



PEER

PUBLIC EMPLOYEES FOR ENVIRONMENTAL RESPONSIBILITY • ROCKY MOUNTAIN

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Colorado Department of Public Health and Environment
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RE: 2020 Annual Sulfur Dioxide (SO₂) Report as Required by the Data Requirements Rule.

On behalf of **Public Employees for Environmental Responsibility**, the **Center for Biological Diversity**, **WildEarth Guardians**, **Sierra Club**, **Colorado Latino Forum**, **350 Colorado**, **Mothers Out Front**, and **Colorado Jewish Climate Action** we are writing this letter to provide comments on the proposed “2020 Annual Sulfur Dioxide (SO₂) Report as Required by the Data Requirements Rule” (from hereafter “The Report”). We thank CDPHE for allowing the public the opportunity to review and comment on this document.

The Report cites 40CFR51 Subpart BB Section 51.1203, also known as the Data Requirements Rule (DRR) as the basis for the Round 2 and Round 3 1-hr SO₂ NAAQS designation process and for the ongoing requirements for some of seven coal-fired electric power plants in Colorado subject to this regulation. We are concerned however, to see that CDPHE has disregarded provisions in the DRR in the initial designation process and in the ongoing requirements for the Pawnee, Martin Drake, Craig, and Comanche generating stations.

The records show that the emission rate listed as “Modeled Emissions” in The Report for the Pawnee Power Plant are not federally enforceable allowable emissions and that this emission rate is repeatedly being exceeded by this facility. In addition, it has been demonstrated that there are violations of the 1-hr SO₂ NAAQS caused by the Martin Drake Power Plant. The meteorological data relied on by CDPHE to support the current designation of the Craig, Comanche and Hayden Generating Stations are inadequate. We explain these issues in more detail in this letter.

Since the promulgation of this National Ambient Air Quality Standard, environmental groups and private residents have provided to CDPHE evidence that these facilities have circumvented the DRR. The public has even, through independent modeling, provided irrefutable evidence of 1-hr SO₂ NAAQS violations. Yet CDPHE failed to take any action.

Previous CDPHE administrations had adopted policies that were friendly to business at the expense of clean air. In order to make it less expensive to run a facility, facilities may have skirted the requirements of the DRR and of the 1-hr SO₂ NAAQS, and with acquiescence from CDPHE, continued to operate without any concerns for hourly impacts. Now we present the question to this administration, will it take this opportunity to make a change? We encourage CDPHE to move away from decisions using policy set by a different administration, and look closely at the information that we are providing, and revisit the current designations for the Pawnee, Martin Drake, Craig, Comanche and Hayden Generating Stations to ensure that the 1-hour SO₂ NAAQS is actually being met.

The emission rate listed as “Modeled Emissions” in The Report for the Pawnee Power Plant is not federally enforceable allowable emissions.

The DRR, 40CFR51 Subpart BB §51.1203.(d)(2) indicates that *“Modeling analyses shall characterize air quality based on either actual SO₂ emissions from the most recent 3 years, or on any federally enforceable allowable emission limit or limits established by the air agency or the EPA and that are effective and require compliance by January 13, 2017.”*

The Pawnee Power Plant Title V permit,¹ last renewed in January of 2019, lists in Section II Condition 1.3, two federally enforceable allowable SO₂ emission limits: 1.2 lb/MMBTU on a 3-hour rolling average, and 0.12 lb/MMBTU on a 30-day rolling average. The facility’s coal-fired Unit 1 is listed in this permit as rated at 5,346 MMBTU/hr. None of those SO₂ emission limits result in the modeled emission rate of 131.75 g/s listed in the Report.

The 3-hour rolling average limit results in an emission rate of 809.03 g/s, and the 30-day rolling average limit results in an emission rate of 80.9 g/s that, while lower than the modeled emission rate listed in The Report, is useless to protect a 1-hour NAAQS because it is only enforceable for the much longer 30-day period.

What this means is that there are no legal means to enforce the modeled emission rate listed in The Report of 131.75 g/s because it is not included in any permit, approved State Implementation Plan or state or federal regulation. Even if the total annual SO₂ emission rates have decreased over the years, on any given hour the emission rate can exceed, and by far, the modeled emission rate, and even exceed the 3-hour rolling average limit of 809.03 g/s, as long as the 3-hour and 30-day rolling averages emission rates balance out and remains below the corresponding limits.

When it is set in this way, it is feasible for the Pawnee Power Plant to repeatedly exceed the modeled emission rate of 131.75 g/s and cause a violation of the 1-hour SO₂ NAAQS while still meeting the actual enforceable emission rates. In fact, this so called “allowable emission rate” that was used to conduct modeling and is listed in the Report, is repeatedly being exceeded by this facility.

EPA's Air Markets Program Data² collects all the emissions data from the Continuous Emissions Monitoring Systems (CEMS) from the largest air polluters in the country. For the Pawnee Power Plant, the data collected by EPA from their CEMS shows for example, that during the period of January through December of 2019, there were 149 hours during which the SO₂ emissions were above the value of 131.75 g/s.

The emission rate values of these 149 hours range from 132.08 g/s up to 583.08 g/s. This means, 149 hours during which the so-called allowable emission rate used in the modeling was exceeded by up to 400%. And that’s only in one year. Several full years of emissions would certainly show many more exceedances of this emission rate.

However, under the current permit limits, CDPHE could not legally initiate an enforcement action on the Pawnee Power Plant for repeatedly exceeding this “allowable” modeled emission rate of 131.75 g/s on an hourly basis. This means this emission rate is not a federally enforceable allowable rate.

¹ Operating Permit – Public Service Company of Colorado – Pawnee Station. First Issued: January 1, 2013; Renewed: January 1, 2019. <https://www.colorado.gov/pacific/cdphe/operating-permits-company-index>

² <https://ampd.epa.gov/ampd/>

Has CDPHE conducted or approved modeling with those higher emission rates of up to 583.08 g/s to determine if the Pawnee Power Plant is demonstrating attainment with the 1-hr SO₂ NAAQS? If the answer is no, then attainment with this standard has not been demonstrated and CDPHE is misleading the public by suggesting otherwise.

The report states, “...the modeling for Pawnee Generating Station used a conservative approach that included an EPA-recommended adjustment factor considered allowable...” This is highly doubtful when considering the language in the DRR cited above, and also considering the precedent that EPA has previously rejected modeling results submitted by The Sierra Club for the Martin Drake Power Plant during the Round 2 designation process for the 1-hr SO₂ NAAQS.

During that process, The Sierra Club provided 2 independent modeling analyses during EPA’s public comment period showing violations of this standard, and EPA responded by stating that “With regard to these analyses, EPA emphasizes that the use of allowable emissions that are not federally enforceable is inconsistent with the Modeling TAD and modeling analyses that include such allowable emissions cannot be relied upon in determining whether the area is meeting or not meeting the 2010 SO₂ NAAQS.”³

Consequently, if the same reasoning is applied to the Pawnee Power Plant, the modeling cited in The Report that relies on allowable emission rates that are not federally enforceable like the 131.75 g/s, is inconsistent with EPA’s Modeling Technical Assistance Document (Modeling TAD) and therefore cannot be relied upon in determining whether the area is meeting or not meeting this standard.

Under these circumstances, comparing reductions in annual emissions is a futile exercise because the entire assumption that the Pawnee Power Plant has demonstrated that it meets the 1-hr SO₂ NAAQS is flawed.

We request that the document by which EPA recommended the adjustment factor cited by CDPHE to make the modeled emission rate allowable, be made available to us for review. In addition, we are also requesting that the modeling for the Pawnee Power Plant referenced in The Report be made available to us for review along with any comments provided by EPA to CDPHE pertaining to that analysis.

Finally, provided that the modeling was done correctly, we are proposing as a solution to ensure that the Pawnee Power Plant is meeting the 1-hour SO₂ standard, that the modeled emission rate of 131.75 g/s be incorporated into the facility’s operating permit as a mass hourly SO₂ emission limit, thus making this emission rate a truly federally enforceable allowable emission rate that will ensure attainment with the 1-hr SO₂ NAAQS.

There are violations of the 1-hr SO₂ NAAQS caused by the Martin Drake Power Plant.

The Report indicates that the Martin Drake Power Plant accepted federally enforceable and permanent SO₂ emission limits that were used as the basis for meeting the requirements of the DRR. However, as part of the public comment period for the facility’s Title V permit renewal, The Center for Biological Diversity, The Sierra Club, and WildEarth Guardians, submitted a letter to CDPHE on April 24, 2018 providing modeling results that showed violations of the 1-hr SO₂ NAAQS.

It is noticeable that one of the scenarios modeled by the environmental groups is exactly the same as the one modeled by the Drake Power Plant’s contractor AECOM and approved by CDPHE. AECOM’s model differed from the conservation groups—the groups’ receptor grid was more refined than in the CDPHE-

³ Responses to Significant Comments on the Designation Recommendations for the 2010 Sulfur Dioxide Primary National Ambient Air Quality Standard (NAAQS). Docket Number EPA–HQ–OAR–2014–0464 U.S. Environmental Protection Agency June 30, 2016. <https://www.epa.gov/sites/production/files/2016-07/documents/so2d-r2-response-to-comments-06302016.pdf>

approved modeling. Thus, the violation of the standard already existed in the CDPHE-approved modeling, it just went unnoticed because the receptor grid was not sufficiently refined.

While the area has already been designated as “unclassifiable” by EPA, new information showing that the largest SO₂ emission source in the area is in fact not meeting the standard, should be sufficient for CDPHE to either propose a re-designation of the area to “nonattainment”, similar to a monitor that after an initial designation starts showing higher monitored values.

At a minimum CDPHE should be taking action and collecting more information that will allow it to address the problem.

In addition, we are concerned by CDPHE’s lack of response to the environmental group’s comments provided during the Title V renewal public comment period. It has been two full years since those comments showing the 1-hour SO₂ violation were submitted, and to our knowledge no response has been provided. Out of respect to the public represented by those environmental groups, we request that an official response be provided.

The meteorological data relied on by CDPHE to support the current designation of the Craig, Comanche and Hayden Generating Stations are inadequate.

The Report indicates that during the Round 3 designations, the remaining areas, which include the areas at the Craig, Comanche and Hayden Generating Stations, were designated as unclassifiable/attainment or unclassifiable. Thus, these 3 facilities are considered to be subject to the ongoing requirements per the DRR, to provide assessment of annual SO₂ emission changes.

Under this requirement The Report indicates that the Comanche Power Plant has already been required to submit updated modeling to CDPHE by July 1, 2020, and that this modeling is based on the original protocol from January 2017.

As part of the public comment period for the Round 3 designations, Sierra Club submitted comments to EPA opposing the designation of these three facilities as “unclassifiable/attainment” because the meteorological data relied on by CDPHE to support that designation was inadequate⁴.

The basis for that statement was the November 2016 presentation made by CDPHE at the EPA 2016 Regional, State and Local Modelers Workshop in New Orleans, LA, which Sierra Club included in its comments. This presentation explains the requirements in 40CFR51 Appendix W to establish that a particular meteorological data set is adequately representative of the dispersion conditions at the location being modeled.

It also explains that “meteorological determinations” are needed for permits and other modeling requirements, and shows for the Craig and Comanche Generating Stations, several wind roses in close proximity to those facilities and with very different wind directions, thus implying that selecting one of them as adequate is questionable, and that the modeling relied upon for the designation process for these generating stations could therefore be equally questionable and invalid.

We request that CDPHE make publicly available for our review, any analysis or meteorological determination conducted by CDPHE for the Craig, Comanche and Hayden Generating Stations, by which

⁴ “Responses to Comments on the EPA’s Intended Round 3 Designations for the 2010 Sulfur Dioxide Primary National Ambient Air Quality Standard (NAAQS)”. Docket Number EPA-HQ-OAR-2017-0003 U.S. Environmental Protection Agency December 20, 2017. https://www.epa.gov/sites/production/files/2017-12/documents/so2_round_3_designations_response_to_comments_final.pdf

it was determined which of the available meteorological data sets was adequate for the SO₂ designation modeling, and which ones were inadequate.

We also request to see the January 2017 protocol referenced in The Report for the Comanche Generating Station that will be used in the updated modeling that will be submitted in 2020 and that modeling itself, which it is submitted.

If the modeling that led to the unclassifiable/attainment designation for these three generating stations were not reliable because they were based on inadequate meteorological data, then once again, comparing reductions in annual emissions is a futile exercise because the entire assumption that these facilities demonstrated that they meet the 1-hr SO₂ NAAQS is flawed.

Conclusion

We request that CDPHE reconsider its current policy for addressing the impacts of SO₂ emissions on the population's health and on the environment. The intent of the 1-hr SO₂ NAAQS and of the process outlined in the DRR was to ensure that the major emitters of this pollutant would not place the population's health and the environment at risk and it is time to have Colorado policy reflecting those goals.

But the results of modeling are only as good as the data that is used. To ensure the use of reliable data, EPA issued the Modeling TAD referenced above, which sets forth EPA's requirements to conduct these modeling analyses. By disregarding several of these requirements, the power plants in Colorado have effectively circumvented the intent and the letter of the DRR and of the 1-hr SO₂ NAAQS.

Finally, we request that the public comment period be extended beyond June 21, 2020. We request an additional 30 days from the time that we are given access to the documents that we are now requesting. This will give us sufficient time to make more informed comments.

Respectfully,

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