



SCOTT A. THOMPSON  
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT  
Governor

January 31, 2022

Mike Bednar  
Grand River Dam Authority  
PO Box 609  
Chouteau, OK 74337-0609

Subject: Additional clarifications on Grand River Dam Authority 4-factor analysis on control scenarios under the Clean Air Act Regional Haze Program

Dear Mr. Bednar:

In a letter dated July 1, 2020, the Oklahoma Department of Environmental Quality (DEQ) identified the Grand River Energy Center located in Mayes County, Oklahoma, as subject to a four-factor reasonable progress analysis under the Regional Haze Rule as part of DEQ's development process for the state implementation plan covering the second planning period (Round 2) of 2021 – 2028.

On September 8, 2020, the Grand River Dam Authority (GRDA) submitted its four-factor analysis to DEQ. GRDA included in its response that there were no cost-effective sulfur dioxide (SO<sub>2</sub>) control measures available for Unit 2 in addition to considering its remaining useful life. DEQ included these conclusions in its draft Regional Haze SIP for Planning Period 2 that was shared with the Federal Land Managers (FLM) and the U.S. Environmental Protection Agency (EPA). Based on EPA and FLM review of Oklahoma's draft SIP, DEQ requests that GRDA review its four-factor analysis for potential SO<sub>2</sub> control measures and respond to the following questions, which are based on EPA's review of Oklahoma's draft SIP. We understand that much of the requested data/analysis may be gleaned or explained from DEQ's permitting and compliance files, and/or GRDA's full unredacted submittal. However, your response will allow GRDA to document the information that best explains and supports the conclusions of GRDA's four-factor analysis. DEQ intends to continue its analysis in parallel.

1. The four-factor analysis is based on a forecasted/projected annual capacity factor but the company states that it is not definitive. Please explain if this forecasted capacity factor is based on recent historical operations. If it is not, it may not be appropriate to base the four-factor analysis on this forecasted capacity factor without an enforceable commitment to operate at that capacity factor.
2. The four-factor analysis is based on a maximum sulfur loading percentage that is based on the exclusive use of Powder River Basin (PRB) coal from Wyoming, which departs from the facility's recent historical practice of mixing the PRB coal with up to 10% Oklahoma coal. Please explain what is driving the switch to use 100% PRB coal, explain whether the switch



to use 100% PRB coal is an enforceable requirement and specify how much the maximum sulfur loading percentage changed in light of this switch.

3. The assumption of a shortened remaining useful life in the cost analysis for controls evaluated for Unit 2 appears to be based on “operating projections.” As discussed in the August 2019 Guidance<sup>1</sup>, this is not an appropriate approach. The Guidance explains that “In the situation where an enforceable shutdown date does not exist, the remaining useful life of a control under consideration should be full period of useful life of that control as recommended by EPA’s Control Cost Manual.” (See August 2019 Guidance at 34.)
4. Some of the control scenarios evaluated in the four-factor analysis include replacing the existing spray dryer absorber (SDA) with a new SDA with higher SO<sub>2</sub> removal efficiency, a circulating dry scrubber (CDS), or wet flue gas desulfurization (WFGD). Taking into account that the existing SDA was recently installed, the company should consider whether the existing SDA would have any salvage value that could offset the cost of the new control equipment. EPA’s August 2019 Guidance explains that “In some instances, the installation of a new control may involve the removal or discontinuation of existing emission controls. Such situations present special issues and states should consult with their Regional offices. For example, it may be appropriate to account for the salvage value of dismantled equipment.” (See August 2019 Guidance at 31.)
5. Please provide line-item cost calculations and any vendor quotes obtained for all the control options evaluated in the four-factor analysis. This is consistent with the Regional Haze Rule, which requires that in establishing its long-term strategy for regional haze, a state must document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the state is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects. 40 CFR 51.308(f)(2)(iii).

DEQ respectfully requests that GRDA respond to EPA's questions no later than February 28, 2022. Thank you for your assistance with this matter. Please contact Melanie Foster at 405-702-4218 for any questions or clarification.

Sincerely,



Kendal Stegmann  
Director, Air Quality Division

---

<sup>1</sup> [https://www.epa.gov/sites/default/files/2019-08/documents/8-20-2019\\_-\\_regional\\_haze\\_guidance\\_final\\_guidance.pdf](https://www.epa.gov/sites/default/files/2019-08/documents/8-20-2019_-_regional_haze_guidance_final_guidance.pdf)