



November 27, 2013

Ms. Gail Cooke
New Mexico Environmental Department
Air Quality Bureau
525 Camino del los Marquez, Suite 1
Santa Fe, New Mexico

Via email to gail.cooke@state.nm.us

Re: Proposed Revisions to New Mexico's Regional Haze State Implementation Plan (SIP) to Adopt New Mexico's Proposed 2013 Regional Haze Progress Report, Docket No. EIB 13-08(R)

Dear Ms. Cooke,

We respectfully submit the following comments regarding the New Mexico Environmental Department ("NMED") Air Quality Bureau's ("AQB") proposed Regional Haze Progress Report ("Progress Report"). The National Parks Conservation Association represents more than 830,000 members and supporters around the country, including 7,000 in New Mexico, who care deeply about protecting the air quality in our national parks and wilderness areas.

The proposed Progress Report has numerous flaws that prevent it from adequately fulfilling the Regional Haze Rule's requirements for progress reports. In addition to failing to use the most recent emission data available, the Progress Report also fails to demonstrate that New Mexico's current SIP elements are sufficient to enable New Mexico to meet its established reasonable progress goals. As a result, New Mexico emissions are inhibiting the ability of other states to meet reasonable progress goals for their Class I areas.

Despite these flaws in the Progress Report, the New Mexico AQB concludes that the current Section 309 and 309(g) of Regional Haze State Implementation Plan ("SIP") is adequate to meet the state's 2018 reasonable progress goals and that it requires no further revision at this time.¹ This conclusion is incorrect and contrary to the Progress Report's findings. Therefore, the New Mexico AQB must revise its Progress Report to correct the flaws mentioned above and below to

¹ p. 39.

ensure that the Class I areas within its borders and in the surrounding states are on the glide path to achieving natural visibility conditions by 2064.

I. Clean Air Act and Regional Haze Background

In section 169A of the 1977 Amendments to the Clean Air Act (CAA), Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the “prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution.” The United States Environmental Protection Agency (“EPA”) promulgated regulations on December 2, 1980, to address visibility impairment in Class I areas that is “reasonably attributable” to a single source or small group of sources. 45 FR 80084 (December 2, 1980). These regulations are codified at 40 CFR §51.300-307. As part of the 1990 Amendments to the CAA, Congress added section 169B to focus attention on regional haze issues, and EPA promulgated a rule to address regional haze on July 1, 1999. 64 FR 35714 (July 1, 1999) codified at 40 CFR §51, subpart P, also known as the Regional Haze Rule. EPA's Regional Haze Rule provides two paths for States to address regional haze. The first path is through 40 CFR §51.308, which requires states to submit a SIP that establishes reasonable progress goals and a long-term strategy for achieving those goals.

The other path for addressing regional haze is through 40 CFR §51.309, which is an option for certain western states that are a part of the Grand Canyon Visibility Transport Commission (“GCVTC”), including New Mexico. Under §169B(c)(i) and §169B(e) of the CAA, EPA established the GCVTC on November 12, 1991 with the purpose to assess information about the adverse impacts on visibility in and around the sixteen Class I areas on the Colorado Plateau region and to provide policy recommendations to EPA to address such impacts. The other eight states that are part of the Grand Canyon Visibility Transport Region are Arizona, California, Colorado, Idaho, Nevada, Oregon, Utah, and Wyoming.

The GCVTC was required to issue a report to EPA recommending what measures, if any, should be taken to protect visibility. In June 1996, the GCVTC issued its first policy recommendations to EPA, in which it determined that all nine transport region states could potentially impact the sixteen Class I areas on the Colorado Plateau. The GCVTC's recommendations were incorporated into EPA's Regional Haze Rule at 40 CFR §51.309. The §309 regulations provided the states in the Grand Canyon Visibility Transport Region an alternative method of achieving reasonable progress for Class I areas that were covered by the GCVTC. States electing to submit regional haze SIPs under the §309 regulations (“309 SIPs”) may have other Class I areas that are not on the Colorado Plateau. Such states must either address these additional Class I areas through the §309 SIP pursuant to 40 CFR §51.309(g) or submit a regional haze SIP under 40 CFR §51.308.

Additionally, the Regional Haze Rule at 40 CFR §51.309(d)(10) requires periodic implementation plan revisions, known as progress reports, every five years. Each Transport Region State must submit to the EPA the 5-year progress reports in 2013 and 2018 and indicate whether the State's existing implementation plan is sufficient to achieve its established goals for visibility improvement and emissions reductions. 40 CFR §51.309(d)(10)(ii)(A)-(D). In coming

to this conclusion, each Transport Region State must address, at a minimum, the following elements:

- (A) A description of the status of implementation of all measures included in the implementation plan for achieving reasonable progress goals for mandatory Class I Federal areas both within and outside the State.
- (B) A summary of the emissions reductions achieved throughout the State through implementation of the measures described in paragraph (d)(10)(i)(A) of this section.
- (C) For each mandatory Class I Federal area within the State, an assessment of the following: the current visibility conditions for the most impaired and least impaired days; the difference between current visibility conditions for the most impaired and least impaired days and baseline visibility conditions; the change in visibility impairment for the most impaired and least impaired days over the past 5 years.
- (D) An analysis tracking the change over the past 5 years in emissions of pollutants contributing to visibility impairment from all sources and activities within the State. Emissions changes should be identified by type of source or activity. The analysis must be based on the most recent updated emissions inventory, with estimates projected forward as necessary and appropriate, to account for emissions changes during the applicable 5-year period.
- (E) An assessment of any significant changes in anthropogenic emissions within or outside the State that have occurred over the past 5 years that have limited or impeded progress in reducing pollutant emissions and improving visibility.
- (F) An assessment of whether the current implementation plan elements and strategies are sufficient to enable the State, or other States with mandatory Federal Class I areas affected by emissions from the State, to meet all established reasonable progress goals.
- (G) A review of the State's visibility monitoring strategy and any modifications to the strategy as necessary.

40 CFR §51.309(d)(10)(i)(A)-(G). If, after considering the above elements, a Transport Region State determines that its SIP is or may be inadequate to ensure reasonable progress, it must provide notification to the EPA, develop additional strategies to address the implementation plan deficiencies, collaborate with other States whose emissions may be impeding its progress, and revise the plan no later than one year from the date that the progress report was due. 40 CFR §51.309(d)(10)(ii)(A)-(D).

II. New Mexico's Proposed Regional Haze Progress Report Does Not Adequately Meet the Regional Haze Program's Progress Report Requirements.

As a Transport Region State, New Mexico has elected to address the Regional Haze Rule requirements through §309. As mandated by §51.309(d)(10)(i), the New Mexico AQB drafted its proposed Progress Report. It proposes to conclude that its current Regional Haze SIP is adequate to meet the state's 2018 reasonable progress goals and that it requires no further revision at this

time.² However, as the following sections will show, the proposed Progress Report fails to adequately address all the required elements of §51.309(d)(10). Therefore, the Progress Report is insufficient and cannot claim to meet the Regional Haze Program's requirements.

To clarify its regulatory requirements, in April 2013 EPA issued guidance regarding progress reports, entitled *General Principles for the 5-Year Regional Haze Progress Reports for the Initial Regional Haze State Implementation Plans (Intended to Assist States and EPA Regional Offices in Development and Review of the Progress Reports)* ("EPA April 2013 Guidance"). Among other elements, EPA's April 2013 Guidance includes a checklist, mirroring the regulatory requirements, for evaluating progress report submittals.³ We will walk through EPA's checklist and the regulations in offering comments on New Mexico's Progress Report, and supplement New Mexico's report with additional information where possible. We note that a given item may be "complete" in the sense that it nominally exists, but if it is insufficient in detail, analysis, or substance the Progress Report requirements are not fulfilled.

A. The Proposed Progress Report Does Not Meet §51.309(d)(10)(i)(A)

EPA Checklist: "Status of Control Strategies in the Regional Haze SIP: Does the report include a list of measures the state relied upon?"

The proposed Progress Report does not describe the measures New Mexico is relying upon to achieve its reasonable progress goals.⁴ We request that New Mexico include a description of these measures as required, not merely a reference to previous SIPs. Elsewhere, the Progress Report notes that "many of the controls planned for EGUs in New Mexico had not taken place yet in 2010."⁵ Describing the "status of the implementation of all measures," as required by §51.309(d)(10)(i)(A), means articulating which of the relied-upon controls have been implemented, and which have not. We ask New Mexico to include this information in its final report.

B. The Proposed Progress Report Does Not Meet §51.309(d)(10)(i)(B)

EPA Checklist: "Emissions Reductions from Regional Haze SIP Strategies: Does the report include estimated reduction estimates for these measures?"

§51.309(d)(10)(i)(B) requires a summary of the emissions reductions achieved through the implementation of measures to meet a state's reasonable progress goals. Section 3.3 of the AQB's proposed Progress Report claims to describe the emissions reductions resulting from New Mexico's implementation of its SIP.⁶ However, aside from qualitatively discussing a decrease in SO₂, Section 3.3 does not include estimated emission reductions. Instead, it seeks to rely upon monitoring data showing decreases in visibility impairment. These decreases, while encouraging, do not suffice to meet the burden of §51.309(d)(10)(i)(B), in part because they tell

² p. 35.

³ p. 24-25.

⁴ p. 7.

⁵ p. 33.

⁶ p. 9.

us very little about whether the improvements are the result of emissions reductions due to New Mexico's SIP, or external changes (e.g. a decrease in natural or out-of-state sources).⁷ We ask that New Mexico include the required estimates of emission reductions associated with their SIP measures.

C. The Proposed Progress Report Does Not Meet §51.309(d)(10)(i)(C)

EPA Checklist: Visibility Progress: Does the report include the summaries of monitored visibility data as required by the Regional Haze Rule?

The goal of a 5-year progress report is to document progress and changes in the preceding 5 years and, on that basis, to make informed decisions identifying needed adjustments to the SIP. Because its data is not the most recent available, the proposed Progress Report fails to meet this goal.

To fulfill its goal of describing the most recent 5 years, the progress report should include information that describes the preceding 5-year period as closely as possible, allowing in some instances for lag time between an event and the reporting thereof. The regulations recognize this need for up-to-date data, and accordingly ask for information that is either current (as in §51.309(d)(10)(i)(A)-(B)), based on "the most recent updated" data (§51.309(d)(10)(i)(C)), or covers "the past 5 years" (as in §51.309(d)(10)(i)(C)-(E)). New Mexico's Progress Report does not meet this standard.

Specifically, §51.309(d)(10)(i)(C) calls for an assessment of specific visibility parameters "over the past 5 years," yet the Progress Report addresses 2005-2009, a time period ending nearly four years ago.⁸ This is not a question of data availability; the report acknowledges that "the most recent IMPROVE monitoring data currently available includes 2010 data,"⁹ and in fact data through 2011 are widely known and readily available.¹⁰

Rather this appears to be an issue of misinterpretation of both the regulations and EPA's guidance. Citing EPA's 2003 guidance,¹¹ the Progress Report states that it is describing "the most recent successive 5-year average period available, the 2005-2009 period average" even though more recent data are available. While EPA's 2003 guidance does discuss successive 5-year periods in one instance,¹² it very clearly states that the goal is to use the "most recent" data

⁷ Even when the Progress Report discusses emission trends in Section 3.5, it fails to determine whether this monitored improvement is a result of the implementation of the SIP or other external measures. p. 23. For example, the Progress Report finds that there is a negative change in total emissions of sulfur dioxide in New Mexico since 2002; however, it fails to explain how much of these emissions reductions are due to active control measures of the SIP and how much are due to factors outside of the SIP, such as surrounding states' emission reductions. p. 25-26.

⁸ p. 3.

⁹ p. 13.

¹⁰ The summary data for 2010 have been included on the IMPROVE website since December 2011 (http://vista.cira.colostate.edu/improve/Data/IMPROVE/summary_data.htm); the raw data are available on the VIEWS website through 2011 (<http://views.cira.colostate.edu/web/DataWizard/>); and WRAP provides visual summaries of this data as well, including quick comparisons between the 2000-2004 baseline and the 5 year period from 2007-2011 (<http://vista.cira.colostate.edu/TSS/Results/HazePlanning.aspx>).

¹¹ EPA's September 2003 *Guidance for Tracking Progress Under the Regional Haze Rule*.

¹² p. 4-2.

available,¹³ and also contemplates a 5 year period outside the “successive” pattern cited by New Mexico.¹⁴

Moreover, there is clear recent guidance on the issue. EPA’s April 2013 Guidance states that the description of “current visibility conditions” should “include[] the most recent quality assured public data available at the time the state submits its 5-year progress report for public review.” p. 9. As EPA noted in its recent comments to Texas, at present, “this would include data at least through 2011.”¹⁵ The progress reports are intended to provide mid-course correction if any is needed; there is no logical reason to purposefully rely on less than current information. Indeed, as discussed below, this information is critical to demonstrating lasting rather than ephemeral changes. New Mexico should update its analyses to include visibility information up to at least 2011. We also ask that, per EPA’s suggestion, New Mexico include a rolling 5 year average in its analysis.¹⁶

Additional Information and Concerns

The data that New Mexico presents suggests that much of the improvement from the baseline through the 2005-2009 time period is due to decreases in particulate organic matter, which is largely the result of fire. Conversely, an increase in ammonium sulfate, largely an anthropogenic pollutant, was documented at each site. This casts doubt on whether the visibility improvements over this time frame are in fact attributable to changes in anthropogenic emissions from New Mexico. The Progress Report discusses the contribution from an anomalously high sulfate event in 2005, but fails to quantify the impacts (for instance by giving the worst 20% days with that event removed). We appreciate the perspective offered by including annual average trends (Table 3.5), but the time period from 2000-2009 is not up to date and seems to take credit for significant reductions that occurred during the baseline period rather than as the result of SIP measures.

Additionally, we have performed a preliminary review of the available data from IMPROVE and the VIEWS website through 2011 for the New Mexico Class I areas. Our main concerns from this analysis of the worst 20% days include:

- For White Mountain, the 2007-2011 dv appears to be higher than the 2000-2004 baseline (i.e., degradation appears to be occurring). This is in part due to a continued increase in contribution from ammonium sulfate.
- Bosque del Apache appears to be experiencing an on going increase in impacts from ammonium nitrate, largely an anthropogenic pollutant, as compared to the baseline.
- Wheeler Peak, Pecos, and Gila all may still be experiencing ammonium sulfate impacts higher than or equivalent to baseline impacts.¹⁷

¹³ See, e.g., p. 1-9, 1-10, 1-11, 1-14.

¹⁴ See p. 1-6, which discusses the 2013-2017 time frame.

¹⁵ EPA Comments on the Texas Regional Haze Progress Report. 9/30/13. p. 2.

¹⁶ See EPA April 2013 Guidance, p. 10.

¹⁷ The data available from the IMPROVE summaries and that available through VIEWS are similar but not identical; hence, it is not clear whether ammonium sulfate has increased since the baseline or remained very similar.

- Looking at the 2006-2010 time period, many of the Class I areas still demonstrate an increase in ammonium sulfate over the baseline. This indicates that other factors may be at play in addition to the 2005 anomaly identified by New Mexico.

We ask that New Mexico include the most recent visibility data, and in particular that it provide explanation for any increases in contributions from anthropogenic pollutants.

D. The Proposed Progress Report Does Not Meet §51.309(d)(10)(i)(D)

EPA Checklist: “Emissions Progress: Does the report provide emissions trends across the entire inventory for a 5-year period as required by the Regional Haze Rule?”

Likewise, §51.309(d)(10)(i)(D) requires an emission analysis covering the applicable 5-year period “based on the most recent updated emissions inventory, with estimates projected forward as necessary and appropriate.” New Mexico’s analysis includes a description of the differences between the 2002 inventory and the most recent updated inventory, which was for base year 2008. It also describes EGU emissions from 1996 – 2010.

However, this fails to address the regulatory requirement to include “estimates projected forward as necessary and appropriate.” In this case, 2008 is 5 years ago. While the inventory is helpful, it provides very little information about what is happening today, and little basis upon which to assess the sufficiency of New Mexico’s SIP. At a minimum, we ask that New Mexico include:

- Up-to-date EGU emissions (EPA’s Air Markets Database is typically available through the most recent quarter).
- Descriptions of general trends for in-state emissions from 2008 to at least 2012 by pollutant and source category (preferably quantitative).

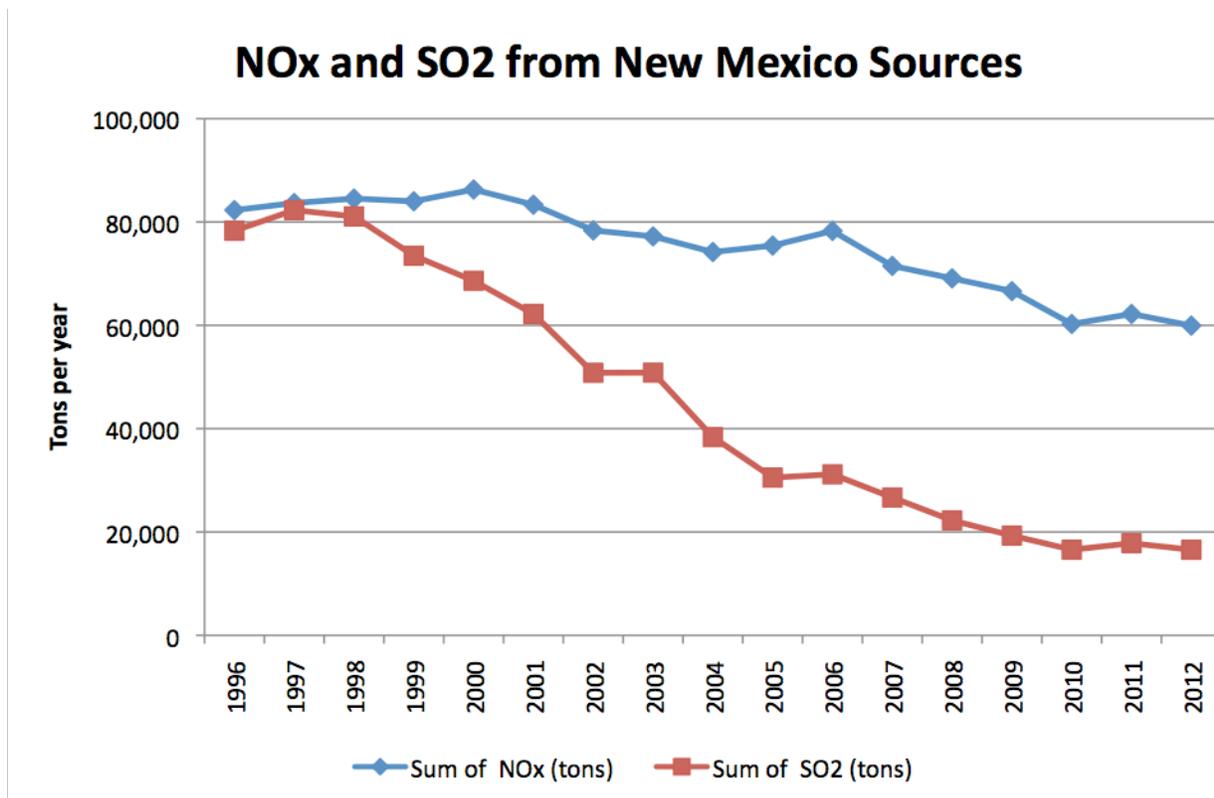
Although a recreation of a full inventory for a more recent year is not necessary, some forward estimate of recent emissions is required. Some of this data should already be available through state emissions inventory and Title V reporting,¹⁸ wildfire tracking (e.g. as required under §51.309(d)(6)), and similar data collection endeavors; EPA’s 2011 National Emissions Inventory would also provide a more updated point of comparison.¹⁹ Without this information it is impossible to determine the impact of New Mexico’s SIP measures.

Additional Information and Concerns

We reviewed EPA’s Air Markets Database for information on New Mexico’s EGUs. As the graph below shows, emissions from these sources have largely stagnated in more recent history (2010-2012; data for the first 9 months of 2013 also indicates roughly the same). This reinforces the need for New Mexico to provide more detailed, thorough information about the controls that have already been adopted by sources, as well as those that are anticipated in the future.

¹⁸ See, e.g. <http://www.nmenv.state.nm.us/aqb/modeling/modelingemissions.html>.

¹⁹ <http://www.epa.gov/ttn/chief/net/2011inventory.html>.



E. The Proposed Progress Report Does Not Meet §51.309(d)(10)(i)(E)

EPA Checklist: “Assessment of Changes Impeding Progress: Does the report include an explicit statement of whether there are anthropogenic emissions changes impeding progress?”

§51.309(d)(10)(i)(E) requires that a progress report provide “an assessment of any significant changes in anthropogenic emissions within or outside the State that have occurred over the past 5 years that have limited or impeded progress in reducing pollutant emissions and improving visibility.” Instead of providing this assessment, the Progress Report only indicates the major sources of anthropogenic sources in New Mexico of visibility-impairing pollutants; it provides a static glance at the 2005-2009 time period rather than addressing change over time.²⁰ It then draws the unsupported conclusion that there are no anthropogenic emissions within New Mexico that limited or impeded progress in reducing pollutant emissions or improving visibility. To support its determination, we request that New Mexico include an analysis of the emissions nearby each Class I area and identify any that are unexpected as compared to the predictions of the SIP.

Moreover, the proposed Progress Report completely fails to address anthropogenic emissions outside of New Mexico that limit or impede progress in visibility improvement. Models have identified that Texas sources have a disproportionate impact on New Mexico Class I areas. According to CENRAP modeling for 2018, for example, Texas contributes more than 20% of the total visibility impairment at three New Mexico Class I areas (35% at Carlsbad Caverns, 22% at

²⁰ p. 35.

Salt Creek, and 21% at White Mountain); Texas contributes more than 5% of the total visibility impairment at another four New Mexico Class I areas (11% at Bosque del Apache, 8% at Wheeler Peak and Pecos, 7% at San Pedro Parks).²¹

Texas' SIP submission requires no emissions reductions at all. EPA has thus far failed to act on Texas' SIP submission. Thus, the emissions reductions that should be required under the Regional Haze Rule have not come to pass and are clearly impeding New Mexico's ability to make progress towards natural visibility. We ask New Mexico to make clear to EPA and Texas the need for additional reductions from Texas in order to improve visibility at New Mexico's Class I areas.

F. The Proposed Progress Report Does Not Meet §51.309(d)(10)(i)(F)

EPA Checklist: "Assessment of Current Strategy: Does the report include an assessment of whether the state's haze plan is on track to meet reasonable progress goals?"

In order to comply with §51.309(d)(10)(i)(F), the proposed Progress Report should provide an assessment of whether New Mexico's current SIP is sufficient to enable it and other states with mandatory Class I areas affected by New Mexico emissions to meet all established reasonable progress goals under the CAA. The proposed Progress Report does not fulfill this requirement. Section 3.7, which addresses this element, re-states the visibility monitoring data, and uses this to conclude that New Mexico's approach is sufficient.

This approach is flawed. By failing to provide timely data regarding New Mexico's emissions, controls, and progress, the Progress Report offers no support for the idea that the demonstrated visibility benefits are in fact causally linked to New Mexico's SIP measures rather than changes in natural or out-of-state sources. The Progress Report states that "New Mexico believes that the current control strategies...are sufficient;"²² we ask New Mexico to provide quantitative evidence that this is the case for both its in-state and out-of-state impacted Class I areas.

III. The Proposed Progress Report Fails to Account for Emission Reductions from EPA's Federal Implementation Plan for San Juan Generating Station

In September 2011, EPA promulgated a Federal Implementation Plan ("FIP") requiring significant additional emission reductions from the San Juan Generating Station. 76 FR 52389 (September 21, 2011). This FIP will lower New Mexico's 2018 emissions below those used to model the reasonable progress goals. The reasonable progress goals, by definition, should reflect all of the reductions in the SIP/FIP and in any other Clean Air Act requirements. 40 CFR 51.308(d)(1)(B)(vi). In promulgating the FIP, therefore, EPA should have revised the reasonable progress goals to be consistent with the additional emissions reductions; that is, the reasonable progress goals for Class I areas impacted by San Juan Generating Station should be lower than those presented in the Progress Report.

²¹ Compiled from CENRAP's PSAT Visualization Tool, 2018 Future Year, CM&Soil RRF=1. Available at <http://www.censara.org/html/presentations.php>. Some of this impairment is from natural sources, but a significant portion is anthropogenic.

²² p. 36.

Given that neither EPA nor New Mexico have quantified the appropriate reasonable progress goals, it is impossible to tell the magnitude of progress towards them. At a minimum we ask that New Mexico include a list of the Class I areas impacted by the additional reductions from San Juan Generating Station and quantitative description of reasonable progress goals that are consistent with EPA's FIP.

In conclusion, the information that New Mexico has presented is insufficient to make the required determination of adequacy under §51.309(d)(10)(ii). Therefore, the data presented in the 5-year Progress Report is not sufficient to support AQB's conclusion that the proposed SIP makes adequate progress toward the regional haze program's reasonable progress requirements. The New Mexico progress report should be revised to address the plans deficiencies within a year. These revisions must include more detailed, updated, thorough analysis that concretely links the emissions reductions required under its SIP to visibility improvements at its Class I areas. In addition, the plan should be revised to include reasonable progress goals that are consistent with EPA's FIP and identify measures sufficient to ensure that the state's regional haze plan helps put in and out-of-state Class I areas back on the glide path to achieving natural visibility by 2064.

Sincerely,

/s/

Nathan Miller

Stephanie Kodish

National Parks Conservation Association