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December 23, 2019

Mr. Kevin Worley
Xcel Energy
P.O. Box 1261
Amarillo, TX 79105

Kevin.L.Worley@xcelenergy.com

Subject: Request for Additional Information on Four-Factor Analysis under the Regional Haze Program

Mr. Worley:

This letter requests additional information for the Xcel Energy Cunningham Station Four-Factor Analysis report that was received by the New Mexico Environment Department (NMED) Air Quality Bureau (AQB) on November 4, 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.

Based on our initial review, the NMED requires the following additional information to complete our review of Xcel Energy's four-factor analysis:

Combustion Turbines

1. Provide the details regarding Good Combustion Practices (GCP) and the routine maintenance schedule and procedures that are currently used to mitigate NO_x emissions that are employed as the base case.
2. Can documentation be obtained from Siemens to support the claim that there are no commercially available dry low NO_x (DLN) burners that would provide lower emissions than those already installed on the combustion turbines?
3. Provide documentation with details from Xcel engineers that steam injection may not be implemented on the combustion turbines.
4. Although the analysis indicates that selective catalytic reduction (SCR) may be considered a technically feasible control option, if space and temperature limitations can be overcome, please provide additional discussion on the possible space limitations; the potential significant technical and financial challenges associated with elevated exhaust temperature from the simple cycle turbines; and the drawbacks from employing this technology on peaking units when compared to continuous operation of combined-cycle units.

Industrial Boilers

1. Provide the details regarding GCP and the routine maintenance schedule and procedures that are currently used to mitigate NO_x emissions and are employed as the base case.

2. Please provide additional detail on the reasons why the three levels of combustion burners on Boiler Unit 1 cannot be modified to include the overfire air technique currently employed on Unit 2.
3. There are other NO_x reduction technologies that may be applicable to the Cunningham Station's boilers. Please include a discussion on the technical feasibility on the following technologies:
 - a. ECOTUBE;
 - b. LoTOx;
 - c. natural gas reburn;
 - d. NO_xStar™ and NO_xStar Plus™;
 - e. regenerative SCR (RSCR); and
 - f. selective non-catalytic combustion.

Cost of Compliance

1. Please provide copies of all vendor quotes used for determining the cost of compliance and copies of electronic spreadsheets used to calculate cost effectiveness.
2. Provide a vendor quote to refine the cost effectiveness estimates for installation of SCR units on the boilers.

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