



PUBLIC EMPLOYEES FOR ENVIRONMENTAL RESPONSIBILITY

962 Wayne Ave • Suite 610 • Silver Spring, MD 20910

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Carl Daly
Acting Director for the Air and Radiation Division

Rebecca Matichuk
Regional Modeling Contact

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

Via email: daly.carl@epa.gov, Matichuk.Rebecca@epa.gov

RE: 1-Hour SO₂ NAAQS Attainment Status in Colorado

Dear Mr. Daly and Ms. Matichuk:

On behalf of Public Employees for Environmental Responsibility, the Center for Biological Diversity, Wildearth Guardians, Colorado Sierra Club, Mothers Out Front, Colorado Latino Forum, 350 Colorado, and Colorado Jewish Climate Action, we are writing this letter requesting that EPA require that the state of Colorado enforce the 1-hour SO₂ NAAQS in relation to the emissions of the Pawnee, Craig, Comanche and Hayden Generating Stations in Colorado. In the time of the national COVID-19 pandemic, it is more important than ever to address the issues described herein.

The areas where these facilities are located have been designated as “unclassifiable” or “unclassifiable/attainment” during the Round 2 and Round 3 Area Designations for this air quality standard. These designations were based on emissions and air dispersion modeling of power plants either conducted or approved by the Colorado Department of Public Health and Environment (CDPHE) and submitted to your office for final ratification.

The designations imply that there are no known air quality problems caused by the SO₂ emissions of these facilities. However, we believe that the Craig, Comanche and Hayden stations might be causing 1-hour SO₂ NAAQS exceedances. Further, we have

evidence showing that the Pawnee station is actually causing violations of this standard and that the area should in fact be re-classified as “nonattainment.”

In June, we sent the attached letter to CDPHE¹ explaining some of these concerns and requesting additional information related to those dispersion modeling studies. Upon our request, CDPHE provided the SO₂ modeling reports for these facilities as well as analyses of the meteorological data, and modeling files for the Comanche and Pawnee power plants.

Based on that information we can see that the modeling studies for the Hayden, Comanche, and Craig facilities are invalid because there were performed using meteorological data that is not adequately representative of the dispersion conditions at the location of the power plants. Consequently, those modeling results should not have been relied upon to reach conclusions about 1-hr SO₂ NAAQS attainment in those areas.

In addition, using the modeling files provided by CDPHE for the Pawnee generating station, and using actual emissions reported by that facility to EPA's Air Markets Program,² we have determined that this power plant is causing violations of the 1-hr SO₂ NAAQS.

I. The Relationship Between Air Pollution and COVID-19 calls for Immediate Action

SO₂ and ozone irritate the respiratory system and can trigger or aggravate respiratory diseases such as asthma, emphysema, and chronic bronchitis.³ Under normal conditions, short- and long-term exposure to these and other air pollutants is a major environmental health problem that will result in increased visits to doctors and emergency rooms, hospital admissions, and premature deaths.⁴

But these are not normal conditions. We are living in unprecedented times in which the spread of the novel Coronavirus COVID-19 has reached pandemic levels and has infected more than 326,668 people and killed 4,636 of those patients in Colorado.⁵

¹ Letter from PEER, et. al. to CDPHE dated 06/21/2020, RE: 2020 Annual Sulfur Dioxide (SO₂) Report as Required by the Data Requirements Rule.

² <https://ampd.epa.gov/ampd/>

³ <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#effects>

⁴ World Health Organization. [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health) and US Environmental Protection Agency. <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>.

⁵ <https://covid19.colorado.gov/data>, 12/29/20.

Major symptoms of this disease include sore throat, cough, and shortness of breath, which overlap with the effects of SO₂ and ozone pollution. According to three recent studies, exposure to these pollutants is linked to COVID-19 cases and may be one of the most important contributors to fatality caused by the COVID-19 virus.⁶ It is therefore, more urgent than ever to take immediate actions to curb SO₂ emissions.

The CDPHE and EPA are not fulfilling their mandates to protect public health and the environment.

II. Comanche Generating Station

The modeling study for the Comanche Generating Station used meteorological data collected at the Rocky Mountain Steel Mill (RMSM) meteorological tower, supplemented with data from the National Weather Service (NWS) meteorological station located at the Pueblo Memorial Airport in Pueblo, Colorado.⁷

With respect to the different meteorological data sets collected from stations located in the Pueblo area, CDPHE's analysis⁸ (attached with this letter) states that:

“Due to the differences in the terrain features and Comanche Power Plant's proximity to them, there are no adequately representative meteorological datasets available for modeling the Comanche Power Plant with AERMOD.”

Furthermore, referring specifically to the Rocky Mountain Steel Mill and Pueblo Memorial Airport data sets, CDPHE's Meteorological Determination states that:

“Due to the expected transport and dispersion conditions at the Comanche Power that are not captured at all by the Pueblo Depot and Pueblo NWS Station datasets and only partially captured

⁶ Conticini E., Frediani B., Caro D. **Can atmospheric pollution be considered a co-factor in extremely high level of SARS-CoV-2 lethality in Northern Italy?** Environ Pollut. 2020.

Travaglio, M., Yu, Y., Popovic, R., Selley, S., Santos Leal, N., Miguel Martins, L.M., 2020. **Links between air pollution and COVID-19 in England.** medRxiv.

Yongjian Z., Jingu X., Fengming H., Liqing C. **Association between short-term exposure to air pollution and COVID-19 infection: Evidence from China.** Science of the Total Environment. 2020.

⁷ 1-HOUR SO₂ AIR DISPERSION MODELING REPORT. Xcel Energy (Public Service Company of Colorado) Comanche Generating Station. XCEL Energy & Trinity Consultants, June 26, 2020.

⁸ Meteorological Determination for the Comanche Power Plant. Modeling, Meteorology, and Emission Inventory Unit, Air Pollution Control Division/Technical Services Program. Colorado Department of Public Health & Environment, February 19, 2016.

by each of the RMSM and Rio Grande datasets, there are no adequately representative meteorological datasets for modeling the Comanche Power Plant with AERMOD.”

CDPHE’s document further says:

“Because the transport and dispersion conditions at the Comanche Power Plant are expected to be a combination of influences from the mountain/valley wind systems in the Arkansas and St Charles River Valleys, it is questionable if either the RMSM or the Rio Grande meteorological dataset would adequately characterize the location and magnitude of the design concentration. The wind conditions at the Pueblo Depot and Pueblo NWS Station are subject to different terrain influences.”

Also:

“The surface characteristics at the RMSM are different than the surface characteristics at the Comanche Power Plant. This would make the RMSM meteorological data not adequately representative for modeling the Comanche Power Plant. This was not explored extensively at Pueblo Depot and Pueblo NWS station since both sites are not adequately representative of dispersion at Comanche Power Plant.”

And finally, among the documents provided by CDPHE in response to PEER’s data request⁹ there was an email (enclosed with this letter) dated September 23, 2015, from Emmett Malone, CDPHE’s Air Quality Meteorologist, to other CDPHE staff in which he explains referring to the Rocky Mountain Steel Mill meteorological site, that *“...the sensors may be in the downwash cavity of the instrument shed. This eliminates the possibility of using this data.”*

He further continues with an analysis of several meteorological data sets, including the one at Rocky Mountain Steel Mill, and concludes *“I have no way to say with any confidence that any of these data sets are representative of the dispersion conditions at Comanche.”*

As CDPHE clearly states many times in two separate documents, the Rocky Mountain Steel Mill and Pueblo Memorial Airport data sets are not adequately representative for modeling the Comanche Power Plant because those data sets do not capture the pollutant dispersion and transport conditions expected to occur at Comanche.

The wind conditions at the location of the meteorological towers are either totally or partially subject to different terrain influences than those experienced by the winds at

⁹ Letter from PEER to CDPHE RE: 2020 Annual Sulfur Dioxide (SO₂) Report as Required by the Data Requirements Rule. June 21, 2020.

the Comanche location, and the surface characteristics at the Rocky Mountain Steel Mill location are different than those at the Comanche site.

In the Modeling Report submitted to CDPHE and EPA¹⁰, a surface characteristics analysis was conducted for the location of RMSM meteorological station, but no such analysis was done for the location of the Comanche Power Plant, and therefore no comparison was done between the surface characteristics of both sites to determine if one was representative of the other.

The land use at both locations are very different-- one is within the Pueblo urban area and the other one is outside of the city-- so the surface characteristics of both locations are quite different, just as CDPHE's analysis indicates.

And on top of that, the overall quality of the Rocky Mountain Steel Mill meteorological data is questionable. The meteorological station sensors were incorrectly placed in the downwash cavity of the instrument shed where they are subject to interference with the wind speeds and directions. The exposure of this site is inadequate.

In conclusion, for all the above reasons explained by CDPHE, using the unreliable data from the RMSM and the NWS Pueblo Airport Station results in unreliable modeling and contradicts EPA regulations and guidance.¹¹

The "Unclassifiable/Attainment" designation for the 1-hr SO₂ NAAQS of the Pueblo, CO area was based on an analysis that by CDPHE's own admission is flawed, and there is a real possibility that there might be violations of the 1-hr SO₂ NAAQS that the modeling simply would not reveal because the model was using inadequate meteorological data.

III. Hayden Generating Station

The modeling study for the Hayden Generating Station was conducted using meteorological data collected at the Hayden/Yampa Valley Airport meteorological tower. The data used corresponds to the years 2011, 2013, and 2014¹².

CDPHE's analysis¹³ (attached) states that:

¹⁰ 1-HOUR SO₂ AIR DISPERSION MODELING REPORT. Xcel Energy (Public Service Company of Colorado) Comanche Generating Station. XCEL Energy & Trinity Consultants, June 26, 2020.

¹¹ 40CFR51 Appendix W (2017) §8.4.1.b, §8.4.2.b; and "Meteorological Monitoring Guidance for Regulatory Modeling Applications." Section 3, US EPA, 2000.

¹² 1-HOUR SO₂ AIR DISPERSION MODELING REPORT FOR HAYDEN GENERATING STATION. Xcel Energy (Public Service Company of Colorado) & Trinity Consultants, January 2017.

“In Colorado, each FAA AWOS site will be missing 15% to 60% of its wind data on a quarterly basis. EPA considers 90% joint capture by quarter to be a benchmark, and if NWS data completeness is less than 90% by quarter, then the representativeness of the data may be suspect and alternative sources of meteorological data should be considered. Since the Hayden NWS meteorological data has less than 90% joint data capture, missing key periods that are needed to represent dispersion and atmospheric transport, this data is not adequately representative for modeling the Hayden Power Plant plumes.”

Regulations and guidance from your agency establish a 90% completeness requirement for meteorological data used in regulatory modeling applications.¹⁴ Furthermore, these regulations and guidance also prohibit filling in data from other meteorological stations to achieve this minimum completeness requirement and establish that calm hours are not considered valid data for the purpose of meeting this requirement.

The reason why this 90% threshold is so important is because the model will not calculate concentrations during those missing or calm hours thus potentially leaving important gaps in the modeled results. Therefore, according to your own agency’s guidance, if the 90% completeness requirement can't be met, *“...then the representativeness of the data may be suspect and alternative sources of meteorological data should be considered.”*¹⁵

CDPHE’s meteorological determination indicates that the meteorological data from the Hayden/Yampa Valley Airport used for the modeling of the Hayden Power Plant does not meet the 90% completeness requirement, and consequently it concludes that such data set is not adequately representative for modeling this facility.

The Modeling Report prepared by industry and submitted to CDPHE and EPA¹⁶ indicates that data from years 2012 and 2015 do not meet the 90% completeness

¹³ Meteorological Determination for the Hayden Power Plant. Modeling, Meteorology, and Emission Inventory Unit

Air Pollution Control Division/Technical Services Program. Colorado Department of Public Health & Environment. February 19, 2016

¹⁴ 40CFR51 Appendix W §8.4.3.2.f, §8.4.4.2.a, and §8.4.4.2.c (2017); "Use of ASOS meteorological data in AERMOD dispersion modeling", Sections 4.1 and 4.3, March 08, 2013 EPA memorandum; and "Meteorological Monitoring Guidance for Regulatory Modeling Applications." Sections 5.3.2 and 6.8, US EPA, 2000.

¹⁵ "Use of ASOS meteorological data in AERMOD dispersion modeling", March 08, 2013 EPA memorandum.

¹⁶ 1-HOUR SO₂ AIR DISPERSION MODELING REPORT FOR HAYDEN GENERATING STATION. Xcel Energy (Public Service Company of Colorado) & Trinity Consultants, January 2017.

requirement and implies, although does not states explicitly, that the data used in the modeling from years 2011, 2013, and 2014 do meet this requirement.

However, this report does not specify the percentage of completeness achieved by each year of data. While CDPHE's meteorological determination doesn't specify those percentages either, it does contradict the industry modeling report by indicating that the data does not meet the 90% completeness benchmark.

These contradictory statements between the power plant and the regulatory agency cast doubt on the validity of the modeling results and a final conclusion about NAAQS attainment should not have been reached based on this data set without clarifying these contradictory statements. If the meteorological data set is missing significant portions of records, then it is plausible that there are 1-hr SO₂ NAAQS violations that the model would not reveal.

IV. Craig Generating Station

The modeling study for the Craig Generating Station was conducted using meteorological data collected at the NWS Craig-Moffat County station, and insufficient analysis was included in the report submitted to EPA explaining how the data set is representative of the conditions at the power plant. There is only one sentence stating that this meteorological station is the closest one and that is representative of the power plant topography¹⁷.

CDPHE's analysis¹⁸ (attached) on the contrary indicates that the data from the NWS Craig-Moffat County station is not adequately representative of the dispersion conditions that occur at the Craig power plant. The explanation provided by CDPHE in this case is very simple yet compelling: meteorological data has been collected in the past at the Craig facility site, and the wind directions of that data set don't match the wind directions recorded at the NWS Craig-Moffat County station.

If the winds used in the model blow from different directions than those that actually occur at the Craig power plant, then the results are not at all representative and the attainment designation for the 1-hr SO₂ NAAQS is not a reflection of the actual situation of that location.

¹⁷ "AIR QUALITY IMPACT ANALYSIS REPORT CRAIG STATION 1-HR SO₂ DISPERSION MODELING". CDPHE / CB&I Environmental & Infrastructure. January 2017.

¹⁸ "Meteorological Determination for the Craig Power Plant". Modeling, Meteorology, and Emission Inventory Unit, Air Pollution Control Division/Technical Services Program. Colorado Department of Public Health & Environment. February 19, 2016

CDPHE further explains that the meteorological data set from the Craig Power Plant site was collected for use with a different model and therefore doesn't have all the parameters needed for use with AERMOD. But, as shown in the Meteorological Determination Document, it does have the wind speeds and directions that allow for the comparison with data from the NWS Craig-Moffat County station, and makes the *not representative* conclusion irrefutable.

V. Previous Precedent Has Been Set by EPA

During the Round 2, 1-hr SO₂ designation process several environmental and independent citizens groups secured the services of independent engineering consultants to prepare two separate modeling studies of the SO₂ impacts caused by the Drake Power Plant in Colorado Springs, CO. Those modeling studies were conducted using meteorological data from the nearby Colorado Springs Airport, and both modeling studies resulted in violations of the 1-hr SO₂ NAAQS.

CDPHE's analysis¹⁹ (attached) states that the data from the Colorado Springs Airport is not representative of transport and dispersion conditions at the Drake Power Plant due to the differences in meteorological conditions between the Colorado Springs Airport and the Power Plant.

The explanation provided by CDPHE for this facility is not different than the explanations provided for the Comanche, Hayden and Craig power plants: that portions of the winds at the airport and the power plant will be similar, but that other significant portions of the winds measured at the airport will not be similar to the winds that occur at the power plant.

This is exactly the same reason why the Rocky Mountain Steel Mill data is not representative of the conditions at the Comanche Power Plant, and the same reason why the NWS Craig-Moffat County data is not representative of the conditions at the Craig Power Plant, because the Steel Mill data and the NWS Craig-Moffat County data will only partially capture the transport and dispersion conditions at the Comanche and Craig Power Plants respectively.

In addition, CDPHE's Meteorological Determination for the Drake Power Plant also states that:

¹⁹ "Meteorological Determination for the Martin Drake Power Plant". Modeling, Meteorology, and Emission Inventory Unit, Air Pollution Control Division/Technical Services Program. Colorado Department of Public Health & Environment. September 3, 2015.

“The wind speeds at the airport are expected to be greater than the wind speeds at the power plant due to the low roughness length of the land cover around the airport anemometer.”

The surface roughness length is one of the surface characteristics parameters that according to EPA’s regulations should be compared on both the meteorological station and the power plant sites. Therefore, with the above statement CDPHE is in essence saying that the surface characteristics at the CO Springs Airport are different than those at the Drake Power Plant, and therefore the winds will also be different, and the CO Springs data will not be representative of the conditions at the power plant.

Again, this is exactly the same explanation provided for the Comanche Power Plant in the corresponding CDPHE meteorological determination that says:

“The surface characteristics at the RMSM are different than the surface characteristics at the Comanche Power Plant. This would make the RMSM meteorological data not adequately representative for modeling the Comanche Power Plant.”

And finally, CDPHE also states referring to the CO Springs Airport data and the Drake Power Plant:

“...wind speed and direction vary with height above terrain; thus, for elevated plumes such as those at the power plant (200+ feet), it is necessary to obtain wind conditions above 10 meters (anemometer height at the Colorado Springs Airport) to construct realistic wind profiles to model plume transport. Modeling with non-representative meteorological data affects the location and magnitude of plume impacts.”

This statement means that in order to appropriately model a tall stack of more than 200 feet, like all of the stacks at these large power plants, the meteorological data has to be measured at a height above the typical 10 meters that the National Weather Service and the Federal Aviation Administration use when they place the instruments at their stations.

The difference between the height of the meteorological instruments and the height of the power plant stack is yet another reason listed by CDPHE of why the CO Springs Airport data is not adequately representative of the conditions at the Drake Power Plant.

This exact reasoning also applies to the meteorological data collected at the Hayden/Yampa Valley Airport meteorological tower used for the modeling of the Hayden Power Plant, and to the data collected at the NWS Craig-Moffat County

station used for the modeling of the Craig Power Plant. Those data sets were measured by sensors placed at a 10-meter height (approximately 3 feet) and were used to model emissions coming out of tall stacks in the range of 200-feet of height.

In the case of the Drake Power Plant both CDPHE and EPA considered that the modeled violations presented by the environmental groups were not valid and could not be relied upon to make an attainment determination because the meteorological data that was used was not adequately representative of the pollutant dispersion and transport conditions that occur at the power plant.²⁰

Consequently, the modeling results that show no violations at the Comanche, Hayden, and Craig Power Plants are not valid. The results cannot be relied upon to make an attainment determination because the meteorological data sets that were used for all three cases were not adequately representative of the pollutant dispersion and transport conditions that occur at the corresponding power plants.

The analyses to determine the appropriateness of the meteorological data for all four power plants were conducted all by CDPHE using the same procedures under EPA's existing regulations and guidance. However, those conclusions were selectively used only in the case of the Drake Power Plant and ignored in the Comanche, Hayden and Craig cases. It is not equitable for the CDPHE and EPA reasoning to be applied only to the modeling submitted by environmental and independent citizens groups, but not to the modeling submitted by industry.

Finally, another reason why CDPHE and EPA rejected the modeling submitted by the environmental and independent citizens groups was that the emission rates used in those analyses were not federally enforceable rates. EPA responded to the modeling provided by these groups 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.”*²¹

Consequently, if the same reasoning is applied to the Pawnee facility, the modeling conducted by CDPHE that relies on allowable emission rates that are not federally enforceable like the 131.75 g/s, is inconsistent with EPA's Modeling Technical

²⁰ 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>

²¹ 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>

Assistance Document (Modeling TAD). Therefore, it cannot be relied upon in determining whether the area is meeting or not meeting this standard. The double standard applied by both CDPHE and EPA to environmental groups and industry is revealing.

VI. Solutions to Remedy Attainment Issues at Craig, Hayden and Comanche Power Plants

We request that the EPA require the CDPHE to:

Set up meteorological stations at the locations of the power plants to collect at least one year of meteorological data. At that point, the CDPHE could repeat the modeling analysis with the new data using enforceable emission rates.²² We request that the CDPHE be transparent on modeling with public review.

VII. Pawnee Generating Station

The modeling study for the Pawnee Generating Station was conducted using a single year of meteorological data collected at the same facility site, and a fixed emission rate of 131.75 g/s that is considered by CDPHE to be a short-term allowable emission rate.²³

The Data Requirements Rule, promulgated for the implementation of the 1-hr SO₂ NAAQS designation process, 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."*²⁴

The Pawnee Power Plant Title V permit²⁵ 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 basis, and 0.12 lb./MMBTU on a 30-day rolling average basis. The facility's coal-fired Unit 1 is rated at 5,346 MMBTU/hr. None of the SO₂ emission limits result in the modeled emission rate of 131.75 g/s.

²² 40 CFR 51, Subpart §§BB 1203(d)(2). Options given to all large SO₂ sources of modeling or monitoring is in 40CFR51 Subpart BB §1201 and 1203

²³ "1-hour SO₂ Air Quality Dispersion Modeling Analysis for Pawnee Power Plant." Air Pollution Control Division. Colorado Department of Public Health and Environment, January 11, 2017.

²⁴ Data Requirements Rule, 40 CFR 51 Subpart BB §51.1203.(d)(2).

²⁵ 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>

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. While lower than the modeled emission rate listed in the modeling report, it fails 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 emission rate of 131.75 g/s used in the modeling study because it is not included in any permit, an 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 perfectly exceed, and by far, the modeled emission rate. It can 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 remain below the corresponding limits.

Consequently, the emission rate used in the modeling study does not meet the requirement referenced above of being a federally enforceable allowable emission limit or limit established by CDPHE or EPA, and that was effective and required compliance by January 13, 2017. Thus, the results of this modeling study cannot be relied upon to make a determination of NAAQS attainment.

In addition, the modeling report prepared by CDPHE indicates that the emission rate of 131.75 g/s used in the modeling study and considered short-term allowable rate, was derived using an adjustment factor from EPA's document "Guidance for 1-hour SO₂ Nonattainment Area SIP Submissions Memorandum" dated April 23, 2014. It is also indicated that this approach was "*...discussed with EPA Region 8 and OAQPS and accepted.*"

However, CDPHE said that they did not have any emails or documentation from your agency agreeing to this procedure. **We ask that EPA confirm that CDPHE used a valid procedure to derive a federally enforceable emission rate and that EPA has approved that the emission rate is not included in a permit, approved State Implementation Plan or state or federal regulation.**

EPA's Air Markets Program Data²⁶ shows that during the period of January through December of 2019, the Pawnee power plant exceeded CDPHE's SO₂ short-term allowable emission limit of 131.75 g/s during 149 hours. The emission rate values of these 149 hours range from 132.08 g/s up to 583.08 g/s. This means, there were 149 hours during which the allowable emission rate used in the modeling was exceeded by up to 400%.

²⁶ <https://ampd.epa.gov/ampd/>.

And that's only in one year. Several full years of emissions would certainly show many more exceedances of this emission rate. **Why is such a repeated violation of an emission limit on a major stationary source tolerated by both CDPHE and EPA?**

Furthermore, using the exact same modeling analysis submitted by CDPHE to EPA, without any changes other than replacing the original short-term allowable emission rate of 131.75 g/s with an actual emission rate of 583.08 g/s, we found that the results show many violations of the 1-hr SO₂ NAAQS up to a value of 145.81 ppb, almost double the standard of 75 ppb.

Using other actual emission rates in this modeling will also result in 1-hr SO₂ NAAQS violations. In addition to the fact that actual emissions at the facility are routinely exceeding the short-term allowable limit, the Pawnee generating station is also routinely violating the 1-hr SO₂ NAAQS thus making the entire area a nonattainment area for this standard.

EPA has in its possession all the modeling files and recent actual emission rates from the Pawnee facility to verify the results and conclusions cited above, so **we urge you to take immediate action to resolve this violation.**

IIX. Proposed Solution for Pawnee Power Plant

We request that the emission rate that was used when modeling for the Pawnee Power Plan, the emission rate of 131.75 g/s, be set as an enforceable SO₂ hourly limit in the power plants Title V permit. The facility has installed control devices for SO₂ emissions and are therefore capable of maintaining emission below that limit if they operate them continuously at the correct capacity.

We respectfully urge you to reconsider your attainment decisions with regard to these power plants and their compliance with the 1-hr SO₂ NAAQS. We request that you take actions to resolve state compliance with the air quality standard within thirty days.

Sincerely,

Chandra Rosenthal, Rocky Mountain Director
Kevin Bell, Staff Counsel
Public Employees for Environmental Responsibility
croenthal@peer.org
(202) 265-7337 x501

Robert Ukeiley
Senior Attorney – Environmental Health
Center for Biological Diversity
1536 Wynkoop St., Ste. 421
Denver, CO 80202
rukeiley@biologicaldiversity.org
(720) 496-8568

Jeremy Nichols
Climate and Energy Program Director
WildEarth Guardians
(303) 437-7663

Ramesh Bhatt
Chair, Conservation Committee
Colorado Sierra Club
1536 Wynkoop Street, Suite 200
Denver, CO 80202
303-861-8819

Ean Thomas Tafoya
Co-Chair
Colorado Latino Forum
ean@clf.org
720-621-8985

Micah Parkin
Executive Director
350 Colorado
504-258-1247

Laura Fronckiewicz
Colorado Organizing Manager
Mothers Out Front
Laura.Fronckiewicz@MothersOutFront.org
(720) 432-1285

Moshe Kornfeld
Colorado Jewish Climate Action
coloradojewishclimateaction@gmail.com
585-330-4949

cc:

Deb Thomas, Acting Regional Administrator, Region 8
Thomas.Deb@epa.gov

Mr. Simms and EPA Agency Review Team members:

psimms@jbrpt.org; aaguirre@jbrpt.org; adunkin@jbrpt.org; mfritz@jbrpt.org; lgarcia@jbrpt.org; cgiles@jbrpt.org; jgoffman@jbrpt.org; sharris@jbrpt.org; kkopocis@jbrpt.org; mmccabe@jbrpt.org; bmcgrane@jbrpt.org; anunez@jbrpt.org; lpieh@jbrpt.org; esalcedo@jbrpt.org

Jana Milford, Ph.D., J.D., Colorado AQCC Commissioner
cdphe.aqcc-comments@state.co.us

Jill Ryan, Executive Director, CDPHE
jill.hunsakerryan@state.co.us

Robyn Wille, Air Strategy, CDPHE
robyn.wille@state.co.us

Senator Stephen Fenberg
Stephen.fenberg.senate@state.co.us

Senator Chris Hansen
chris.hansen.senate@state.co.us

Representative Steven Woodrow
steven.woodrow.house@state.co.us