United States Department of the Interior

OFFICE OF THE SECRETARY
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N3625(2301)

Mr. Paul Tourangeau
Director, Air Pollution Control Division
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Dear Mr. Tourangeau:

On August 3, 2007, the State of Colorado submitted a draft implementation plan describing its proposal to improve air quality regional haze impacts at mandatory Class I areas across your region. Materials released on the State's regional haze website, dated October 29, 2007, supplemented Colorado's approach to addressing reasonable progress goals and long-term strategy requirements of the Regional Haze Rule. We appreciate the opportunity to work closely with the State through the initial evaluation, development, and, now, subsequent review of this plan. Cooperative efforts such as these ensure that, together, we will continue to make progress toward the Clean Air Act's goal of natural visibility conditions at all of our most pristine National Parks and Wildernesses Areas for future generations.

This letter acknowledges that the U.S. Department of the Interior, National Park Service (NPS) received and conducted a substantive review of the August 3, 2007, proposed Regional Haze Rule implementation plan, in fulfillment of your requirements under the Federal Regulations 40 CFR 51.308(i)(2). As outlined in a letter to each state dated, August 1, 2006, our review focused on eight basic content areas. The content areas reflect priorities for the Federal Land Management Agencies, and we have enclosed comments associated with these priorities. We are concerned that your draft plan has substantial shortcomings regarding these priority content areas, and the NPS Air Resources Division staff stands ready to work with you towards resolution of these issues. We ask that further consultation on our issues of concern take place with us prior to public release.

The State provided documents to the public on October 29, 2007, that modified the technical and policy approaches of the August 3rd package. The State staff also met with the NPS Air Resources Division staff on November 13, 2007, where NPS staff expressed concern with the lack of time available for our review of the new materials (i.e., less than the 60 days of review before public hearings, as required by the Regional Haze Rule). It is now our understanding that those documents will not be incorporated in the regulatory options placed in front of the Colorado Air Quality Control Commission on December 20, 2007. Given the need for providing comments before the state hearing, our enclosed comments reflect documents provided to us by November 20, 2007. We provide comment on the post August 3, 2007, information to the extent that those documents indicate how the State will address serious deficiencies to its current plan.

Mr. Paul Tourangeau

Our major concern with the August 3rd plan is that it lacks two key components. The State has chosen to delay setting reasonable progress goals and establishing a long term strategy for addressing emissions that affect visibility at Class I areas in and near Colorado. Those omissions make the plan deficient with respect to requirements of the Regional Haze Rule. In addition. we request the State address the enclosed comments regarding additional analyses to support its decisions on emissions limits for eligible BART sources, and at this time submit only those provisions of the plan to the U. S. Environmental Protection Agency (EPA). Please note, however, the EPA can make a final determination regarding the document's completeness and, therefore, ability to receive federal approval from the EPA. For further information, please contact Bruce Polkowsky at 303/987-6944.

We appreciate thc opportunity to work closely with the State of Colorado as it continues to develop its regional haze implementation plan. We share your continued dedication to significant improvement in our nation's air quality values and visibility.

Sincerely,

David M. Verhey
Principal Deputy Assistant Secretary
for Fish and Wildlife and Parks

Enclosure

cc: Douglas A. Lempke, Administrator, Colorado Air Quality Control Commission

National Park Service Comments Regarding
Colorado Draft Regional Haze Rule State Implementation Plan

On August 3, 2007, the State of Colorado (State) submitted a draft Regional Haze Rule State implementation plan (SIP), pursuant to the requirements codified in federal rule at 40 CFR 51.308(i)(2), to the U.S. Department of the Interior (DOI), U.S. Fish and Wildlife Service (FWS), and National Park Service (NPS). Comments raised at Western Regional Air Partnership (WRAP) meetings and in meetings between the State air program and the air program staff from NPS and FWS have prompted Colorado to develop additional information on reasonable progress goals and an assessment of emissions sources in the state that would be addressed under the long term strategy. This additional information was made available to the Federal Land Management (FLM) agencies and the general public on October 29, 2007. In further discussions among interested parties to the State's regional haze rule activities, the State has now withdrawn much of the information provided on October 29th, and in subsequent meetings of the interested parties has stated that it will revise its August 3rd package before the December 20th meeting of the State's Air Quality Control Commission. These large and still incomplete changes to the State's regional haze plan have made it impracticable for the FLM agencies to complete a review of the Colorado draft plan that meets the EPA's federal rule requiring opportunity for FLM consultation on the State's intentions a full 60 days before a public hearing and State regulatory action. **Therefore, with respect to the setting of reasonable progress goals and determining a long term strategy, DOI believes that the State has not met the 40 CFR 51.308(i)(2) requirement for FLM consultation. While the State has completed much of the work needed to complete action on BART for SIP submittal purposes, we request that the State expand its explanation of the overall BART decision process in the body of the draft SIP and address the specific issues listed below before BART actions are submitted to EPA as part of any SIP revision. Furthermore, we recommend that Colorado address the concerns regarding eligible BART sources in its plan and submit only those provisions to EPA at this time.**

The comments which are highlighted in bold face are those that NPS believes warrant additional consultation prior to further public hearings or regulatory actions by the State. We look forward to your response as per section 40 CFR 51.308(i)(3). For further information, please contact Bruce Polkowsky (NPS) at (303) 987-6944.

HIGHLIGHTED COMMENTS:

1. **Lack of Comprehensive Long Term Strategy for Regional Haze Impairment**

   The Regional Haze Rule requires all States to assess the effects of emission sources in their state to determine if emissions are reasonably anticipated to cause or contribute to visibility impairment in a mandatory federal Class I area. Based on the latest technical information provided by the WRAP none of the State's mandatory federal Class I areas will achieve the uniform rate of progress with current air quality programs. Therefore, the State is obligated to assess control options which might

achieve the uniform rate of progress between 2008 and 2018 and then provide a rationale for its chosen suite of emission control options in light of the four statutory factors and any additional factors relevant to addressing any human-caused impairment at the Class I areas. Section 8.3 of the August 3, 2007, draft addresses a commitment to a "process to determine further measures that may reasonably be adopted in the future to gain relevant improvements in visibility." The section continues with a bulleted list of action items and associated years of completing the suite of long term strategy controls until early 2010. We request the State include a specific schedule for future actions in the revised hearing materials so that the Colorado Air Quality Control Commission can consider a state rule schedule for developing a complete long term strategy.

Appendix B to the August 3, 2007, draft reviews the history of visibility issues at some Class I areas, but does not provide details of the State's course of action regarding emissions controls to address regional haze impacts between 2008 and 2018, as required by the Regional Haze Rule.

The materials provided for public review on October 29, 2007, provide insight on the State's future approach for a long term strategy for regional haze. We support the State's overall approach which determines the key aerosols and the key sources of those aerosols. In our letter to the State dated August 1, 2006, we stated that for areas likely not to meet the uniform rate of progress, we would encourage the State to examine the effects of the individual aerosol species to assure the State is addressing emissions that are controllable. The technical work provided in the October 29, 2007, materials presents a good rationale for why all aerosol species and the sources that contribute to them are important for achieving reasonable progress.

We also support the approach used to assess the major emissions sources that contribute to those aerosols. In addition, we support applying available control costs to develop presumptive emissions limits as the basis for long term strategy requirements. As noted in the October 29th information, much work remains to assure that area sources are adequately analyzed and that presumptive limits are set appropriately.

We request that the State utilize these approaches to assess measures for sources in Colorado that affect Class I areas outside of Colorado as well. The WRAP information indicates that Colorado is in the top five contributors for either sulfate or nitrate, in the base period or in 2018 for Canyonlands National Park (NP) in Utah and Bandelier National Monument (NM) in New Mexico. There also may be similar effects at other Class I areas. The development of a long term strategy should include specific consultation with neighboring States to assure a thorough understanding of the regional contributions and collaboration on what emissions strategies are planned by each State under their respective long term strategies so that the final computation of reasonable progress goals takes into account the total improvements expected at the State's Class I areas. Inter-State consultation should consider specific geographic regions that have the strongest impact influence to each of the Class I areas (i.e.,

Area-of-Influence analysis) and should consider all controls and not be bound by existing programs (e.g., existing Section 309 sulfur dioxide controls for Class I areas not on the Colorado Plateau).

In summary, we request that the Air Pollution Control Division support the adoption by the Colorado Air Quality Control Commission of a state rulemaking that would provide a firm regulatory schedule for adopting a long term strategy based on the technical approach developed in the October 29th materials and provide for adequate consultation by the Division among neighboring states. Because the draft SIP clearly identifies Oil and Gas and Fire as specific emission categories that are anticipated to grow in 2018, the NPS requests that these specific source categories be identified and included for review.

2. **Lack of Reasonable Progress Goals**

The August 3, 2007, draft rule does not establish reasonable progress goals for the best and worst visibility days at Colorado's mandatory federal Class I areas as required in Section 51.308(d)(1). Such goals cannot be determined until the State has completed an analysis of the long term strategy options and addressed sources reasonably anticipated to cause or contribute to visibility impairment. The goals must include deciview levels for the best visibility days that, at a minimum, are no more impaired than those measured in the baseline period. In addition, Section 51.308(d)(1)(vi) requires that any improvement in the best days resulting from ongoing implementation of other air quality programs be incorporated into the reasonable progress goals set by the State.

We expect that the State would set reasonable progress goals based on the future work described in Section 8 of the August 3, 2007, draft after fully developing its long term strategy based on the concepts introduced in the October 29, 2007 public materials. Again, we request the State to establish a firm schedule for developing the long term strategy and resulting reasonable progress goals. We anticipate future consultation on those activities.

3. **Best Available Retrofit Technology (BART) for Regional Haze**

The NPS has provided extensive comments to the State on individual BART determinations during the past several months. With respect to Appendix A, "Draft State Implementation Plan, Appendix A: BART determination," the State is assuming that presumptive BART is good enough, unless the source cannot meet it. The BART Guidelines[1] provide a detailed description of how a State must approach the BART determination process for large Electric Generating Units (EGUs), including for certain EGUs, presumptive limits for SO_2 and NO_x based on fuel type, unit size, and the presence or absence of pre-existing controls. Considering that the State is not

[1] "Appendix Y to Part 51—Guidelines for BART Determinations Under the Regional Haze Rule)," is referred to throughout this document as the "BART Guidelines."

making the presumptive rate of progress, they should apply the five-factor BART analysis even when presumptive BART is proposed by the source.

The BART Guidelines in no way limit the authority of the State to adopt more stringent BART emission limitations than the presumptive limits where the State considers such limits appropriate. For instance in 70 FR at 39132, in response to comments on the proposed BART Guidelines that the presumptive SO_2 EGU limits should be more stringent, EPA explained in the preamble to the final BART Rule that "[i]f, upon examination of an individual EGU, a State determines that a different emission limit is appropriate based upon its analysis of the five factors, then the State may apply a more or less stringent limit." Similar statements are made elsewhere in the BART Rule. Clearly, the BART Rule does not suggest the presumptive limits should be viewed as establishing a safe harbor from more stringent regulation under the BART provisions.

We are including below a bullet summary of previous comments on specific facilities for the State's continued evaluation.

GENERAL COMMENTS:

BART SUMMARY:

CEMEX Kiln: SNCR has been permitted or proposed for several new cement kilns[2] and as BART for the Holcim Cement kiln in Montana and therefore must be considered.

Colorado Springs Utilities (CSU)—Drake EGUs #5, #6 & #7: BART applicability must be resolved.

Tri-State Generation and Transmission—Craig Station Units #1 & #2.

- Craig could meet a lower (than presumptive) SO_2 limit.
- Craig should evaluate application of SNCR to meet a lower NO_x limit.
- PM_{10} emissions should be limited to levels that reflect the current capabilities of fabric filters.

Colorado Energy Nations Co. (CENC, formerly Trigen)

- Certain control strategies such as wet scrubbing and post-combustion NO_x controls cannot be categorically excluded.
- Addition of DSI for SO_2 control should be re-evaluated.
- Since CENC has proposed to alleviate peak SO_2 emission rates by a fuel management approach, this strategy should not be rejected in favor of no SO_2 reduction strategy.
- PM_{10} emissions should be limited to levels that reflect the current capabilities of fabric filters.

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[2] Holcim and Continental in MO; Florida Crushed Stone, Florida Rock, and Suwannee American Cement in FL; Ash Grove in NV, and Drake in AZ

Public Service Company of Colorado (PSCO)

Comanche #1 & #2:

- Because Comanche #1 & #2 are subject to an outstanding enforcement action for triggering NSR and PSD, Best Available Control Technology (BACT) applies to these boilers instead of BART. Application of BACT could reduce SO_2 emissions by 17% and NO_x emissions by more than half.
- There are several examples of boilers burning coal similar to that at Comanche but with much lower SO_2 emissions.[3] Therefore, PSCO should be capable of achieving the same lower limits with its new dry scrubber (and burning relatively clean coal) as similar facilities which burn coal with higher sulfur.
- The State has advanced PSCO's proposal on the basis that the 0.15 lb SO_2/mmBtu combined annual average is below the presumptive BART limits, and did not investigate the possibility of reducing emissions further. However, since PSCO modeled baseline conditions using the maximum actual 24-hour average emission rate and then, contrary to the State's guidance, modeled the "Post Control-Presumptive BART" scenario using the 30-day rolling average emission rates to estimate 24-hour average impacts, we would like to see the rationale behind this conclusion.
- The State is proposing a BART alternative that would allow Comanche to satisfy BART for NO_x by meeting 0.15 lb/mmBtu for units #1 & #2 on an annual average, instead of meeting 0.15 lb/mmBtu on a 30-day average at Unit #1. However, the State has not demonstrated that this approach would result in more visibility improvement than if each unit met its presumptive BART limit which is based upon a 30-day rolling average. PSCO appears to contend that the reductions in SO_2 below the presumptive BART limits at units #1 & #2, as well as reductions in NO_x at Unit #2 below its 0.23 lb/mmBtu presumptive BART limit, will offset the higher NO_x emissions at Unit #1. However, in conducting its BART-Alternative modeling, PSCO erroneously input the annual SO_2 limit of 0.1 lb/mmBtu to evaluate a 24-hour visibility impact. If one accounts for the variability in short-term emissions, it is likely that the appropriate 24-hour SO_2 emission rate would be about double the annual rate.[4]
- PM_{10} emissions should be limited to levels that reflect the current capabilities of fabric filters for this facility.

Pawnee #1

- Pawnee is still subject to EPA enforcement action for major modifications to this boiler. Therefore, PSD review applies, including the requirement to apply BACT. Because BACT applies to this boiler, SCR should be applied to achieve an emission rate of 0.05 – 0.06 lb NO_x/mmBtu on a 24-hour average.

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[3] The Newmont and White Pines projects in NV, and the High Plains project in CO propose dry scrubbers to meet 0.065 lb SO_2/mmBtu on a 30-day rolling average basis. The Dry Fork project in WY proposes a limit of 0.08 lb SO_2/mmBtu, while the older WYGEN 2 & 3 projects in Wyoming are expected to meet 0.10 lb SO_2/mmBtu on a 30-day rolling average with a dry scrubber while burning coal with uncontrolled emissions of 2.64 lb SO_2/mmBtu.

[4] If EPA follows through in its enforcement action, this is all moot since units #1 & #2 would have to meet BACT which would likely result in emission limits lower than BART.

- The State proposes that Pawnee meet the presumptive BART limit of 0.15 lb SO_2/mmBtu on a 30-day rolling average. Even if the State restricts its BART analyses to dry scrubbing, there are several examples of boilers burning coal similar to that at Comanche but with much lower emissions.[5] Therefore, PSCO should be capable of achieving the same limit with its new dry scrubber (and burning relatively clean coal) as similar facilities which burn coal with higher sulfur.
- It is not possible to evaluate PSCO's "BART Alternative" modeling because PSCO does not provide enough explanation of the emission rates in Appendix A-6 of its BART proposal.
- PM_{10} emissions should be limited to levels that reflect the current capabilities of fabric filters.

Hayden #1 & #2

- The State should not allow a higher NO_x limit than for the Craig units which are also subject to BART, a visibility-related consent agreement with identical limits, and burn similar northwestern Colorado coals.
- Selective Non-Catalytic Reduction would reduce NO_x emissions by 36% at a cost of $449/ton. This cost falls within the range that EPA estimated would cover 75% of the BART-eligible boiler population.
- The State should determine if the Hayden scrubbers should be upgraded to perform as well as those at Craig.
- It is not possible to evaluate PSCO's "BART Alternative" modeling because PSCO does not provide the emission rates in Appendix A for an alternative scenario. Instead, it appears that PSCO simply compared "Baseline" to "Post Control-Presumptive Limits" conditions. Contrary to State guidance, PSCO modeled "baseline" SO_2 emissions (24-hour peak NO_x was modeled) and the "post-control" scenario using the 30-day rolling average emission rates to estimate 24-hour average impacts.
- PM_{10} emissions should be limited to levels that reflect the current capabilities of fabric filters.

Cherokee #4

- Sulfur dioxide controls beyond the recently-installed dry scrubber should be evaluated.
- The State did not evaluate any specific NO_x controls beyond the recently-installed Low-NO_x Burners and Separated Over-Fire Air. Selective Non-Catalytic Reduction would reduce NO_x emissions by 32% at a cost of $410/ton. This cost falls within the range that EPA estimated would cover 75% of the BART-eligible boiler population.
- It is not possible to evaluate PSCO's "BART Alternative" modeling because PSCO does not provide the emission rates in Appendix A for an alternative scenario. Instead, it appears that PSCO simply compared "Baseline" to "Post Control-Presumptive Limits" conditions. Contrary to State guidance, PSCO modeled "baseline" SO_2 emissions (24-

[5] The Newmont and White Pines projects in NV, and the High Plains project in CO propose dry scrubbers to meet 0.065 lb SO_2/mmBtu on a 30-day rolling average basis. The Dry Fork project in WY proposes a limit of 0.08 lb SO_2/mmBtu, while the older WYGEN 2 & 3 projects in Wyoming are expected to meet 0.10 lb SO_2/mmBtu on a 30-day rolling average with a dry scrubber while burning coal with uncontrolled emissions of 2.64 lb SO_2/mmBtu.

hour peak NO_x was modeled) and the "post-control" scenario using the 30-day rolling average emission rates to estimate 24-hour average impacts.
- PM_{10} emissions should be limited to levels that reflect the current capabilities of fabric filters.

Valmont #5
- Sulfur dioxide controls beyond the recently-installed dry scrubber should be evaluated. Emissions are limited under the Metro Facilities cap.
- The State did not evaluate any specific NO_x controls beyond the recently-installed Low-NO_x Burners and Separated Overfire Air. Selective Non-Catalytic Reduction would reduce NO_x emissions by 29% at a cost of $359/ton. This cost falls within the range that EPA estimated would cover 75% of the BART-eligible boiler population.
- PSCO claims that emission reductions achieved under the Metro Agreement represent a "better-than-BART" approach. It is not possible to evaluate PSCO's "BART Alternative" modeling because PSCO does not provide enough explanation of the emission rates in Appendix A.

BART Alternative: PSCO's "Alternative BART Analysis" is not an appropriate comparison. PSCO is modeling actual maximum 24-hour emissions to represent the baseline condition—that is correct. Then the analysis supplied by PSCO models the 30-day rolling average emissions to represent 24-hour visibility impacts resulting from the "presumptive BART" condition. The 30-day average emissions will always be a lower number than the equivalent 24-hour emissions rate. PSCO's assessment also modeled annual emissions to represent 24-hour visibility impacts resulting from its "BART Alternative" condition. So, even if total emissions did not change, PSCO's approach would show that its "BART Alternative" is "superior." We request the State to assure that the alternative emissions strategy is superior based on a consistent evaluation of short-term emissions rates.

OTHER SECTIONS:

1. Chapter 3 describes the State's plan to rely solely on the Interagency Monitoring of Protected Visual Environments (IMPROVE) program and current interagency support for publishing IMPROVE data. As partners in that program we agree that the most efficient way to provide for regional haze monitoring is through continued participation with the IMPROVE cooperative. However, we note that the State has a responsibility to conduct monitoring and assessment as part of an ongoing progress review towards the goals set in this SIP, as well as for informing future SIP revision and planning activities required under the national Regional Haze Rule. Given the uncertain future of any individual monitoring site, the SIP should address the representativeness of both primary and alternative data sites, and also provide a more specific plan for ensuring that monitoring is continued if national funding is not available.
2. Figure 4-4, "Uniform Progress Goal for Each Colorado Class I Area." Please check the 20% Best Days Baseline conditions number for Eagles Nest, Flat Tops, Maroon Bells, Snowmass and West Elk Wilderness areas. The current numbers seem low.
3. Chapter 5 describes the emissions in Colorado that contribute to visibility impairment. We request the State to commit to participate in the fire emissions tracking approach

developed by the WRAP's Fire Emissions Joint Forum. Building that data for fire on state and federal land, in conjunction with neighboring states, will support a better understanding of the role of fire in visibility impairment and development of better policies to limit impacts of managed fire use.

4. Figures 5-1 and 5-2. Please review the projected area source growth of sulfur dioxide and nitrogen oxides emissions by comparing that projection with historical information on area sources. These figures also point to a large increase in nitrogen oxide emissions from oil and gas development which is a concern for maintaining the twenty percent best days at Class I areas.
5. Chapter 7, "Visibility Modeling and Apportionment." The use of the PSAT modeling results in Section 7.4 should be reviewed in light of the contribution of natural emissions to the component labeled "Boundary Conditions". Presentation of the boundary conditions in Figure 7-2 may give the misleading impression that Boundary Conditions overwhelm policy choices to achieve close to the uniform rate of progress at reasonable cost.

6. As part of its long term strategy, we expect that the State will rely in great part on the new source review (NSR) and prevention of significant deterioration (PSD) programs to assure that new sources do not unduly impair the expected progress toward natural conditions. Section 9.5.5 of the August 3, 2007, draft speaks to emissions reductions of ongoing programs, but does not discuss the interaction between the existing new source review program and progress on the regional haze plan. Given the uncertainty in the new source growth estimates used to develop the 2018 emissions inventory, and ultimately the 2018 visibility projections, NPS believes it would be appropriate for the State to discuss the relationship between the Regional Haze Plan and requirements of the NSR and PSD programs within the SIP. Specifically, how does the State anticipate addressing new sources of air pollution in the PSD process in regards to its reasonable progress goals and long term strategy; and, how will it analyze the affect of new emissions from these new sources on progress toward the interim visibility goals established under this SIP, as well as the ultimate goal of natural background visibility by 2064?