Trinity Consultants
3495 Piedmont Rd, Bldg 10, Ste 905, Atlanta, GA 30305 / P 678.441.9977 / F 678.441.9978 / **trinityconsultants.com**

April 23, 2021

Mr. Byeong-Uk Kim, Ph.D.
Manager, Data & Modeling Unit
Georgia Environmental Protection Division – Air Protection Branch
4244 International Parkway, Suite 120
Atlanta, GA 30354
Byeong.Kim@dnr.ga.gov

RE: Washington County Power – Sandersville, GA – Fuel Oil Conversion Project – PSD Permit Application Additional Information Request for PSD Air Dispersion Modeling

Dear Mr. Kim:

Please find attached to this letter, two revised documents to address your additional information request, dated March 31, 2021, regarding the dispersion modeling conducted for the Washington County Power, LLC (WCP) PSD Permit Application. The attached includes;

a. A revised Volume II modeling report. It seemed easiest and most appropriate to update the previously provided Volume II modeling report with the updated requested information. Revised information (from the original February 2021 report) within the narrative of the Volume II modeling report have been highlighted in yellow, for ease of tracking significant changes to the report. Additional tables have been included within Appendix D, to show more details and provide additional information on items such as the modeling inventory development for the project, MERPs calculations, etc. An electronic copy of the revised modeling files, applicable spreadsheet information (e.g. Appendix D) are included on the thumb drive accompanying the attached Volume II modeling report.

b. A revised Appendix B (calculations) for the Volume I portion of the permit application. Upon review of comments received to modeling we discovered certain discrepancies (e.g. individual generator/fire pump calculations were not included, etc.) in what was submitted versus what was intended to be provided. Also, there was a linking error in the spreadsheet associated with the sulfuric acid mist emissions (realized through comment regarding modeling of sulfuric acid mist emissions), so that has been corrected/adjusted in the attached revised Appendix B from Volume I.

Additional details regarding the attached revisions, are as follows.

1. Report tables have been adjusted and revised to provide significant impact area (SIA) distance information where appropriate for significance modeling. None of the updated MERPs information negatively influenced $PM_{2.5}$ SIA values as the initial SIA values for $PM_{2.5}$ were quite small.

2. Regional inventory documentation has been supplemented in the attached Volume II modeling report, including additional discussions and explanations regarding how the various sorting and elimination of sources was conducted (Section 3.6), as well as additional spreadsheet documentation showing how various aspects of the inventory development occurred (Appendix D). For example, a new spreadsheet table (including a matrix of sites) in Appendix D (Table D-24) shows how sites were evaluated for distance from each other (for sites within 2 km of each other) and emissions were summed for those cluster groups for the 20D analysis. Although information may not have been provided exactly as requested in the additional information request, the writeup and spreadsheet tables provided in Appendix D should allow Georgia EPD to understand and reproduce the inventory source list and modeling information we utilized for the inventory sources for the modeling assessments.

3. Information regarding the Modeled Emission Rates for Precursors (MERPs) have been updated through the report. MERPs values added to modeled values are now shown in all applicable tables within the report. Section 4.5.6 and Appendix D, Tables D-18 to D-21 have written discussions and calculations for derivation of the various MERP values used for the various modeling exercises. Specific MERPs values were derived from more recently available EPA documentation regarding Class I areas/distances to derive Class I SIL specific MERP associated values for $PM_{2.5}$. Also, secondary based $PM_{2.5}$ impacts from potential increment consumers has now conservatively been accounted for in the PSD Increment analysis for $PM_{2.5}$.

4. Some additional explanation has been provided within the attached Volume II modeling report regarding the 1-hr NO_2 NAAQS analysis. Although the referenced table (Table 5-7) only showed contributions associated with H8H, the electronic modeling files provided with the application (specific contribution run folder) included MAXDCONT output files which evaluated source contributions all the way down to the 83rd high (where violations ceased with results below the NAAQS-background).

5. Additional documentation regarding the emergency generator and fire pump is now included in Section 4.5.1, with additional supporting documentation for emissions in the attached revised Appendix B for Volume I.

6. As discussed during our prior conference call, the natural gas heaters were conservatively modeled in all modeling scenarios. The only exception was in the past actual individual model runs for NO_2, as those units were not modified and had no estimated past actual emissions. Revised language in the Volume II report has been included to help alleviate this confusion.

7. Revised VISCREEN modeling corresponding to the revised sulfuric acid mist emission rates have now been incorporated into the attached revised Volume II modeling report.

8. All Excel spreadsheet files provided electronically should now conform to the latest and correct data for modeling files and supplemental information.

If you have any questions or comments about the information presented in this letter, please do not hesitate to call me at 404.751.0228.

Sincerely,

TRINITY CONSULTANTS

Justin Fickas
Principal Consultant

Attachments

cc: Kirk Stafford, Harbert Infrastructure (Birmingham, AL)
Jeremiah Redman, Trinity Consultants (Birmingham, AL)