Mustang Gas Products, LLC
A Subsidiary of Mustang Fuel Corporation

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February 24, 2022

Ms. Kendal Stegmann
Air Quality Division
Oklahoma Department of Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73101-1677

SUBJECT: Response to 4-Factor Analysis on Control Scenarios Request
Clean Air Act Regional Haze Program
Binger Gas Plant
Permit No. 2015-1174-TVR3 (M-1)
Mustang Gas Products, LLC

Dear Ms. Stegmann:

Mustang Gas Products, LLC ("Mustang") in response to the four-factor analysis additional clarification request from the Oklahoma Department of Environmental Quality ("ODEQ") received on January 31, 2022 is submitting the enclosed information for the Binger Gas Plant ("Facility"). This response is being provided prior to the deadline of February 28, 2022 as specified in the request.

1. *Please provide additional justification for the elimination of an air fuel ratio controller ("AFRC"), which is a type of Clean Burn Technology, from further consideration without evaluating this control option in the four-factor analysis. The company states that due to the cost associated with retrofitting the engines with this control, limited operational flexibility, and an increase in regulatory requirements, Mustang does not believe it is feasible to control the engines using an AFRC. However, it appears this control option was identified as a technically feasible control option for these engine types based on the company's review of the RACT/BACT/LAER clearinghouse. Please explain whether there are unique circumstances or conditions at this plant that make AFRC technically infeasible.*

Mustang retracts the original statement included in the initial submittal. After further discussion with field operations and engineering it was determined Mustang has historically installed AFRCs on Mustang's controlled engines and will continue to do so going forward. In addition, Mustang has confirmed engines CM-2323, CM-2324, and CM-2325 are equipped with an AFRC as represented in Permit No. 2020-0500-TVR4, which is currently in review with the DEQ. Mustang agrees the installation of an AFRC is a viable option for controlling these engines.

2. *Additional discussion is needed for the elimination of selective catalytic reduction ("SCR") from further consideration without evaluating it under the four factors. The company states that it does not believe SCR is feasible due to anticipated issues with controlling this type of engine with SCR. However, the company's review of the RACT/BACT/LAER clearinghouse revealed that a number of similar engine types are currently equipped with SCR for the control of NOX emissions. Did the company reach out to any SCR vendors to investigate whether this control option would be technically feasible for the units at the Binger Gas Plant?*

As covered in the previous submittal and discussed in AP-42 Section 3.2 Natural Gas-fired Engines, an SCR is a type of precombustion technology typically used to control a lean burn engine. As the engines located at Binger are naturally aspirated rich burn engines, these controls are not compatible. For an SCR to work properly the exhaust temperature of the controlled engine must be maintained in the range of 450 to 850 degrees Fahrenheit (F). Per the manufacturer specifications for these engines, the exhaust temperatures are rated above the recommended threshold for an SCR. Mustang notes the engines listed in the RACT/BACT/LAER clearinghouse all appear to be lean burn engines and therefore are not similar engines. Accordingly, the control method is not a viable option for these engines.

3. *The company compared actual 2019 emissions inventory data to the maximum potential to emit ("PTE") rate to calculate the emission reductions for the NSCR control scenario. Please explain how the maximum PTE rate of the units was estimated/calculated for the NSCR control scenario.*

The maximum PTE controlled rates were calculated using the following conditions. Please note while Mustang agrees the installation of a AFRC and NSCR will result in a 90% control of emissions, Mustang would like to maintain more conservative emission factors in the permit to prevent any future compliance issues. Mustang notes there have been changes made at the facility since the submittal of the original analysis. An AFRC and NSCR were installed on engine CM-2323, as demonstrated in the pending Title V Permit Renewal No. 2020-0500-TVR4.

Unit	Permitted Emission Factor (g/hp-hr)	Percent Reduction (%)	Proposed Permit Emission Limit (g/hp-hr)	Proposed Potential Emission Limit (TPY)
CM-2322	18.00	56	9.00	104.29
CM-2323	18.00	83	3.00	35.69

4. *The company states that engines CM-2324 and CM-2325 are already operated with "properly functioning NSCRs as well as with good combustion practices." The company notes that the existing control equipment has a 90% control efficiency and that it believes additional controls for these two engines would therefore be uneconomical and unnecessary. Please provide a discussion of recent actual NO_X emissions from these two engines as well as any available report or other documentation of the study/testing that was conducted to determine the control efficiency of the existing NSCR.*

Please see the below table for a comparison of the engine uncontrolled emissions and the quarterly Portable Emissions Analyzer test results for engines CM-2324 and CM-2325 which demonstrate an emission reduction of 90% or greater.

Unit	Uncontrolled Emission Factor (g/hp-hr)	Uncontrolled Emissions (lb/hr)	2021 Q2 (NOx lb/hr)	2021 Q3 (NOx lb/hr)	2021 Q4 (NOx lb/hr)	2022 Q1 (NOx lb/hr)
CM-2324	18.00	48.89	4.403	2.756	0.498	2.284
CM-2325	18.00	48.89	2.416	4.798	4.090	3.784

According to the most recent modeled predictions based on observation data in the Wichita Mountains, Oklahoma is ahead of schedule for the reduction of regional haze. Please see the respective chart included in Appendix A.

If you have any questions or need additional information, please contact me at (405) 748-9488.

Sincerely,
Mustang Gas Products, LLC

Sunni Stephenson
EHS Environmental Coordinator

cc: Mr. Steve Hoppe, Mustang Gas Products, LLC
Mr. Camren McMillan, Altamira-US, LLC

Enclosures:
Appendix 1. Area Visibility Observation Data Comparison

Area Visibility Observation Data Comparison

Wichita Mountain Class Area Visibility Observation Data for 2002 – 2020 and Modeled Predictions for 2028 Compared to the EPA Glidepath