UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

MAR 2 8 2019

Richard Dunn, Director
Georgia Environmental Protection Division
4244 International Parkway, Suite 120
Atlanta, Georgia 30354

Dear Mr. Dunn:

I am writing to respond to your request for the U.S. Environmental Protection Agency to terminate requirements under the Data Requirements Rule (DRR)[1] for the sulfur dioxide (SO_2) national ambient air quality standards (NAAQS) for ongoing verification, which apply to the area in Heard County, Georgia. Specifically, this is the area surrounding the Georgia Power Plant Wansley. This request to terminate the ongoing data reporting requirements applicable to the area was included in your submittal of updated air quality characterization information, which you transmitted to the EPA on January 9, 2019.

The DRR provides that "[f]or any area where modeling of actual SO_2 emissions serve[s] as the basis for designating such area as attainment for the 2010 SO_2 NAAQS, the air agency shall submit an annual report to the EPA Regional Administrator" providing specified types of information, including a recommendation as to the need for further modeling to assess whether the area is continuing to attain the NAAQS. *See* 40 CFR 51.1205(b). However, "[a]n air agency will no longer be subject to [these requirements] if it provides air quality modeling demonstrating that air quality values at all receptors in the analysis are no greater than 50 percent of the 1-hour SO_2 NAAQS, and such demonstration is approved by the EPA Regional Administrator."

Georgia's December 28, 2016, air quality characterization for Heard County included modeling of actual emissions for Plant Wansley to inform round 3 SO_2 designations. The December 28, 2016, submission include modeling indicated that maximum SO_2 concentration in Heard County was 15 parts per billion (ppb), representing 20 percent of the SO_2 NAAQS and showing that there was no expected violation of the NAAQS in Heard County. The EPA designated Heard County as attainment/unclassifiable on January 9, 2018 (effective April 9, 2018).[2]

Georgia's January 9, 2019, submittal included updated modeling of the most recently available actual emissions (2015-2017) for Plant Wansley showing a maximum SO_2 concentrations in the area of 16.5 ppb, representing 22 percent of the SO_2 NAAQS. The EPA has evaluated this modeling analysis and concludes that it appropriately characterizes SO_2 air quality in this area. The EPA has included its technical assessment of the modeling supporting Georgia's request in the enclosure. Therefore, the EPA agrees that Georgia has provided modeling demonstrating that SO_2 air quality values at all receptors in Heard County are no greater than 50 percent of the NAAQS, and I approve this demonstration.

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[1] 40 CFR part 51, subpart BB.
[2] *See* 83 FR 1098

Consequently, no further ongoing verification is required for this area under 40 CFR 51.1205(b). Thank you all for the work your agency has done to support improved air quality. If you have any questions, please contact me at (404) 562-8357 or Carol L. Kemker, Acting Director of the Air, Pesticides and Toxics Management Division, at (404) 562-8975.

Sincerely,

Mary S. Walker
Acting Regional Administrator

Enclosure

The EPA's Assessment of the Air Dispersion Modeling Provided by the State of Georgia Environmental Protection Division

The EPA agrees that the modeling information provided by Georgia for the analysis of the Heard County Area affected by the Georgia Power Plant Wansley (Plant Wansley) facility and other nearby sources is sufficiently representative of current air quality for that area. In accordance with the EPA's Sulfur Dioxide (SO_2) Modeling Technical Assistance Document (TAD), the most recent 3-years of actual hourly emissions (2015–2017) from Plant Wansley and actual stack heights were used in the modeling. Georgia evaluated offsite SO_2 sources within 50 kilometers (km) of Plant Wansley in all directions and included the following offsite sources in order to adequately characterize air quality in the vicinity of Plant Wansley: Plant Yates, Wansley Combined-Cycle Generating Plant, Chattahoochee Energy Facility, and Municipal Electric Authority of Georgia ("MEAG Power"). Table 1 lists the sources and their emissions (Table 4 in Georgia's December 26, 2018 submission). Georgia's determination was based on the most recent emissions for the nearby sources: 2016 for large sources (annual National Emissions Inventory (NEI) reporters) and 2014 for smaller sources (triannual NEI reporters). Georgia calculated the Q/d (emissions (tons per year (tpy))/distance km) values for all facilities. Only one of the resultant Q/d values was greater than 20; however, due to the close proximity to Plant Wansley, an additional three offsite sources were included in the modeling. Therefore, Georgia modeled the Plant Wansley facility along with the following four offsite sources: Plant Yates, Wansley Combined-Cycle Generating Plant, Chattahoochee Energy Facility, and MEAG Power. Allowable/Potential to Emit (PTE SO_2) emissions and good engineering practice (GEP) stack heights were used to model the nearby sources. Based upon an evaluation of the emissions and the locations of the other sources in the area, the EPA agrees with the nearby sources that were included in the modeling with Plant Wansley and believes that the nearby sources that were not included in the modeling will not cause a significant concentration gradient in the area near Plant Wansley. Therefore, the EPA agrees with Georgia that the impacts from the other nearby sources that were not included in the modeling are adequately represented by inclusion of an appropriate background concentration.

Table 1 of Georgia's December 26, 2018 modeling submittal includes the Clean Air Market's Division (CAMD) SO_2 emissions along with the modeled SO_2 emissions. The annual emissions from CAMD for Plant Wansley do not match up with the CAMD values listed in Table 1 of Georgia's submission due to Unit 5A of Plant Wansley not being included in the modeling. Georgia's submittal identifies Unit 5A as a blackstart combustion turbine which is used to restart the steam-electric generating units when all steam-electric generating units at the facility are down and off-site power is not available. Unit 5A operates less than 30 hours per year (Table 2) and is considered by Georgia to be an intermittent source. Georgia's submittal goes on to say that Unit 5A emissions in CAMD were not measured by SO_2 continuous emission monitoring systems (CEMS), but estimated using the low mass emission (LME) unit methodology for reporting under Part 75 (40 CFR 75.19). The reported Unit 5A emissions in CAMD were based

on the default emission factor of 0.5 lb/one million British Thermal Units for diesel fuel with sulfur content of 4,950 ppm shown in Table LM-1. The actual emission factor for Unit 5A was much smaller since Unit 5A used ultralow sulfur diesel with sulfur content of ~15 parts per million (ppm). Therefore, the actual emissions from Unit 5A were much lower than what were reported in CAMD (Table 2). EPA agrees that the level of operation of Unit 5A would fall under the intermittent category and it is appropriate that the emissions from Unit 5A were not included in this modeling.

The background monitor that Georgia used in the modeling is at the South DeKalb monitoring site in Atlanta. The 2015-2017 3-year design value of 3 parts per billion (ppb) from this background monitor was used by Georgia. Georgia provided an analysis comparing the total emissions within 20 km of Plant Wansley (70 tpy) to the total SO_2 emissions within 20 km of the South DeKalb SO_2 monitor (1,031 tpy) to demonstrate that the South Dekalb monitor is an appropriately representative background monitor for the analysis. EPA agrees with Georgia's use of the South DeKalb monitor as the background monitor.

The State also chose an appropriate modeling domain that shows the maximum impact from the facility in the Heard County area. The receptor grid, as seen in Figure 1, extends to approximately 20 km from Plant Wansley in all directions. Additional 100-m fine-grid receptors were added in the area of the maximum modeled impacts (originally modeled with the 250-m grid) in order to better capture the maximum impact. Receptors were placed at 100-m within Plant Wansley's represented ambient air boundary, which is potentially more receptors than recommended as the SO_2 NAAQS Designations Modeling Technical Assistance Document (SO_2 Modeling TAD)[1] specifies that the areas to consider for receptor placement are those areas that would be considered ambient air relative to each modeled facility. Terrain elevations were sufficiently accounted for by AERMAP. The EPA also agrees that the surface and upper air meteorological data chosen for this analysis are sufficient for a valid modeling analysis.

Georgia used AERMOD version 18081 with the default regulatory setting, the most current version of the model. The AERMOD modeling parameters for the Heard County area of analysis are summarized below in Table 3. Overall, the EPA agrees that this modeling analysis was performed in a manner consistent with the SO_2 Modeling TAD and is sufficient for predicting SO_2 concentrations in the Heard County, GA area. Georgia's modeling indicates that the highest predicted 99th percentile daily maximum 1-hour concentration within the chosen modeling domain is 43.2 micrograms per cubic meter ($\mu g/m^3$), equivalent to 16.5 ppb. This modeled concentration included the background concentration of SO_2 and is based on 2015–2017 actual

[1] "SO_2 NAAQS Designations Modeling Technical Assistance Document," U.S. EPA Office of Air and Radiation, Office of Air Quality Planning and Standards, Air Quality Assessment Division, August 2016 available at: https://www.epa.gov/sites/production/files/2016-06/documents/so2modelingtad.pdf

emissions from Plant Wansley and PTE emissions from nearby sources. Figures 2 and 3 below indicate that the predicted value occurred approximately 2.27 km to the southeast of Plant Wansley. The results from the model run indicate that SO_2 concentrations in the area surrounding Plant Wansley are well below 50 percent of the 1-hour SO_2 NAAQS level of 75 ppb (196 $\mu g/m^3$). Therefore, the modeling supports Georgia's request to terminate the requirement to submit future annual reports for the area surrounding Plant Wansley pursuant to 40 CFR 51.1205(b).

Table 1: List of facilities within 50 km of Plant Wansley and their most recent SO_2 emissions, Prepared by Georgia EPD, December 26, 2018

EIS Facility ID	Facility Name	Latitude	Longitude	SO_2 Emissions (TPY)	Distance (km)	Q/d (TPY/ km)
14900001	Ga Power Company - Plant Wansley	33.4139	-85.0333	4,856.2	0.0	N/A
14900011	Southern Power - Wansley Combined Cycle	33.4060	-85.0373	26.3*	1.1	22.9
14900007	Municipal Electric Authority Of Ga-Wansley	33.4082	-85.0399	13.1*	1.1	12.4
14900006	Chattahoochee Energy Facility	33.4071	-85.0386	10.7*	1.1	9.8
7700001	Ga Power Company - Plant Yates	33.4626	-84.9018	18.4*	13.7	1.3
4500008	Southwire Company - Carrollton	33.5644	-85.0700	5.1	20.5	0.3
14900004	Tenaska Georgia Generating Station	33.3533	-84.9992	1.0	8.9	0.1
12100021	Owens Corning Insulating Systems, LLC	33.5389	-84.6155	3.0	49.4	0.1
9754011	West Georgia Rgnl - O V	33.6310	-85.1520	0.4	31.9	0.0
9744911	Newnan Coweta County	33.3121	-84.7703	0.3	32.3	0.0
7700010	Bon L Manufacturing Company, Inc.	33.3816	-84.8167	0.1	24.5	0.0
11590211	South Fulton	33.5376	-84.6388	0.1	46.9	0.0
4500059	Decostar Industries	33.6066	-85.1144	0.0	27.3	0.0
7416211	Printpack Inc	33.7425	-84.9458	0.0	45.0	0.0
11666411	Tanner Medical Center\Villa Rica	33.7436	-84.8764	0.0	47.4	0.0
14900012	Plasti-Paint Inc.	33.2853	-85.0984	0.0	18.6	0.0
11938611	Tanner Medical Center	33.5701	-85.0749	0.0	21.4	0.0
11498411	Humana Hospital-Newnan	33.3926	-84.8172	0.0	24.2	0.0
11621011	Gum Creek	33.4212	-85.1619	0.0	14.3	0.0

*PTE SO_2 emissions were used rather than actual SO_2 emissions.

Table 2: SO_2 Emissions (TPY) from Unit 5A of Plant Wansley and Operating Hours, Prepared by Georgia EPD, December 26, 2018

Year	Reported Emissions in CAMD (assumes 4950 ppm)	Actual Emissions (ULSD, ~15 ppm)	Operating Time (hours)
2012	0.596	0.002	7
2013	0.708	0.002	27
2014	0.395	0.001	24
2015	1.179	0.004	23
2016	0.414	0.001	25
2017	0.429	0.001	13

Figure 1: Receptor Grid for Heard County Area of Analysis. Source: "GA EPD Dispersion Modeling to Fulfill Annual Reporting Requirements for the 2010 1-Hour SO_2 NAAQS: Georgia Power - Plant Wansley" Prepared by Georgia EPD, December 26, 2018

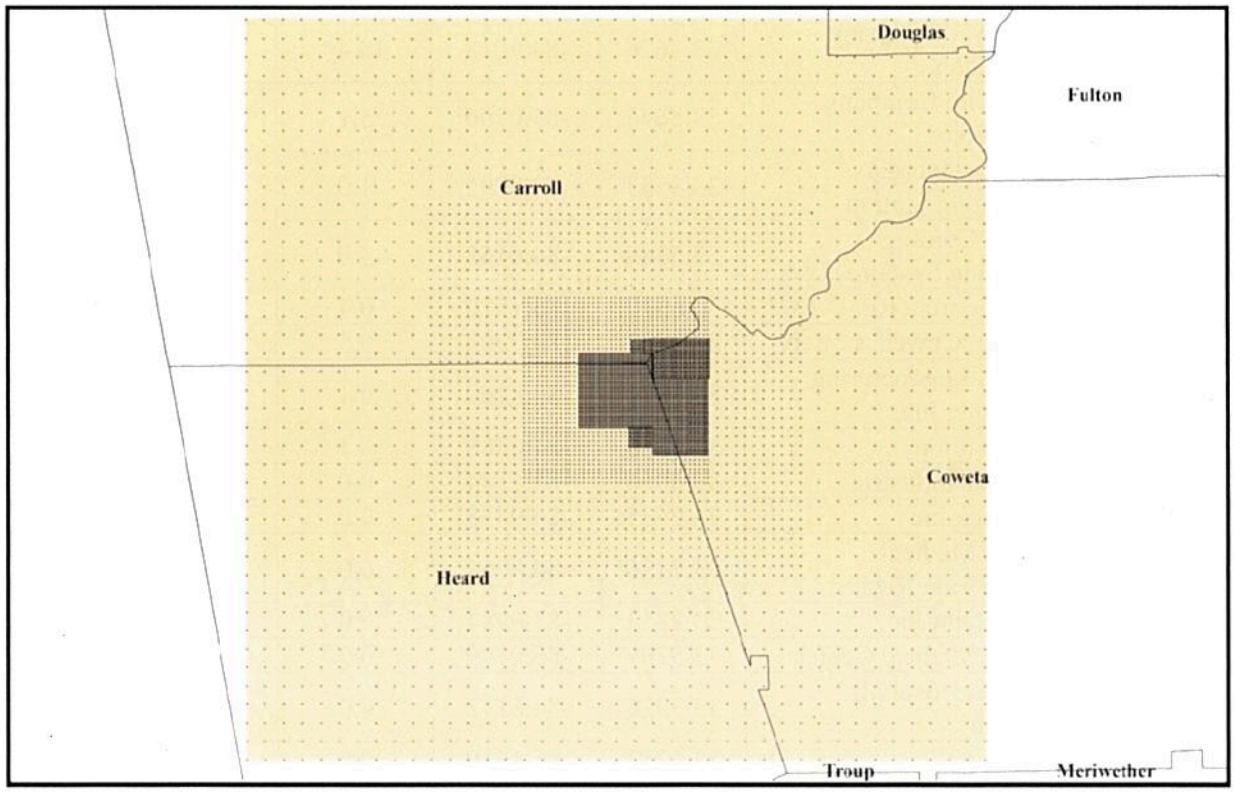

Table 3: Summary of AERMOD Modeling Input Parameters for the Heard County Area of Analysis

Input Parameter	**Value**
AERMOD Version	18081
Dispersion Characteristics	Rural
Modeled Sources	5
Modeled Stacks	11
Modeled Structures	3
Modeled Fencelines	0
Total receptors	7,732
Emissions Type	Mixed
Emissions Years	2015-2017
Meteorology Years	2015-2017
NWS Station for Surface Meteorology	Peachtree City, Georgia
NWS Station Upper Air Meteorology	Peachtree City, Georgia
NWS Station for Calculating Surface Characteristics	Peachtree City, Georgia
Methodology for Calculating Background SO_2 Concentration	1st tier – monitored design value, South DeKalb monitor, Atlanta, Georgia
Calculated Background SO_2 Concentration	3 ppb (7.9 $\mu g/m^3$)

Figure 2: Maximum Predicted 99th Percentile 1-Hour SO_2 Concentrations in the Heard County Area of Analysis Based on Actual Emissions. Source: "GA EPD Dispersion Modeling to Fulfill Annual Reporting Requirements for the 2010 1-Hour SO_2 NAAQS: Georgia Power - Plant Wansley" Prepared by Georgia EPD, December 26, 2018

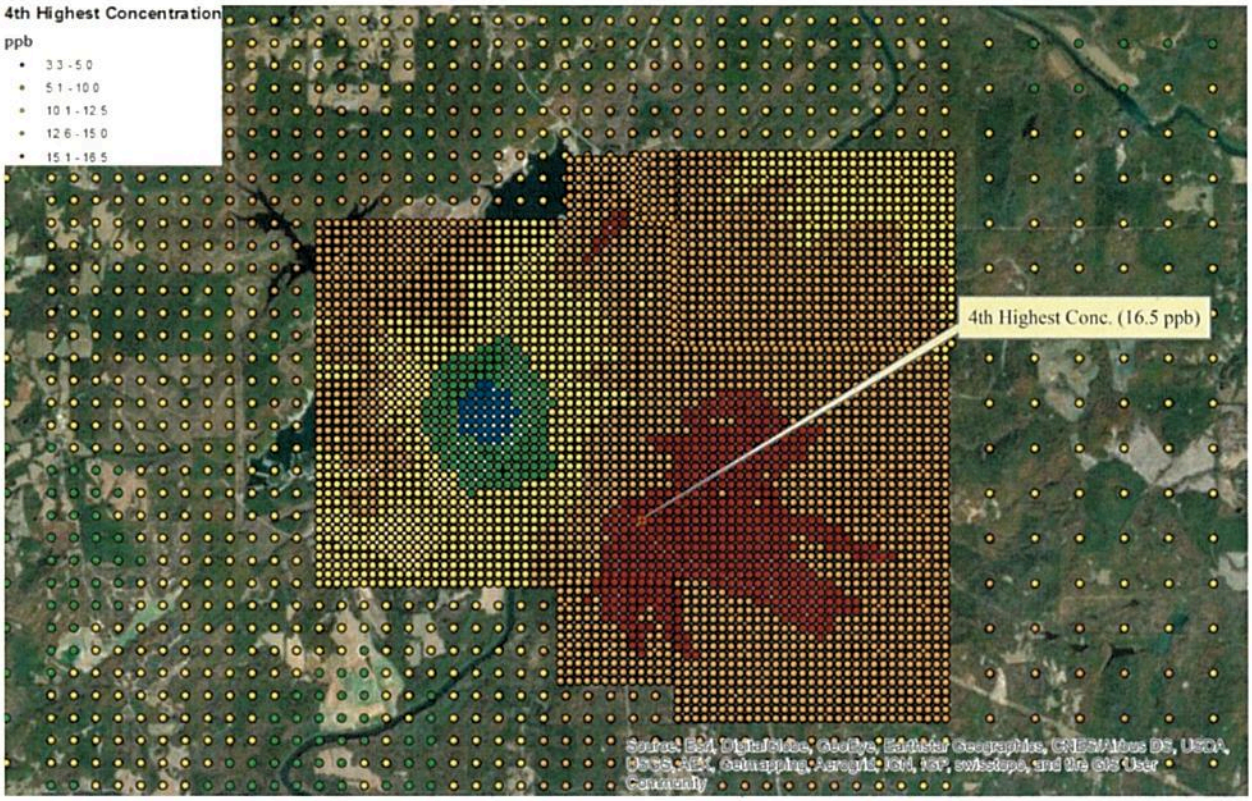

Figure 3: Concentration Isopleth of the Maximum Predicted 99th Percentile 1-Hour SO_2 Concentrations in the Heard County Area of Analysis Based on Actual Emissions. Source: "GA EPD Dispersion Modeling to Fulfill Annual Reporting Requirements for the 2010 1-Hour SO_2 NAAQS: Georgia Power - Plant Wansley" Prepared by Georgia EPD, December 26, 2018