United States Department of the Interior
NATIONAL PARK SERVICE
Air Resources Division
P.O. Box 25287
Denver, Colorado 80225

IN REPLY REFER TO:

N3615 (2350)

July 13, 2012

Carl Daly
Director, Air Program
Environmental Protection Agency, Region 8
Mailcode 8P-AR
1595 Wynkoop Street
Denver, Colorado 80202-1129

EPA Docket ID: EPA-R08-OAR-2011-0114

Dear ~~Mr. Daly~~; Carl

The National Park Service (NPS) has reviewed the Environmental Protection Agency (EPA)'s proposed "Approval, Disapproval and Promulgation of State Implementation Plans; State of Utah; Regional Haze Rule Requirements for Mandatory Class I Areas" published in the Federal Register on May 16, 2012. We previously commented to the State of Utah on August 1, 2008 and March 4, 2011 on the proposed state implementation plan.

Best Available Retrofit Technology (BART)

Consistent with the requirements of 40 CFR 51.309(d)(4)(i)-(vi), we agree with EPA Region 8 (R8) that the Western Backstop Sulfur Dioxide (SO_2) Trading Program meets the BART requirements for stationary source SO_2 emissions in the participating States of Utah, Wyoming, and New Mexico.

We agree with EPA R8 that Utah must separately meet the requirements of 40 CFR 51.309(d)(4)(vii) for stationary source emissions of nitrogen oxides (NO_x) and particulate matter (PM) by conducting a five factor BART analyses for those sources subject to BART. We also agree that the State did not properly follow the requirements of 40 CFR 51.308(e)(1)(ii)(A) and section 169A(g)(2) of the Clean Air Act in determining PM and NO_x BART for PacifiCorp Hunter Units 1 and 2 and PacifiCorp Huntington Units 1 and 2.

However, EPA R8 incorrectly applied the BART requirements at 40 CFR 51.308(e)(1)(ii)(B), which state:

> The determination of BART for fossil-fuel fired power plants having a total generating capacity greater than 750 megawatts must be made pursuant to the guidelines in appendix Y of this part.

When discussing BART requirements for NO_x and PM for the four units subject to BART, EPA R8 incorrectly stated:

> Because PacificCorp units have a 430 MW generating capacity, the State is not required to follow the BART Guidelines in making BART determinations for the units.

The requirement cited above applies to facilities with a total capcity greater than 750 megawatts, not each unit separately. According to information available on the PacifiCorps website, the total generating capcity of Hunter Units 1-3 is 1,320 MW and Huntington Units 1-2 is 895 MW. Therefore Utah needs to follow the BART Guidelines in Appenidix Y.

We agree with EPA R8 that Utah cannot rely on presumptive NO_x emissions limits for the BART determinations. Post-combustion NO_x controls have become more cost-effective and widely implemented since EPA's BART guidelines were released in 2005. Also, these sources impact several Class I areas, and EPA has previously recommended that states consider the cumulative impacts across Class I areas in the BART determinations. We have enclosed our March 2011 comments to Utah that demonstrate Selective Catalytic Reduction technology is cost effective for all four BART units.

Reasonable Progress

Under 40 CFR 51.309(g), Utah should have considered whether sources in the state impair visibility at Class I areas beyond the Colorado Plateau. The Western Regional Air Partnership (WRAP) evaluated emission source contributions at Class I areas using the CAMx regional air quality model with the Particulate Source Apportionment Tool (PSAT). Beyond the 16 Class I areas on the Colorado Plateau, the WRAP PSAT modeling demonstrated that NO_x emissions from point and mobile sources in Utah are the second largest contributors to ammonium nitrate concentrations at Craters of the Moon National Monument (NM) in Idaho and Jarbridge Wilderness Area in Nevada. EPA R8's August 4, 2008 letter[1] notified the State that Utah's NO_x emissions were impacting Craters of the Moon NM and that 40 CFR 51.309(a) requires each 309 state to follow 51.308 requirements for reasonable progress in Class I areas outside of the Colorado Plateau. Utah should have considered control measures for point source NO_x

[1] Docket EPA-R08-OAR-2011-0114

emissions. New Mexico and Wyoming used the same WRAP PSAT modeling to conclude that sources in their states were contributing to impacts at Class I areas not on the Colorado Plateau; New Mexico also considered additional Class I areas outside the state. Both states evaluated emissions control measures for reasonable progress.

EPA R8 recommends using the ratio of emissions to distance as a screening method to determine which point sources to consider for reasonable progress. In its proposal regarding the Wyoming RH SIP[2], EPA R8 states:

> The State used a reasonable progress screening methodology termed "Q/d" to determine which stationary sources would be candidates for controls under reasonable progress. Q/d is a calculated ratio where Q represents (in this case) the NO_X emission rate in tpy of the source divided by the distance in kilometers of the point source from the nearest Class I area, denoted by "d." The State used the maximum permitted emission rate for each source to determine the tpy of NO_X it used in the Q/d calculation. The State determined that a Q/d value of 10 is reasonable for determining which sources the State should consider for reasonable progress controls, since this value yielded sources of concern similar in magnitude to sources subject-to-BART.

Using the same Q/d approach as used by Wyoming, control measures should be considered for two facilities, Pacificorp's Hunter Unit 3 and Intermountain Power Agency's Intermountain Power Plant Units 1 and 2. We recommended that Utah evaluate controls for these facilities in our March 2011 comments to Utah.

Hunter Unit 3: Hunter Units 1 and 2 are 430 MW each and subject to BART; Hunter Unit 3 is a 460 MW unit that was constructed after the close of the BART eligibility period. Hunter Unit 3 is 75 km from Capitol Reef National Park and, in 2011 had emissions of 3,406 tons of NO_X. Applying Q/d for NOx emissions from Hunter Unit 3 yields a Q/d value of 70 at Capitol Reef NP. The Q/d values for Hunter Units 1 and 2 are 99 and 77, respectively, at Capitol Reef NP. Although we have no modeling results for Hunter Unit 3, WRAP modeling of 2002 and 2003 emissions from Hunter Units 1 and 2 estimated 2.145 and 1.905 dv impairments at Capitol Reef NP, respectively. With a similar Q/d, it is likely that Hunter Unit 3 also is a significant contributor at Capitol Reef NP. Using the Q/d = 10 threshold used by Wyoming, Hunter Unit 3 has a Q/d greater than 10 in an area[3] greater than 500 km that includes Grand Teton NP and Craters of the

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[2] Docket EPA-R08-OAR-2012-0026

[3] In its analysis of impacts from the Big Stone I EGU in South Dakota, the South Dakota Department of Environment and Natural Resources requested that the Class I areas between 300 km and up to 625 km from the Big Stone I facility be modeled. In its December 8, 2011 FR Notice, EPA R8 states:

> The results show that Big Stone I's emissions cause visibility impacts that exceed the 0.5 deciviews threshold at the Badlands National Park (470 km) in South Dakota, Theodore Roosevelt National Park (555 km) in North Dakota, and Boundary Waters Wilderness (431 km) and Voyageurs National Park (438 km) in Minnesota.

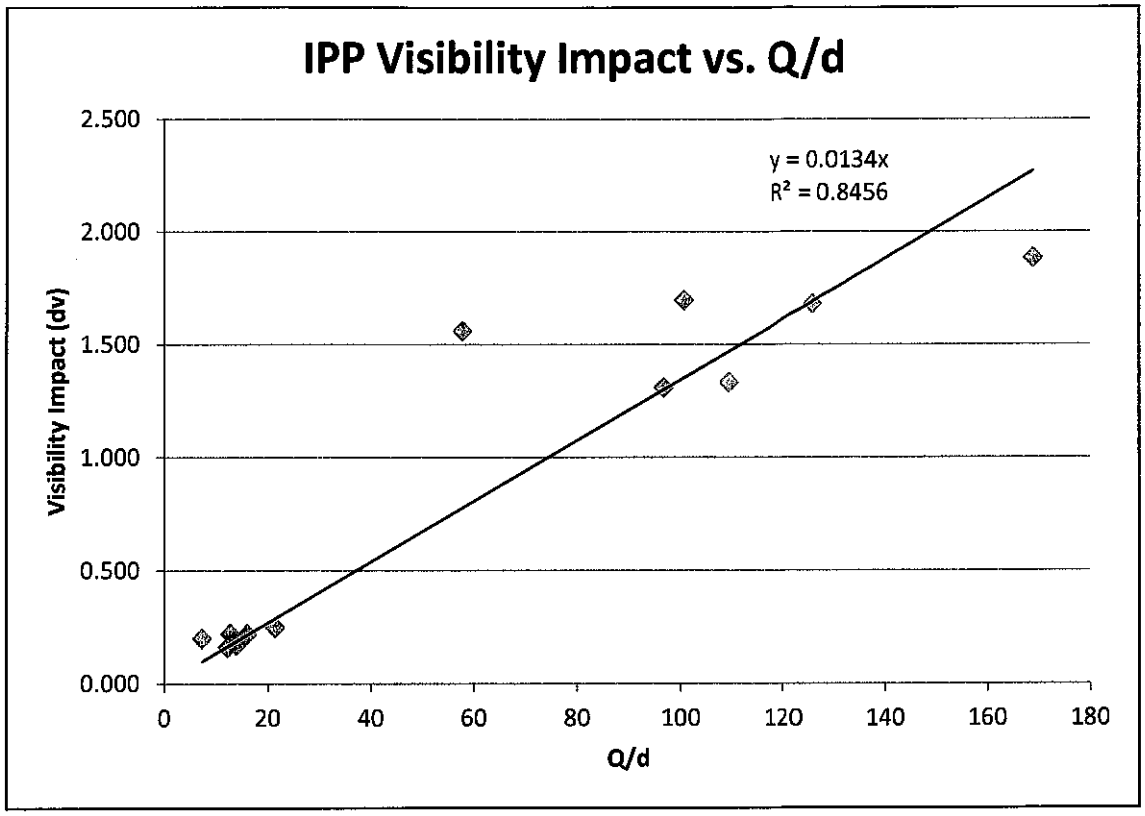
Moon NM and the Bridger, Fitzpatrick and Jarbidge Wilderness Areas, all Class I areas not on the Colorado Plateau. (See enclosed map.) Hunter Unit 3's NO_x Q/d at Craters of the Moon NM is 12. With a current NOx emissions limit of 0.30 lb/MMBtu, Hunter Unit 3 is likely to cause or contribute to visibility impairment at Class I areas both on and beyond the Colorado Plateau. Emissions controls should be considered Hunter Unit 3 for reasonable progress.

Intermountain Power: The Intermountain Power (IPP) plant near Delta, UT consists of two units each with a net generation capacity of 820 MW. Commercial operation of Unit 1 started in June 1986, and Unit 2 in May 1987. In 2011, IPP was the third largest NO_X-emitting facility in the US at slightly over 25,000 tons. IPP Unit 1 ranked number 4 at 12,000 tons, and IPP Unit 2 ranked number 1 at 13,000 tons.

EPA R8 makes no reference to IPP in its current proposal. Applying Wyoming's Q/d approach to each IPP Unit 1 and 2, yields values at Capitol Reef NP (the nearest Class I area at 149 km) of 81 for Unit 1 and 88 for Unit 2. These values are 8 – 9 times higher than Wyoming's threshold to trigger analysis under the reasonable progress provisions of the Regional Haze Rule. Our modeling indicates that IPP Units 1 and 2 combined have a 2.4 dv visibility impact at Capitol Reef NP, with 1.9 dv attributable to NO_X emissions from IPP. IPP NO_X emissions have a Q/d greater than 10 in an area that extends beyond 1200 km and includes Grand Teton NP, Craters of the Moon NM and the Bridger, Fitzpatrick and Jarbidge Wilderness Areas, all Class I areas not on the Colorado plateau. IPP's NO_X Q/d at Craters of the Moon NP is 70 (see enclosed map). With the current NO_X emission limit of 0.40 lb/mmBtu and over 25,000 tpy NO_x, IPP is likely to cause or contribute to visibility impairment on and beyond the Colorado Plateau and control measures should be considered for reasonable progress.

While we do not currently have the files necessary to model the visibility impacts of emissions from IPP on Craters of the Moon NP (or on Jarbidge WA), we were able to model impacts at Class I areas on the Colorado Plateau and compare these results to IPP's NO_X Q/d at Class I areas. We modeled impacts using 2011 emissions from IPP and assuming installation of SCR for both IPP units. The figure below presents the correlation between visibility impacts (in deciviews, dv) from IPP NO_X emissions to IPP's NO_X Q/d for each Class I area modeled. Our results indicate that with a NO_X Q/d of 70, IPP could have a visibility impact greater than 0.9 dv at Craters of the Moon NP. Our modeling results are further described in Appendix A.

In reviewing Otter Tail's results, the State rounded to one significant figure and determined that Big Stone I emissions cause visibility impacts that exceed the 0.5 deciviews threshold at the same Class I areas identified in the WRAP modeling in addition to Isle Royale in Michigan (1,049 km away).



We appreciate the opportunity to work closely with EPA Region 8 and the State of Utah to improve visibility in our Class I areas. For further information regarding our comments, please contact Pat Brewer at (303) 969-2153.

Sincerely,

Susan Johnson
Chief, Policy, Planning and Permit Review Branch

Enclosure

cc:
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