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James Lieb
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jl Lieb@eprod.com

Subject: Follow-up Regarding Enterprise Submittal of Four-Factor Analysis of Control Measures for Blanco C&D Compressor Station GE Turbines

Dear Mr. Lieb:

This letter requests additional information and analysis for the Enterprise Field Services – Blanco C&D Compressor Station four-factor analysis that was received by the New Mexico Environment Department (NMED) Air Quality Bureau (AQB) on October 29, 2019. Pursuant to [NMED's Regional Haze Guiding Principles](#), the four-factor analysis must consider new ideas that potentially offer better solutions to problems and must evaluate the newest engineering methods and technology advances in potential control measures.

NMED has the following questions regarding the emissions control options you presented for the three (3) GE turbines: 5221W (2); 5322B (1).

1. Selective Catalytic Reduction (SCR) Technology

- a. You rejected consideration of SCR technology (CECO-Peerless) on account of space considerations; please provide more details on the specific dimensions and space required for SCR.
- b. Please also provide an estimated NO_x control efficiency.

2. Water/Steam Injection

- a. Your reported reduction effectiveness of 15% appears to be on the low side; a literature search suggests efficiencies greater than 50% to be more common. The AP-42 3.1.4.1 section you refer to in your analysis, in particular, indicates achievable NO_x reduction on the order of 60%. Table 3.1-1 within the same AP-42

document shows reduction from an uncontrolled 0.32 lb NO_x/MMBtu to 0.13 lb NO_x/MMBtu via Water-Steam Injection. Please clarify your 15% determination.

- b. Your mention of increased CO and Unburned Hydrocarbons (UHC) with this technology can, in fact, be mitigated through the water/fuel ratio, with lower ratios favoring smaller increases in undesired CO and UHC. How have you considered this in your analysis?

3. Cost Effectiveness (Dry Low NO_x)

- a. Please provide a vendor quote from Baker Hughes for the *Dry Low NO_x* system proposed for the GE 5322B turbine.
- b. Are there no other vendors who make similar systems that could be fitted to the GE 5221W turbines?

4. Emissions Data

- a. Adjacent to the turbine NO_x emissions lb/hr and tpy data you provide in your analysis of Dry Low NO_x and Water/Steam Injection implementation is the statement, “from 2016 stack test data”. Your 2016 Emissions Inventory submittal, however, does not match the data presented in your analysis (**Unit T-CO1**: 36.92 lb/hr, 158.60 tpy; **Unit T-CO2**: 51.56 lb/hr, 219.26 tpy; **Unit T-DO1**: 49.32 lb/hr, 197.37 tpy). Further observation of your 2016 Emissions Inventory supplemental attachment reveals lb/hr values for the turbine units do not match the ones you used in the analysis. Please clarify.

5. Other Control Options

- a. Have you considered other options not otherwise listed in your 4-Factor Analysis?
 - i. Staged Combustion;
 - ii. Ultra-Lean Combustion; and
 - iii. Post-Combustion other than SCR (i.e. XONON, SCONO_x, NSCR).

Please note that per EPA’s Guidance on Regional Haze State Implementation Plans for the Second Implementation Period (August 20, 2019), “as part of meeting the requirement of the Regional Haze Rule for the state to document the cost and engineering information on which the State is relying every source-specific cost estimate used to support an analysis of control measure must be documented in the SIP”. If you feel that your supplemental information should be classified as confidential business information (CBI), it will need to be reviewed and approved as such by NMED and EPA. Submit CBI with the word ‘confidential’ included in the electronic file name and on each page of the document. Do not combine non-confidential business information and CBI in the same files. Also, the claimant must satisfy the conditions in 20.2.1.115.B(3)(a)-(d) NMAC when the CBI is submitted. Until NMED and EPA determines if the information qualifies as CBI, the information will not be disclosed to anyone other than those listed in 20.2.1.115 NMAC.

NMED respectfully requests that your company submit the additional information on four-factor analysis electronically as soon as possible to Mark Jones at mark.jones@state.nm.us and myself at kerwin.singleton@state.nm.us. Please contact NMED if you have questions about the additional information request. We encourage your questions in order to help expedite the technical analysis required under the Regional Haze Program. Staff would be happy to meet with you in person to discuss these requirements in more detail. Likewise, staff may further contact you with questions or require additional information during its review of your submittals.

Thank you for your assistance in this matter. If you have questions or need clarification, please contact me at (505) 476-4350, or Mark Jones at (505) 566-9746.

Sincerely,

Kerwin C. Singleton
Planning Section Chief

Cc: Jake Zenker, Trinity Consultants