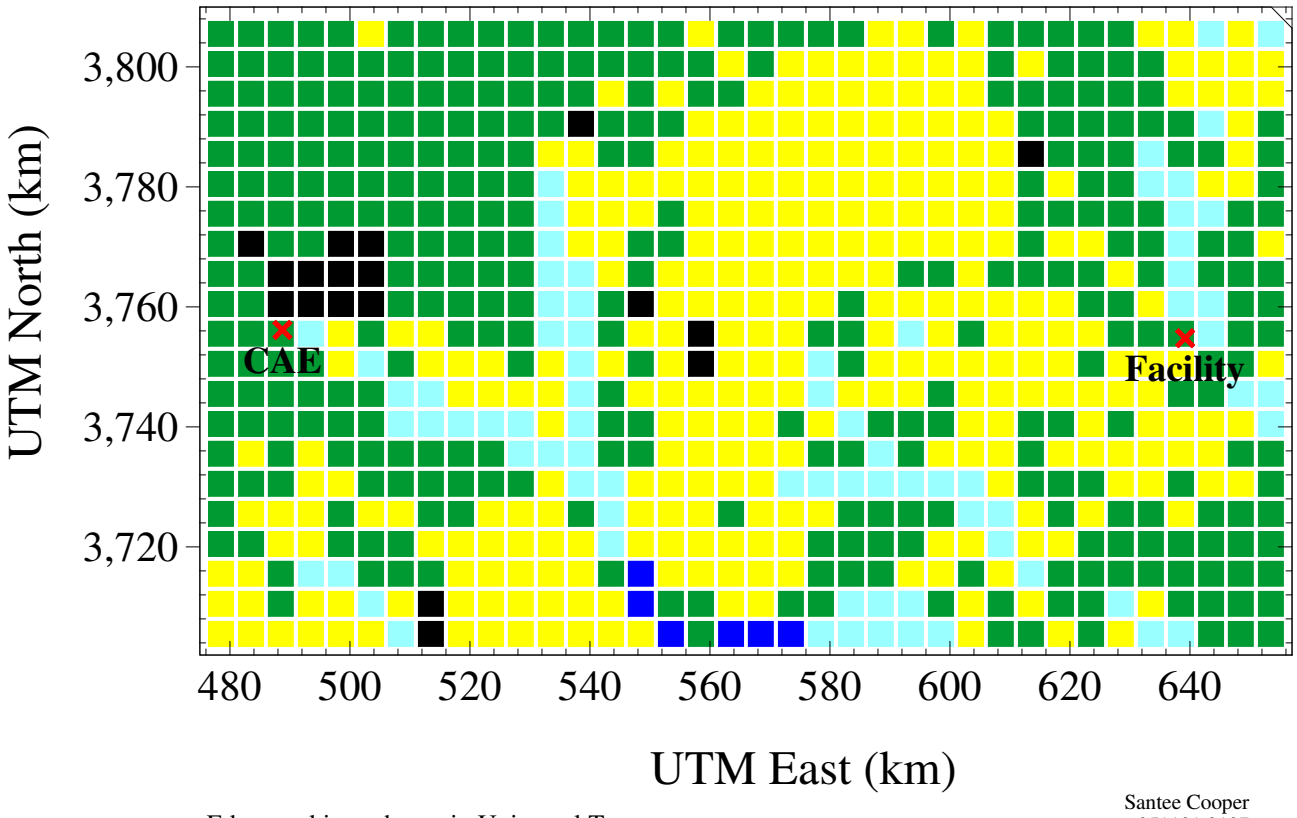


Edge markings shown in Universal Transverse Mercator Coordinates, Zone 17, NAD27

Santee Cooper
051101.0107
10km Receptors.srf

- 2 to 7 m
- 7 to 10 m
- 10 to 18 m
- 18 to 20 m
- 20 to 22 m
- 22 to 30 m

Figure B-5. Landuse Plot
Pee Dee Facility



Edge markings shown in Universal Transverse Mercator Coordinates, Zone 17, NAD27

Santee Cooper
051101.0107
AERMOD Landuse.srf

- Urban
- Agricultural
- Rangeland
- Forest
- Water
- Wetland

Figure B-6. CO Significance Model Impacts (1-Hour)
Pee Dee Facility

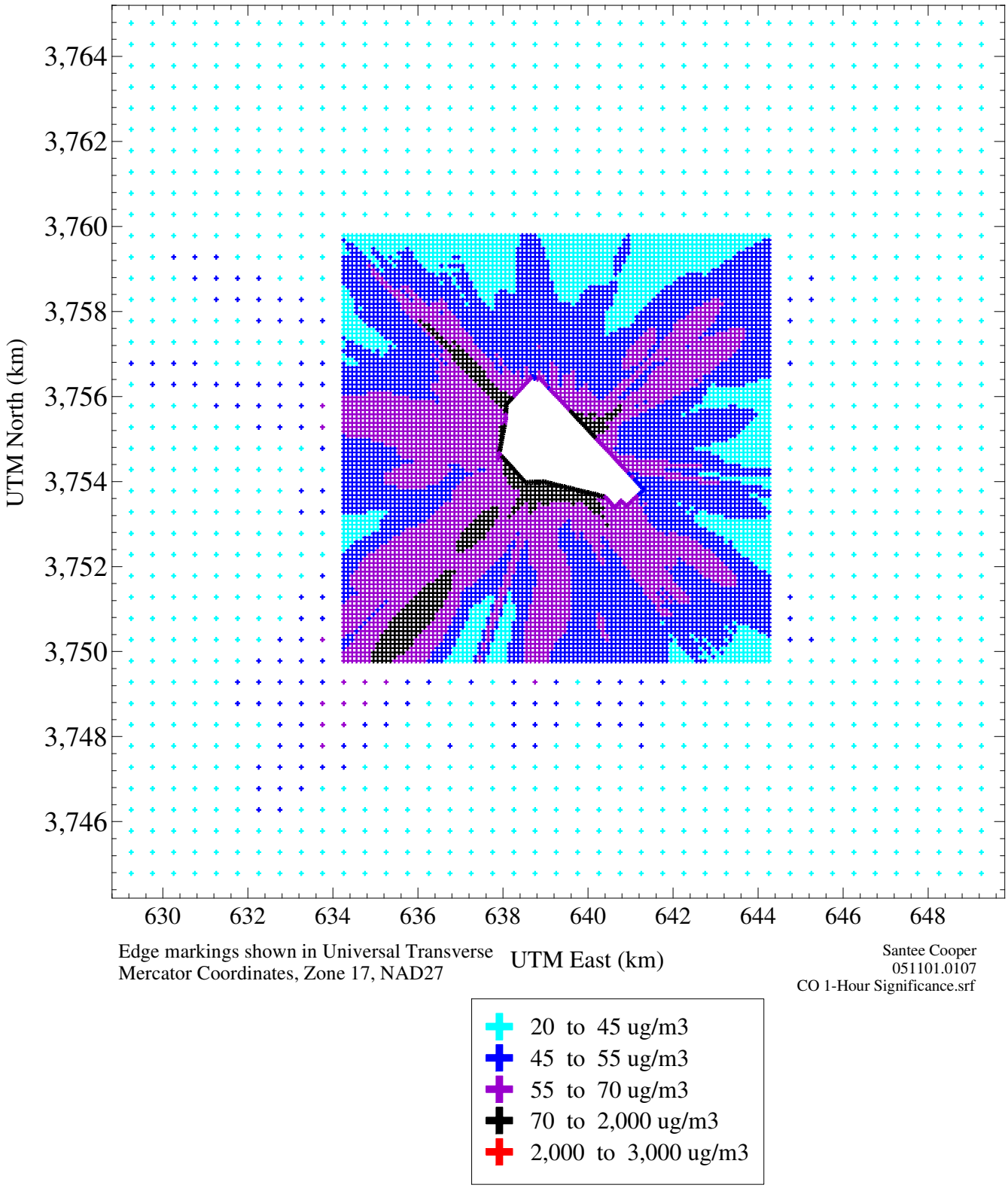


Figure B-7. CO Significance Model Impacts (8-Hour)
Pee Dee Facility

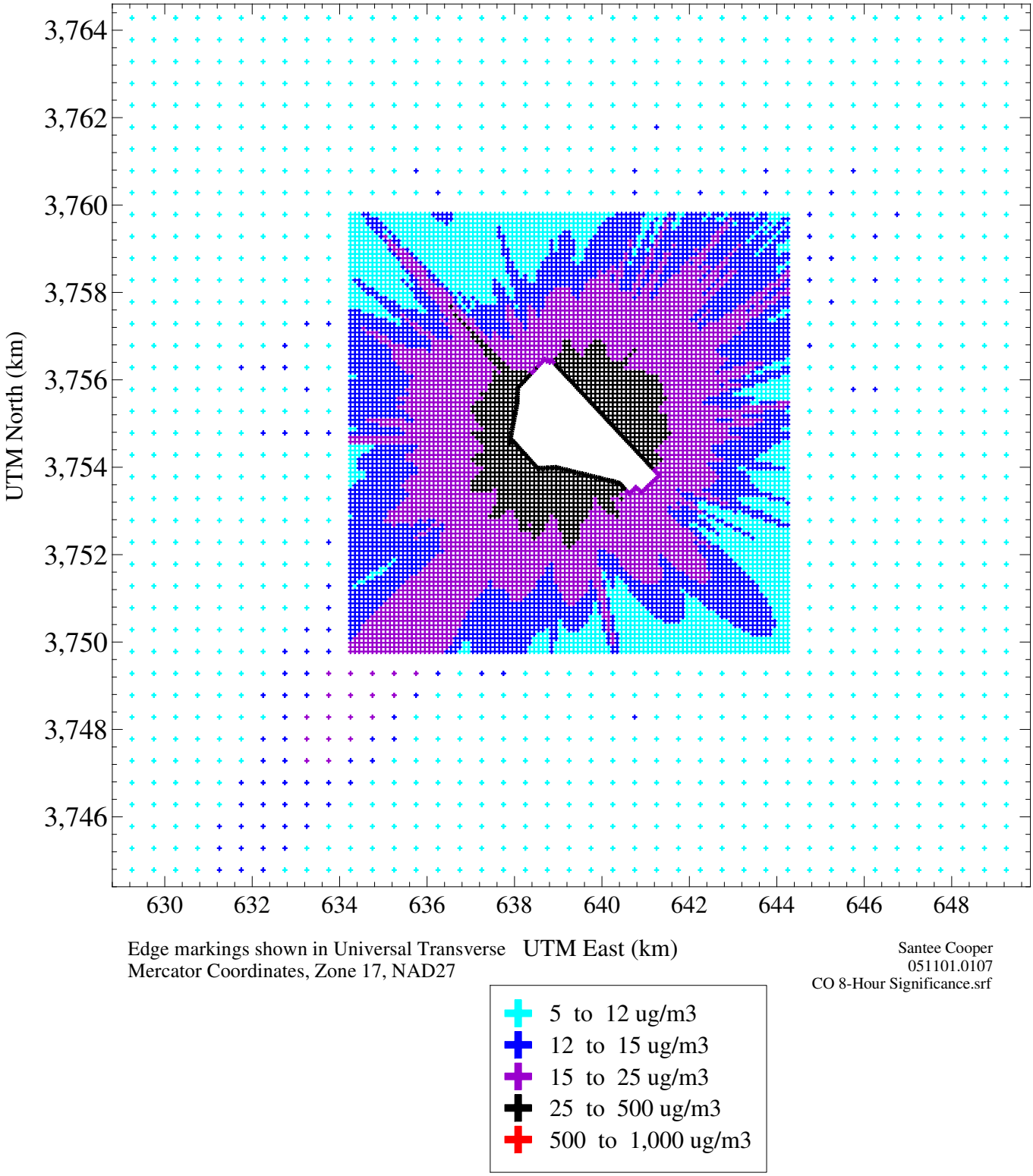


Figure B-8. NOX Significance Model Impacts (Annual)
Pee Dee Facility

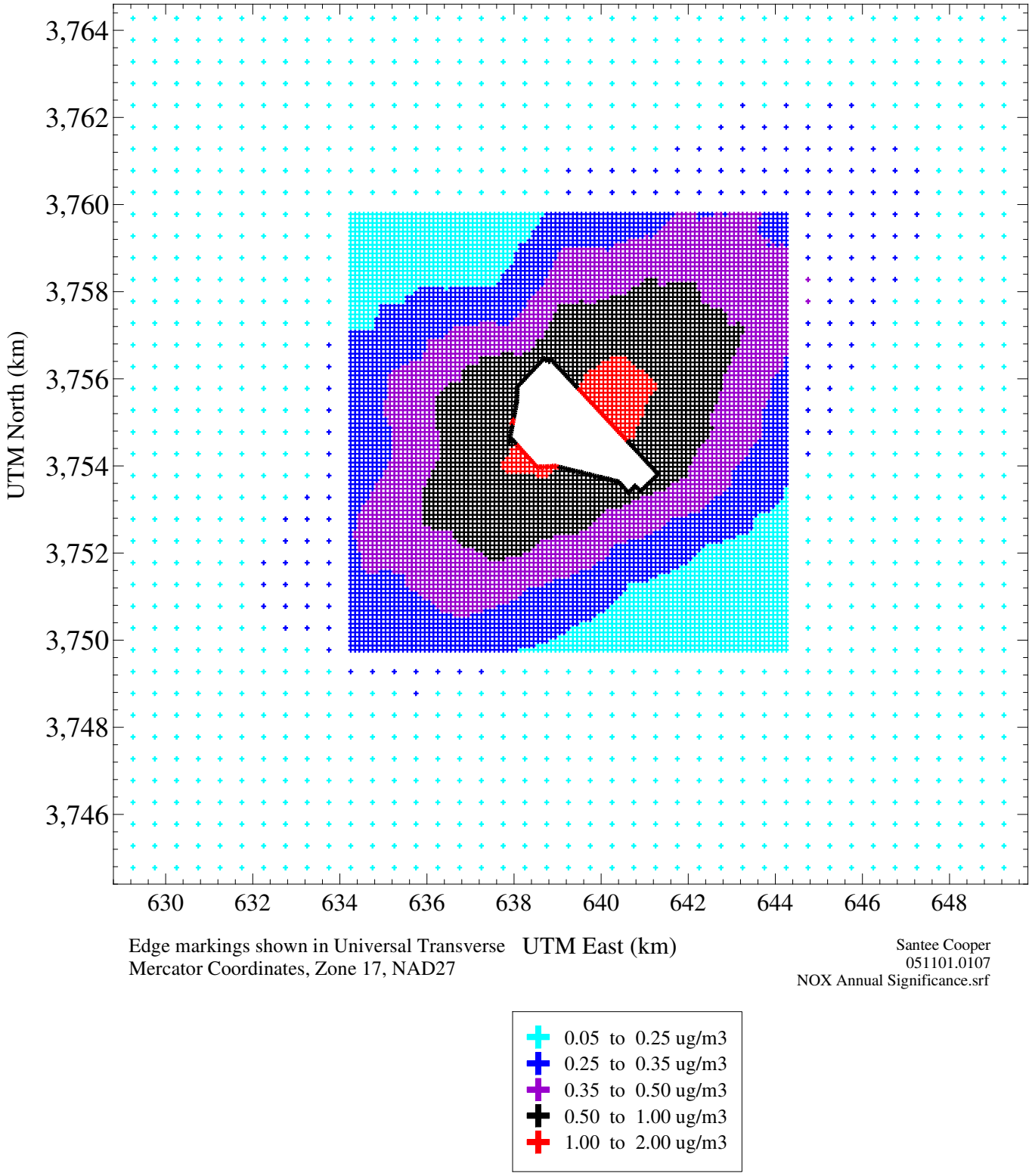
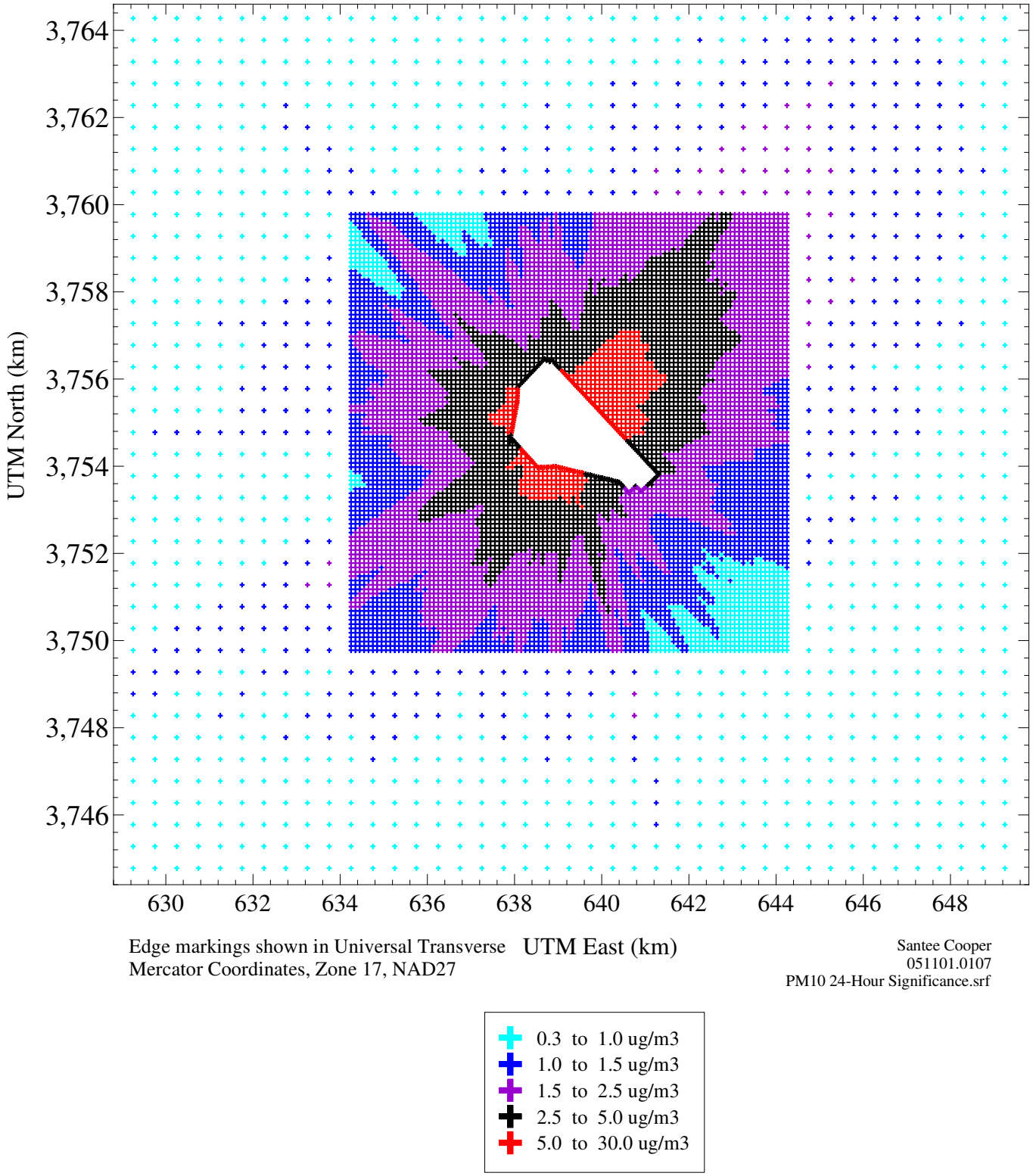


Figure B-9. PM10 Significance Model Impacts (24-Hour)
Pee Dee Facility



Edge markings shown in Universal Transverse Mercator Coordinates, Zone 17, NAD27

Santee Cooper
051101.0107
PM10 24-Hour Significance.srf

Figure B-10. PM10 Significance Model Impacts (Annual)
Pee Dee Facility

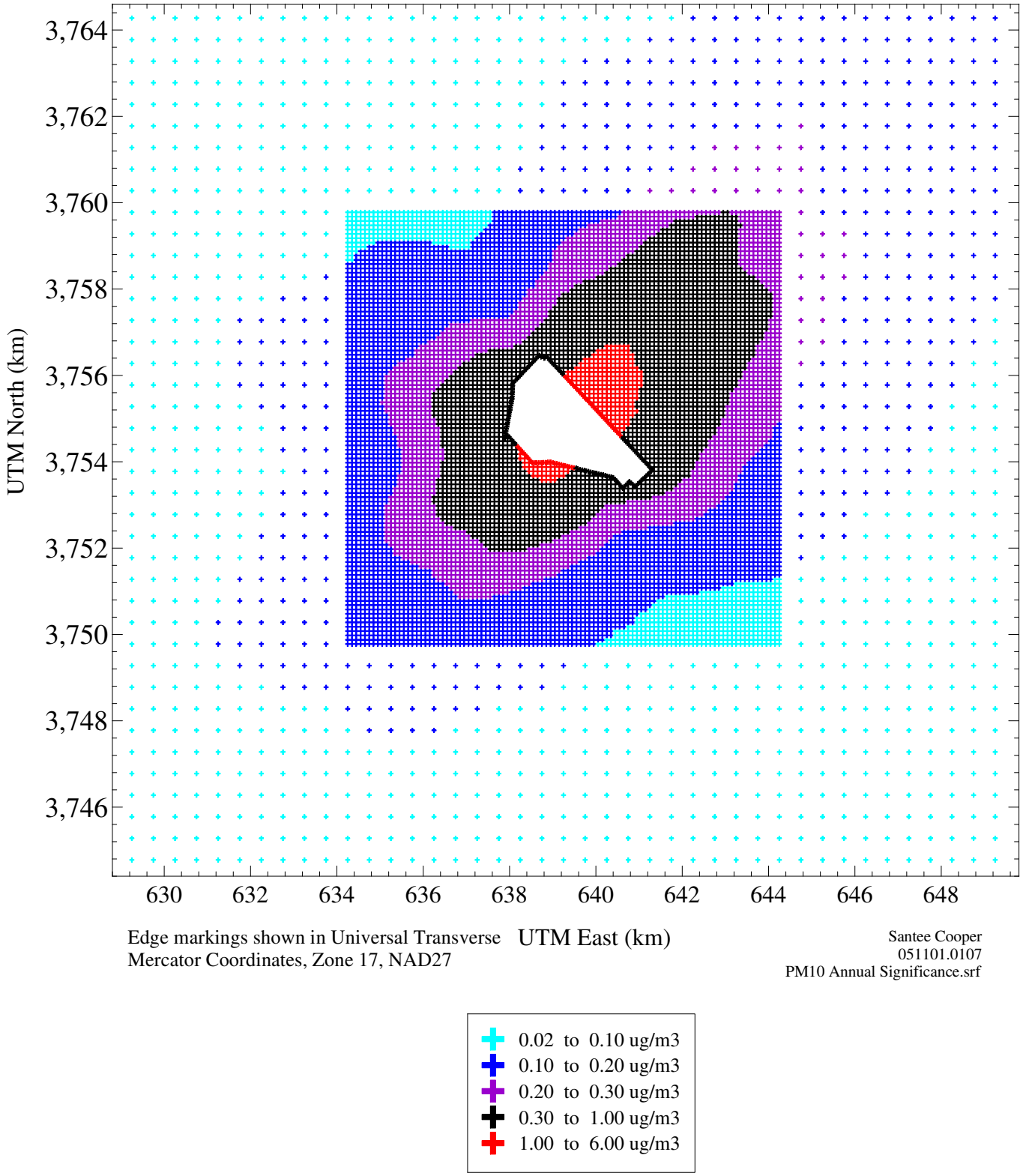


Figure B-11. SO2 Significance Model Impacts (3-Hour)
Pee Dee Facility

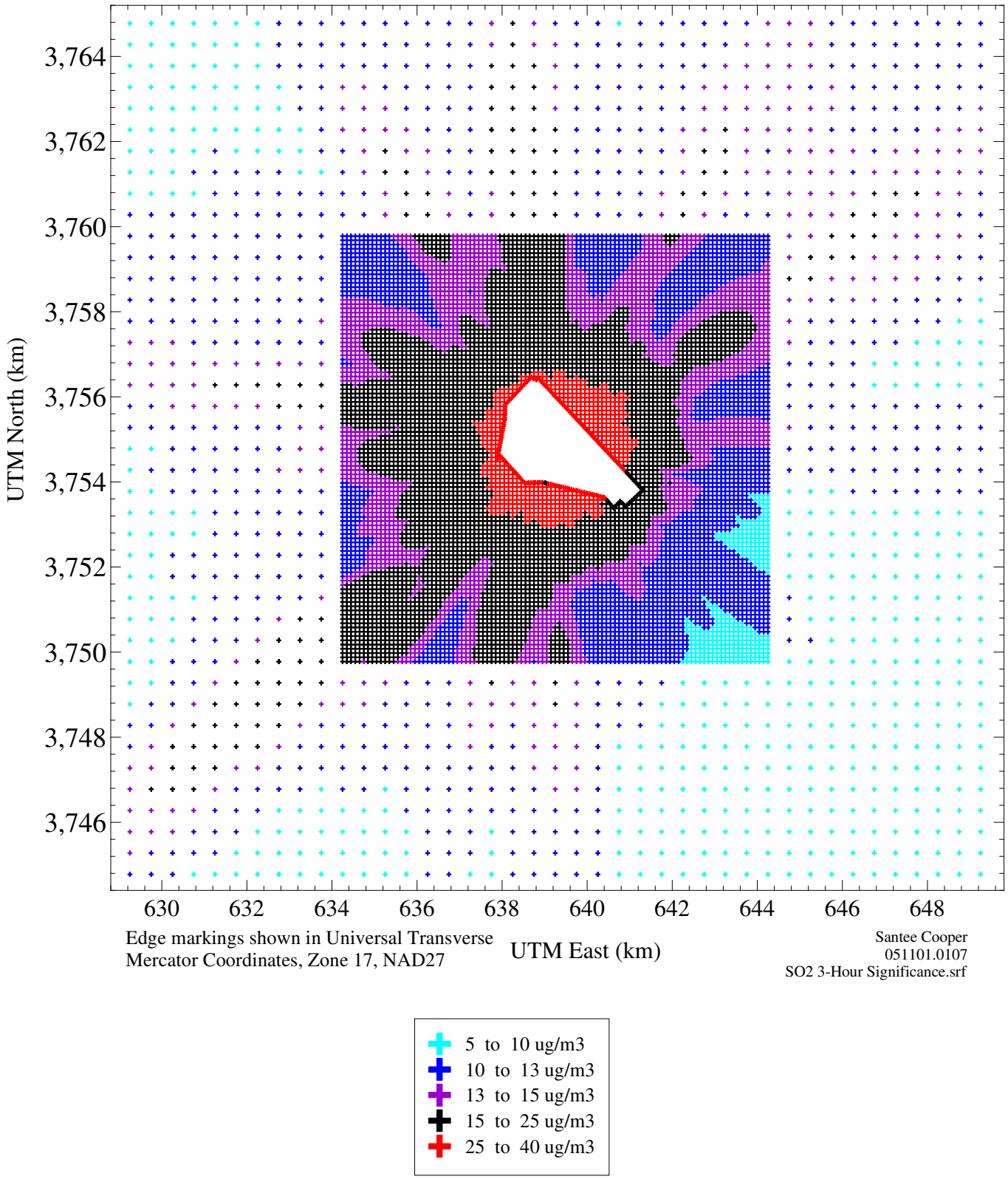


Figure B-12. SO2 Significance Model Impacts (24-Hour)
Pee Dee Facility

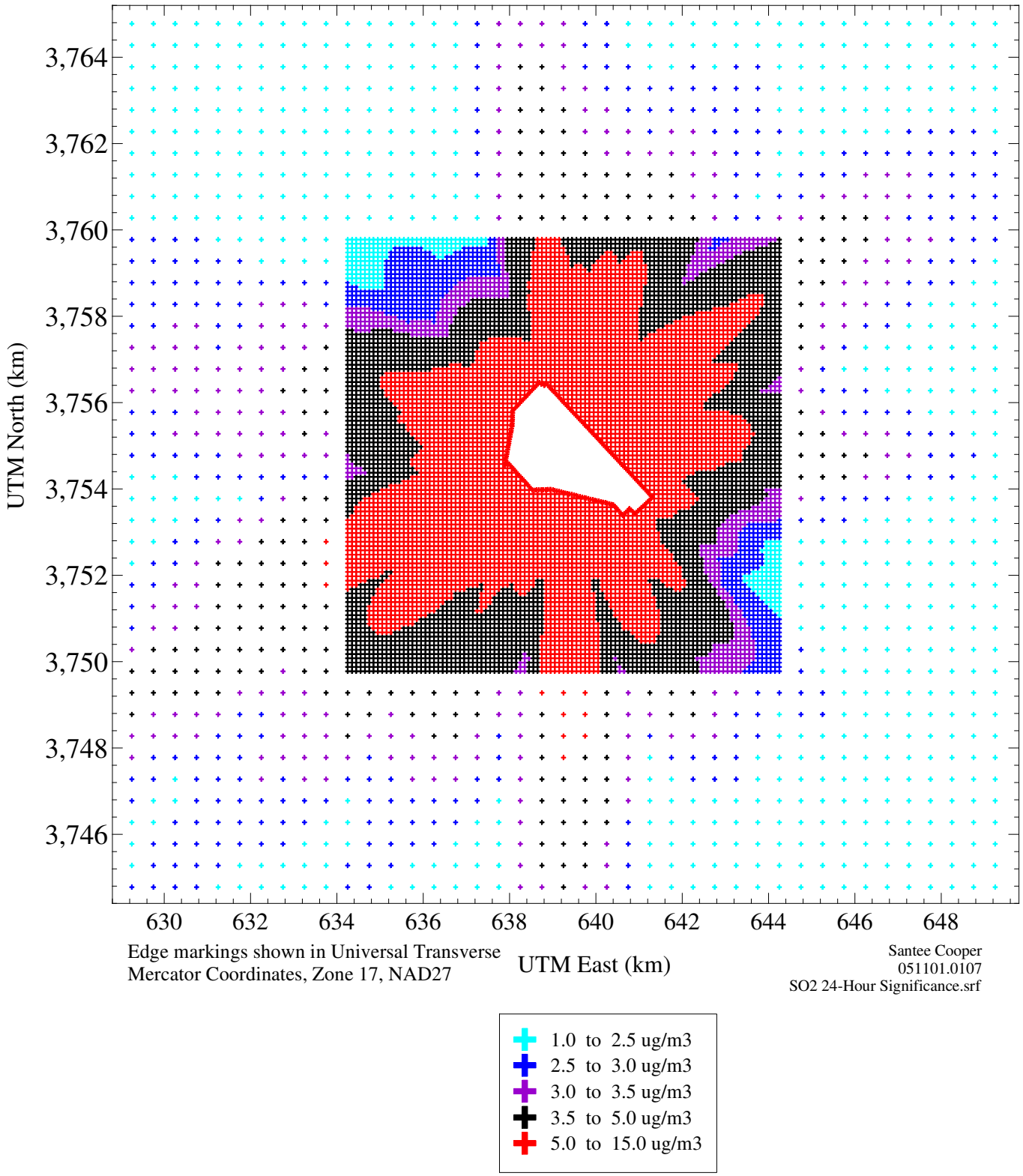
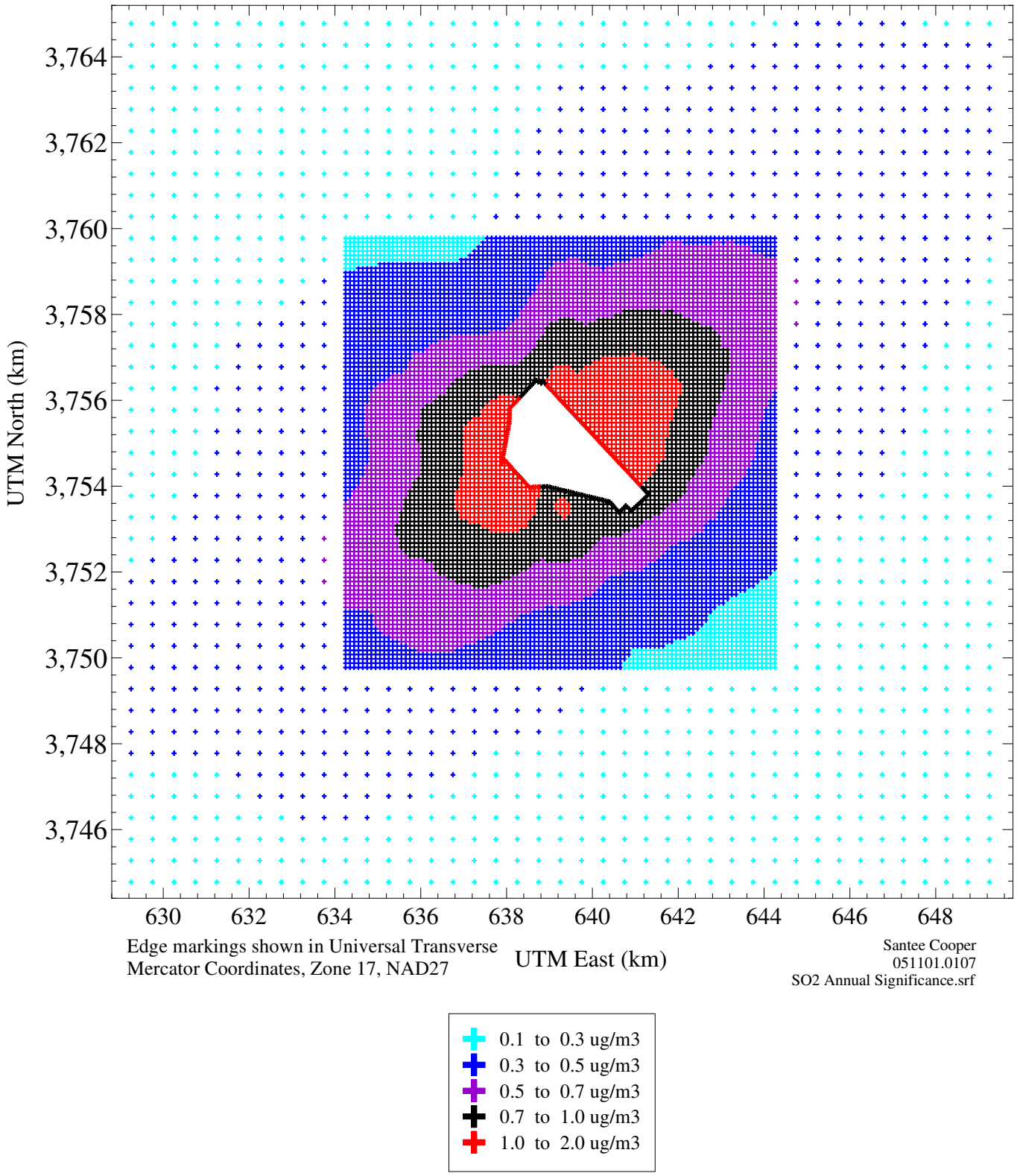
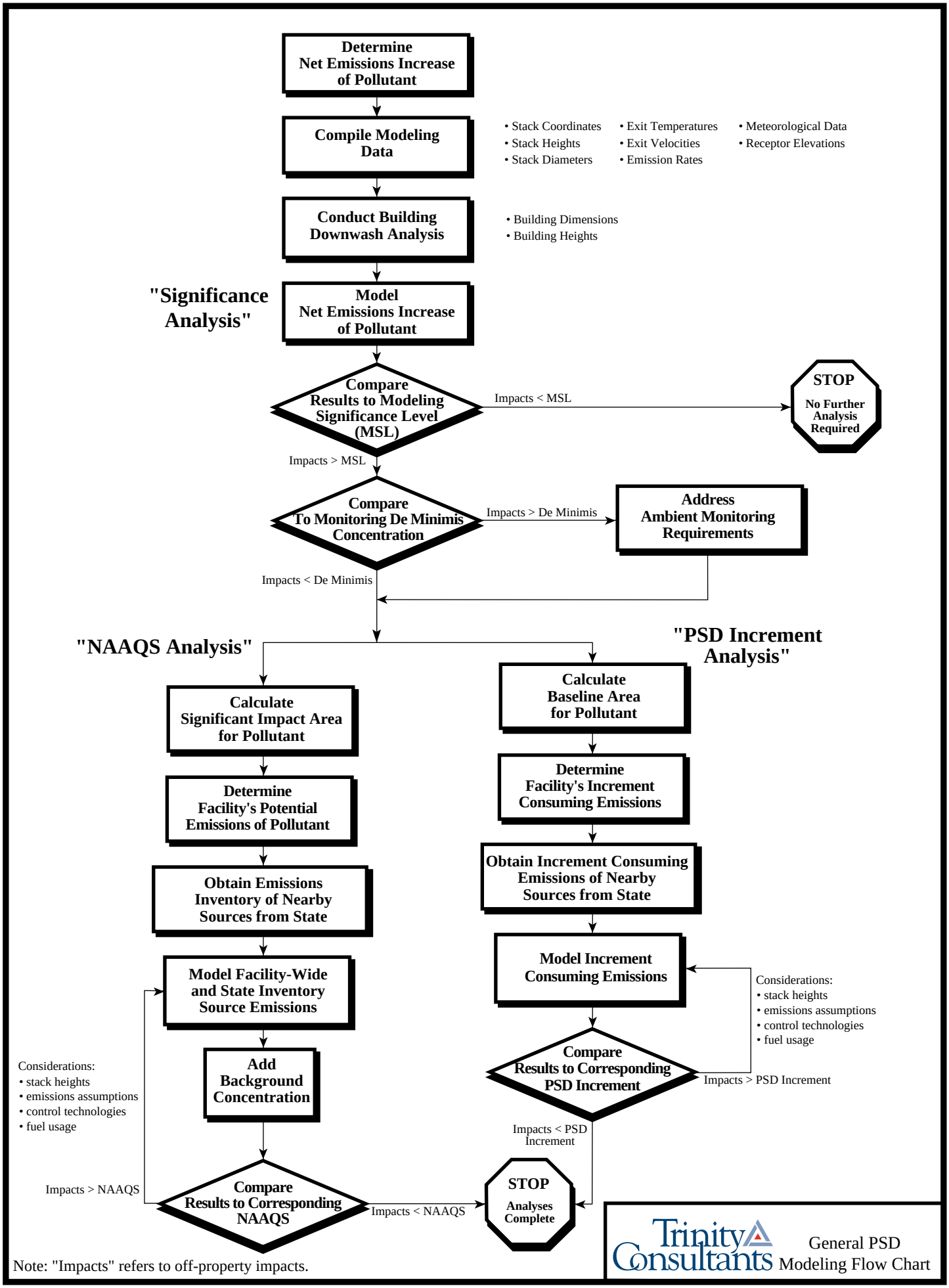


Figure B-13. SO2 Significance Model Impacts (Annual)
Pee Dee Facility



APPENDIX C

PSD FLOWCHART



Note: "Impacts" refers to off-property impacts.

APPENDIX D

ELECTRONIC MODEL FILES