



Michelle Lujan Grisham
Governor

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December 23, 2019

Kijun Hong
Harvest Four Corners, LLC.
1755 Arroyo Drive
Bloomfield, NM 87413

Sent by electronic mail to: khong@harvestmidstream.com

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

Dear Mr. Hong:

This letter requests additional information and analysis for the Kutz Canyon Processing Plant. Four-factor analysis reports were received by NMED in November 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 additional information, analyses and clarifications on your four-factor analysis as follows:

1. **Natural Gas Fired Simple Cycle Turbines:** Please provide the following information regarding potential control measures for nitrogen oxide (NO_x) emissions from Units 1-6, 19, and 20.
 - i. Provide details of the Good Combustion Practices utilized at the plant including routine inspections, maintenance and training schedules. It is unclear if these practices are fully optimized or conform to permit conditions alone.
 - ii. Provide vendor specifications for the Solar SoLoNO_x (i.e., Dry Low NO_x (DLN)) combustion technologies to include the guaranteed NO_x emission rates used in cost analysis, the cost information, recommendations, and equipment specifications for the turbine control estimates.
 - iii. How will upgrading the turbine combustors with Solar SoLoNO_x affect the turbine capacities and the emission rates of NO_x and CO?
 - iv. Provide the statement by the turbine vendor stating why water injection is not technically feasible for these units.
 - v. Provide supporting data and information for the determination that Selective Catalytic Reduction (SCR) systems are a technically infeasible control measure. Please consider and discuss temperature control devices and catalysts with higher operating temperatures (e.g., zeolites). Additionally, provide clarifying information regarding the additional energy demand SCR would require and expansion of current power generation capacity. Provide a cost analysis if this determination is based on cost and not technical feasibility.

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James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

- vi. Please consider and include a discussion on limiting turbine operating hours or shutting down turbines that are no longer needed to reduce emissions.
- vii. Include a discussion of additional control measures for NO_x emissions including catalytic combustion and DLN technology available from other manufacturers. A four factor analysis should be completed for all technically feasible options.
- viii. Provide the electronic spreadsheets used for control technology cost calculations.

2. **Two Stroke Lean-Burn Engines (2SLB):** Please provide the following information regarding potential control measures for NO_x emissions from Units 16-18.

- i. Provide details of the Good Combustion Practices utilized at the plant including routine inspections, maintenance and training schedules.
- ii. Please consider and include a discussion on the feasibility and cost of technology that limits engine capacity to reduce NO_x emissions. Also evaluate limitations on engine operating hours or shutting down engines that are no longer needed to reduce emissions.
- iii. Please consider and include a discussion on the feasibility of replacing the 2SLB engines with commercial electric powered compressors.
- iv. Consider and include a discussion of variations of Clean Burn Technology (CBT) used to reduce NO_x emissions that may be less expensive than the full CBT packages proposed. Please include cost and efficiencies in analysis.
- v. Provide vendor quotes and estimates that include equipment specifications, installation cost information, recommendations, as well as operation and maintenance costs for the engine control estimates in section 3.
- vi. Provide the technical justification and basis that supports the determination that Clark HRA-8 2SLB are poorly suited for SCR controls resulting in technical complications and unreliable operation. When would the engine control vendor contacted recommend this control?
- vii. Please provide more information on what could be done to improve the poor air to fuel ratio for SCR to work properly, including the installation of a turbo charger and intercooler. Provide vendor quotes and specifications received on installing SCR for these engines, if any.
- viii. Provide the electronic spreadsheets used for control technology cost calculations.

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