

MATTHEW H. MEAD
GOVERNOR



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CHEYENNE, WY 82002

Office of the Governor

January 13, 2017

Shaun McGrath
Region 8 Administrator
U.S. Environmental Protection Agency
1595 Wynkoop Street
Denver, CO 80202-1129

Re: Wyoming's Designation Recommendations for the 2010 one-hour Sulfur Dioxide Primary National Ambient Air Quality Standard - Areas Subject to the Data Requirements Rule (EPA Round 3 Designations)

Dear Administrator McGrath,

Pursuant to the Clean Air Act, the State of Wyoming provides the following designation recommendations for the 2010 one-hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard (NAAQS) for areas subject to the Data Requirements Rule (DRR). 42 U.S.C. § 7407(d)(3); 40 C.F.R. §§ 51.1200 - 51.1205. The Environmental Protection Agency (EPA) commonly refers to these as "Round 3" designations. Wyoming's recommendations are based on modeling analyses performed pursuant to 40 CFR 51 Subpart BB, otherwise known as the Data Requirements Rule, and other EPA guidance. Additionally, the State of Wyoming recommends the area surrounding the Jim Bridger Power Plant be designated based on existing monitored SO₂ data. These updated recommendations supplement my initial recommendations made on May 24, 2011.

I. Background

On June 22, 2010, the EPA replaced the 24-hour and annual SO₂ national standard with a new one-hour standard of 75 parts per billion (ppb). Primary National Ambient Air Quality Standard for Sulfur Dioxide; Final Rule, 75 Fed. Reg. 35520 (June 22, 2010); (codified at 40 C.F.R. § 50.17pt. 50). The EPA's adoption of this new national standard also triggered the requirement for each state governor to submit designation recommendations to EPA. 42 U.S.C. § 74107(d). Therefore, on May 24, 2011, I recommended that EPA designate all counties within Wyoming as "unclassifiable," excepting those portions under Tribal jurisdiction. *See* Letter from Governor Matt Mead to James B. Martin, Regional Administrator, EPA Region 8 (May 24, 2011).

On August 3, 2012, the EPA announced that it had extended its deadline to complete the designations. Extensions of Deadline for Promulgating Designations for the 2010 Primary Sulfur Dioxide National Ambient Air Quality Standard, 77 Fed. Reg. 46295 (Aug. 3, 2012). Six months after extending the deadline, EPA Region 8 responded to my recommendations submitted back in May 2011. See Letter from James B. Martin, EPA Region 8 Administrator, to Governor Matt Mead (Feb. 6, 2013). EPA determined that its “review of the most recent monitored air quality data from 2009-2011 shows no violations of the 2010 SO₂ standard in any areas in Wyoming. . . and is, therefore, currently deferring action to designate areas in Wyoming.” *Id.* at 1. Wyoming concurred with EPA’s “no violations” determination. See Letter from Todd Parfitt, Wyoming DEQ Director, submitted to Docket ID No. EPA-HQ-OAR-2012-0233 (March 29, 2013). However, Wyoming disagreed with EPA’s deferral decision and renewed its request that EPA act on my 2011 recommendations and designate all areas within Wyoming as “unclassifiable.” *Id.* The EPA has not yet acted on my 2011 recommendations. However, the EPA noted that it would address these areas in “separate future actions.” Air Quality Designations for the 2010 Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard, 78 Fed. Reg. 47191 (Aug. 5, 2013).

The deadlines by which the EPA must complete its designations for the one-hour SO₂ standard were established via Consent Decree. See Order Granting Joint Motion to Approve and Enter Consent Decree and Denying Other Motions as Moot, *Sierra Club v. McCarthy*, No. 3:13-cv-03953 (N.D. Cal. Mar. 2, 2015). The Court Order directed the EPA to complete designations in three additional rounds: July 2, 2016 (Round 2), December 31, 2017 (Round 3), and December 31, 2020 (Round 4). With respect to Round 2, I recommended that Carbon County remain unclassified and be included in the EPA’s final round of designations. See Letter from Governor Matt Mead to Shaun McGrath, EPA Administrator Region 8 (Oct. 27, 2015). The EPA concurred and did not designate any areas in Wyoming as part of Round 2. Air Quality Designations for the 2010 Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard – Round 2, 81 Fed. Reg. 45039 (July 12, 2016).

The EPA has also promulgated several rules and issued guidance and technical documents that address factors and information that the EPA intends to use in its “separate future actions” for those additional designation rounds. Specifically, the EPA promulgated a rule that directed states to provide additional modeling or monitoring information on a schedule consistent with the deadlines in the Consent Decree. Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard (NAAQS), 80 Fed. Reg. 51052 (Aug. 21, 2015); (codified at 40 C.F.R. pt. 51, subpt. BB). In accordance with the DRR, the Wyoming Department of Environmental Quality, Air Quality Division (DEQ-AQD or Division) submitted a list of applicable SO₂ sources within Wyoming and the methods for air quality characterization. See Letters from Wyoming Air Quality Division to EPA Region 8, dated Jan. 13, 2016 and July 1, 2016; see also Wyoming Ambient Air Monitoring Annual Network Plan 2016, submitted June 15, 2016,

supplemented August 8, 2016. The DEQ-AQD also tasked facilities subject to the DRR with providing data to characterize their ambient air quality, either through modeling or monitoring. Those facilities that have pursued the modeling pathway or have existing monitored data to characterize peak one-hour SO₂ concentrations are discussed below, along with the State of Wyoming's designation recommendations based on that data.

II. Designation Recommendations

Basin Electric – Laramie River Station

Basin Electric Power Cooperative (Basin Electric) has chosen to characterize the peak SO₂ concentrations at the Laramie River Station through modeling. The modeling protocol for the Laramie River Station was determined by the EPA Region 8 to align with EPA's DRR modeling guidance on October 18, 2016. The EPA model used to predict ambient impacts of SO₂ (AERMOD) produces output in terms of microgram per cubic meter (µg/m³). Therefore, the modeled results are compared to the µg/m³ equivalent of the 1-hour NAAQS for SO₂ (75 part per billion), which is 196 µg/m³.

Basin Electric provided the final modeling analysis to DEQ-AQD on November 4, 2016. The Division reviewed the modeling analysis for accuracy and determined that it followed the associated DRR modeling protocol and other EPA guidance. This analysis shows that the 1-hour modeled concentration for comparison to the NAAQS, a concentration of 84.9 µg/m³, is well below the 1-hour SO₂ NAAQS of 196.0 µg/m³. Details on the modeling analysis can be found in Enclosure 1 on the attached compact disc.

Based on the modeling analysis, the State of Wyoming recommends that the area surrounding the Laramie River Station be classified as Attainment.

Campbell County Electric Generating Unit

The Campbell County Electric Generating Unit (EGU) Group, which includes PacifiCorp's Wyodak plant, Basin Electric's Dry Fork Station, and Black Hills' Neil Simpson II, WyGen I, WyGen II, and WyGen III plants, has chosen to characterize their peak SO₂ concentrations through modeling. The modeling protocol for the group was found by EPA Region 8 to align with EPA's DRR modeling guidance on November 28, 2016.

Campbell County EGU Group provided a final modeling analysis to DEQ-AQD on December 14, 2016. The Division reviewed the modeling analysis for accuracy and determined that it followed the associated DRR modeling protocol and other EPA guidance. This analysis shows that the 1-hour modeled concentration for comparison to the NAAQS, a concentration of 93.7 µg/m³, is well

below the 1-hour SO₂ NAAQS of 196.0 µg/m³. Details on the modeling analysis can be found in Enclosure 2 on the attached compact disc.

Based on the modeling analysis, the State of Wyoming recommends that the area surrounding the Campbell County EGU Group be classified as Attainment.

PacifiCorp – Naughton

PacifiCorp has chosen to characterize the peak SO₂ concentrations at the Naughton Power Plant through modeling. PacifiCorp provided DEQ-AQD with a modeling protocol which DEQ-AQD reviewed and approved and then submitted to EPA Region 8 for further review. The protocol was acceptable to EPA Region 8 with the exception of PacifiCorp's proposed exclusion of modeling receptors over the nearby Kemmerer Mine. DEQ-AQD had advised PacifiCorp to exclude these receptors because the DEQ-AQD does not consider the area over the nearby mine as ambient air for purposes of the DRR. *See* Enclosure 3 on the attached compact disc (Email from James Thurman, Ph.D., U.S. EPA/OAQPS/AQAD – Air Quality Modeling Group; to Bob Paine, Associate Vice President, AECOM (January 26, 2016, 8:56AM) stating that EPA's policy for purposes of the area designation process was that "receptors should not be sited where a monitor could not be placed. Accordingly, receptors are not to be placed . . . on the secured property of another industrial source").

PacifiCorp proceeded with a modeling analysis that excluded receptors over the Kemmerer Mine, and this analysis is supported by the DEQ-AQD. A final modeling report was provided to DEQ-AQD on December 22, 2016. The Division reviewed the modeling analysis for accuracy and determined that it followed the associated DRR modeling protocol and other EPA guidance. This analysis shows that the 1-hour modeled concentration for comparison to the NAAQS, a concentration of 147.5 µg/m³, is well below the 1-hour SO₂ NAAQS of 196.0 µg/m³. Details on the modeling analysis can be found in Enclosure 4 on the attached compact disc.

PacifiCorp also provided DEQ-AQD with a modeling analysis that accounts for the proposed conversion of Naughton Unit 3 to a natural gas-fired unit. PacifiCorp will be required to cease coal-firing on Unit 3 in January of 2019 and complete the conversion to natural gas firing by June of 2019. This additional modeling analysis included actual emissions from the current operation of Units 1 and 2 and the potential emissions from Unit 3 after the natural gas conversion. This analysis shows that the 1-hour modeled concentration for comparison to the NAAQS, a concentration of 60.6 µg/m³, is well below the 1-hour SO₂ NAAQS of 196.0 µg/m³.

Based on the modeling analyses performed, the State of Wyoming recommends that the area surrounding the Naughton Power Plant be classified as Attainment.

PacifiCorp – Dave Johnston

PacifiCorp has chosen to characterize the peak SO₂ concentrations at the Dave Johnston Power Plant through modeling. Several versions of a DRR modeling protocol for Dave Johnston were provided to EPA Region 8 for review, with a final modeling protocol for the plant submitted in early December 2016. The EPA has not provided a formal determination on the acceptability of the protocol, but the final protocol included changes that accounted for all EPA comments on previous protocols.

PacifiCorp provided a final modeling analysis to DEQ-AQD on December 27, 2016. The Division reviewed the modeling analysis for accuracy and determined that it followed the associated DRR modeling protocol and other EPA guidance. This analysis shows that the 1-hour modeled concentration for comparison to the NAAQS, a concentration of 193.7 µg/m³, is below the 1-hour SO₂ NAAQS of 196.0 µg/m³. Details on the modeling analysis can be found in Enclosure 5 on the attached compact disc.

Based on the modeling analysis performed, the State of Wyoming recommends that the area surrounding the Dave Johnston Power Plant be classified as Attainment.

PacifiCorp – Jim Bridger Power Plant

On September 15, 2016, the DEQ-AQD's Monitoring Section had a call with EPA Region 8 to discuss facilities pursuing the monitoring pathway under the DRR. On this call, Region 8 indicated that it could be possible to make a designation determination under the DRR based on existing 2013-2015 SO₂ data for the Jim Bridger Power Plant in lieu of continuing monitoring at this facility from 2017-2019 as proposed in Wyoming's 2016 Ambient Monitoring Network Plan. In subsequent communications with Region 8, further guidance on pursuing this option was provided. 2013-2015 SO₂ data were submitted by the facility, reviewed by the DEQ-AQD's Monitoring Section, uploaded to the EPA's Air Quality System (AQS) database, and certified. The certification letter was provided by the facility on December 20, 2016 and will be forwarded to Region 8 under separate cover.

After reviewing these data, the DEQ-AQD's Monitoring Section is confident that the quality of the data is sufficient to satisfy the quality assurance requirements of 40 C.F.R. pt. 58, Appendix A and that a designation determination can be made based on the 2013-2015 SO₂ data for the Jim Bridger Power Plant in Air Quality System (AQS). The DEQ-AQD hereby requests that the EPA make a designation determination for the area surrounding the Jim Bridger Power Plant based on the 2013-2015 SO₂ data. The AQS ID number for this site is 56-037-0020, POC-1. The 2015 design value for this monitor is 31 ppb, well below the NAAQS for 1-hour SO₂ of 75 ppb (see Table 1, below).

Table 1: Jim Bridger SO₂ Monitor 2015 Design Value

	99 th percentile of 1-hr daily maximum concentrations (ppb)			2015 DV
Year	2013	2014	2015	Average
Concentration (ppb)	31	32	29	31

Based on a review of the quality of these data, as well as the 2015 design value for this monitor, the State of Wyoming recommends that the area surrounding the Jim Bridger Power Plant be classified as Attainment.

The remaining SO₂ sources in Wyoming to which the DRR applies will be characterizing their peak SO₂ concentrations through monitoring established on January 1, 2017. The EPA has indicated that this monitoring data will be considered in making Round Four designations by December 31, 2020.

Please accept Wyoming's updated recommendations. I look forward to working with the EPA to finalize attainment designations for these areas of Wyoming.

Sincerely,



Matthew H. Mead
Governor

MHM:dp

Encl.

1. Laramie River Modeling Analysis
2. Campbell County EGU Group Modeling Analysis
3. E-mail from EPA-OAQPS on DRR receptor placement
4. Naughton Modeling Analysis
5. Dave Johnston Modeling Analysis

cc: Todd Parfitt, Director, Wyoming Department of Environmental Quality