

Consistent with the above statutory and regulatory framework, the FAA has adopted policy to establish the standards for which the FAA identifies “obstructions” and “hazards” in the navigable airspace in furtherance of its responsibilities to manage the navigable airspace safely and efficiently. See 14 CFR part 77, and FAA Order 7400.2, Procedures for Handling Airspace Matters. The FAA issues a determination advising whether the structure would be a hazard to air navigation. The FAA may condition its determination of no hazard with the structure appropriately being marked and lighted, as specified in the determination. FAA criteria for marking and lighting of tall structures are found in Advisory Circular No. 70/7460-1, Obstruction Marking and Lighting.

Unless within the vicinity of an airport,¹ proponents of new structures or alterations of existing structures must file notice with the FAA for “any construction or alteration of more than 200 feet in height above the ground level at its site.” 14 CFR 77.13(a)(1). Consequently, as the FAA does not study these structures there is no FAA determination that would specify the marking of these structures.

Background

The emphasis to discover sources of renewable energy in the United States has prompted individuals and companies to explore all means of energy generation. Wind energy, converted into electrical energy by wind turbines, is widely pursued as a viable alternative. In order to determine if a site meets requirements to construct a wind turbine or wind farm, companies erect METs. These towers are used to gather wind data necessary for site evaluation and development of wind energy projects. The data generally is gathered over a year to ascertain if the targeted area represents a potential location for the installation of wind turbines.

Requirements to file notice under part 77 generally do not apply to structures at heights lower than 200 feet AGL unless close to an airport environment. Therefore, the FAA does not have a database of MET locations, nor does it conduct an aeronautical study to determine whether the particular structure would be hazardous to aviation. These towers are often installed in remote or rural areas, just under 200 feet above ground level (AGL), usually at 198 feet or less. These structures are portable, erected in a

matter of hours, installed with guyed wires and constructed from a galvanized material often making them difficult to see in certain atmospheric conditions.

While the METs described above are not subject to the provisions of part 77 and therefore, the FAA does not conduct aeronautical studies to determine whether these structures are obstructions and adversely impact air navigation, the FAA does acknowledge that these towers under certain conditions may be difficult to see by low-level agricultural flights operating under visual flight rules. The color, portability of these towers, their placement in rural and remote areas, and their ability to be erected quickly are factors that pilots should be aware of when conducting operations in these areas.

The FAA has received complaints and inquiries from agricultural operations in remote or rural areas regarding the safety impacts of these towers on low-level agricultural operations. In addition, representatives from the National Agricultural Aviation Association (NAAA) met with the FAA on November 16, 2010 to discuss safety specific concerns of the aerial application industry. The NAAA suggested safety guidelines and marking and lighting criteria in order to reduce the risks for aerial applications. A copy of the material provided by NAAA has been placed in the docket.

Proposed Guidance

The FAA is considering revising AC No. 70/7460-1, Obstruction Marking and Lighting, to include guidance for the voluntary marking of METs that are less than 200 feet AGL. The FAA recognizes the need to enhance the conspicuity of these METs, particularly for low-level agricultural operations and seeks public comment on the guidance provided below.

The FAA recommends that the towers be painted in accordance to the marking criteria contained in Chapter 3, paragraphs 30-33 of AC No. 70/7460-1. In particular, we reference paragraph 33(d), which discusses alternate bands of aviation orange and white paint for skeletal framework of storage tanks and similar structures, and towers that have cables attached. The FAA also recommends spherical and/or flag markers be used in addition to aviation orange and white paint when additional conspicuity is necessary. Markers should be installed and displayed according to the existing standards contained in Chapter 3, paragraph 34 of AC No. 70/7460-1.

The FAA is also considering recommending high visibility sleeves on

the outer guy wires of these METs. While the current Obstruction Marking and Lighting Advisory Circular does not contain such guidance for high visibility sleeves, the FAA specifically seeks comments on this recommendation.

The FAA anticipates that a uniform and consistent scheme for voluntarily marking these METs would enhance safety by making these towers more readily identifiable for agricultural operations.

Issued in Washington, DC, on December 29, 2010.

Edith V. Parish,

Manager, Airspace, Regulations and ATC Procedures Group.

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R06-OAR-2010-0846; FRL-9246-8]

Approval and Promulgation of Implementation Plans; New Mexico; Federal Implementation Plan for Interstate Transport of Pollution Affecting Visibility and Best Available Retrofit Technology Determination

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to disapprove a portion of the State Implementation Plan (SIP) revision submitted by the State of New Mexico for the purpose of addressing the “good neighbor” requirements of section 110(a)(2)(D)(i) of the Clean Air Act (CAA or Act) for the 1997 8-hour ozone National Ambient Air Quality Standards (NAAQS or standards) and the 1997 fine particulate matter (PM_{2.5}) NAAQS. The SIP revision addresses the requirement that New Mexico’s SIP must have adequate provisions to prohibit emissions from adversely affecting another state’s air quality through interstate transport. In this action, EPA is proposing to disapprove the New Mexico Interstate Transport SIP provisions that address the requirement of section 110(a)(2)(D)(i)(II) that emissions from New Mexico sources do not interfere with measures required in the SIP of any other state under part C of the CAA to protect visibility. In this action, EPA is also proposing to promulgate a Federal Implementation Plan (FIP) to prevent emissions from New Mexico sources from interfering with other states’ measures to protect

¹ 14 CFR 77.13(a), paragraphs (2), (3), (4) and (5) are not relevant to this issue.

visibility, and to implement nitrogen oxides (NO_x) and sulfur dioxide (SO₂) emission limits necessary at one source to prevent such interference. In addition, EPA is proposing sulfuric acid (H₂SO₄) and ammonia (NH₃) hourly emission limits at the same source, to minimize the contribution of these compounds to visibility impairment. EPA is proposing monitoring, recordkeeping and reporting requirements to ensure compliance with such emission limitations. EPA also proposes that compliance with the emission limits be within three (3) years of the effective date of our final rule. Furthermore, EPA is proposing the FIP to address the requirement for best available retrofit technology (BART) for NO_x for this source. This action is being taken under section 110 and part C of the CAA.

DATES: Comments. Comments must be received on or before March 7, 2011.

Public Hearing. EPA intends to hold a public hearing in Farmington, New Mexico to accept oral and written comments on the proposed rulemaking. EPA will provide notice and additional details at least 30 days prior to the hearing in the **Federal Register**.

ADDRESSES: Submit your comments, identified by Docket No. EPA-R06-OAR-2010-0846, by one of the following methods:

- **Federal e-Rulemaking Portal:** <http://www.regulations.gov>.
- Follow the online instructions for submitting comments.
- **EPA Region 6 "Contact Us" Web site:** <http://epa.gov/region6/r6comment.htm>. Please click on "6PD (Multimedia)" and select "Air" before submitting comments.

- **E-mail:** Mr. Guy Donaldson at donaldson.guy@epa.gov. Please also send a copy by e-mail to the person listed in the **FOR FURTHER INFORMATION CONTACT** section below.

- **Fax:** Mr. Guy Donaldson, Chief, Air Planning Section (6PD-L), at fax number 214-665-7263.

- **Mail:** Mr. Guy Donaldson, Chief, Air Planning Section (6PD-L), Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733.

- **Hand or Courier Delivery:** Mr. Guy Donaldson, Chief, Air Planning Section (6PD-L), Environmental Protection Agency, 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733. Such deliveries are accepted only between the hours of 8 a.m. and 4 p.m. weekdays, and not on legal holidays. Special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket No. EPA-R06-OAR-2010-0846.

EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <http://www.regulations.gov> or e-mail. The <http://www.regulations.gov> Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through <http://www.regulations.gov> your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at the Air Planning Section (6PD-L), Environmental Protection Agency, 1445 Ross Avenue, Suite 700, Dallas, Texas 75202-2733. The file will be made available by appointment for public inspection in the Region 6 FOIA Review Room between the hours of 8:30 a.m. and 4:30 p.m. weekdays except for legal holidays. Contact the person listed in the **FOR FURTHER INFORMATION CONTACT** paragraph below or Mr. Bill Deese at 214-665-7253 to make an appointment. If possible, please make the appointment at least two working days in advance of your visit. There will be a 15 cent per page fee for making

photocopies of documents. On the day of the visit, please check in at the EPA Region 6 reception area at 1445 Ross Avenue, Suite 700, Dallas, Texas.

The state submittal is also available for public inspection during official business hours, by appointment, at the New Mexico Environment Department, Air Quality Bureau, 1301 Siler Road, Building B, Santa Fe, New Mexico 87507.

FOR FURTHER INFORMATION CONTACT: Joe Kordzi, Air Planning Section (6PD-L), Environmental Protection Agency, Region 6, 1445 Ross Avenue, Suite 700, Dallas, Texas 75202-2733, telephone (214) 665-7186, fax number (214) 665-7263; e-mail address kordzi.joe@epa.gov.

SUPPLEMENTARY INFORMATION:

Throughout this document wherever "we," "us," or "our" is used, we mean the EPA.

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I. Overview of Proposed Action

We are proposing to disapprove a portion of the SIP revision submitted by the State of New Mexico for the purpose of addressing the "good neighbor" provisions of the CAA section 110(a)(2)(D)(i) with respect to visibility for the 1997 8-hour ozone NAAQS and the PM_{2.5} NAAQS. As a result of the proposed disapproval, we are also proposing a FIP to address the requirements of section 110(a)(2)(D)(i)(II) with respect to visibility to ensure that emissions from New Mexico sources do not interfere with the visibility programs of other states. We are proposing to find that New Mexico sources, other than one, are

sufficiently controlled to eliminate interference with the visibility programs of other states, and for the one remaining source we are proposing to impose specific emissions limits that will eliminate such interstate interference. We are simultaneously evaluating whether the source at issue meets certain other related requirements under the Regional Haze (RH) program. As a result of this evaluation, we are likewise proposing to find that the proposed controls for the source at issue will address the NO_x BART requirements of the RH program. In this action, we are not addressing whether the state has met other requirements of the RH program and will address those requirements in later actions.

Section 110(a)(2)(D)(i)(II) of the Act requires that states have a SIP, or submit a SIP revision, containing provisions “prohibiting any source or other type of emission activity within the state from emitting any air pollutant in amounts which will * * * interfere with measures required to be included in the applicable implementation plan for any other State under part C [of the CAA] to protect visibility.”

Because of the impacts on visibility from the interstate transport of pollutants, we interpret the “good neighbor” provisions of section 110 of the Act described above as requiring states to include in their SIPs measures to prohibit emissions that would interfere with the reasonable progress goals set to protect Class I areas in other states. New Mexico submitted a SIP to address these requirements in September 2007. In this action, we are proposing to disapprove the New Mexico SIP submission as not meeting the requirements of section 110(a)(2)(D)(i)(II) with respect to visibility. The SIP submission made by the state anticipated the timely submission of a substantive RH SIP submission as the means of meeting the requirements of section 110(a)(2)(D)(i)(II). New Mexico has yet to submit such a RH SIP. In addition, the state has not revised its submission to address the requirements of section 110(a)(2)(D)(i)(II) with respect to visibility by any alternative means.

By December 17, 2007, each State with one or more Class I Federal areas was also required to submit a RH SIP that included goals that provide for reasonable progress towards achieving natural visibility conditions. 40 CFR 51.308(d)(1). We previously found that New Mexico had failed to submit a complete RH SIP by December 17, 2007. 74 FR 2392 (January 15, 2009). This finding started a two year clock for the promulgation of a RH FIP by EPA or the

approval of a complete RH SIP from New Mexico. CAA § 110(c)(1).

To address the above concerns, we are also proposing to promulgate a FIP that ensures that emissions from New Mexico sources do not interfere with other states’ measures to protect visibility in accordance with section 110(a)(2)(D)(i)(II) for the 1997 8-hour ozone and 1997 PM_{2.5} NAAQS, and also to address the requirements under the RH program for BART by imposing limits for NO_x for the San Juan Generating Station (SJGS).¹ This FIP will limit the emissions of SO₂ and NO_x from the SJGS. Together, the reduction in NO_x from our proposed NO_x BART determination, and the proposed SO₂ emission limits to establish federal enforceability of current SO₂ levels will serve to ensure there are enforceable mechanisms in place to prohibit New Mexico NO_x and SO₂ emissions from interfering with efforts to protect visibility in other states pursuant to the requirements of section 110(a)(2)(D)(i)(II) of the CAA. NO_x and SO₂ are significant contributors to visibility impairment in and around New Mexico. As the Four Corners Task Force notes,² “[r]eduction of NO_x is particularly important to improve visibility at Mesa Verde National Park, which is 43 km away from SJGS. * * * [V]isibility has degraded at Mesa Verde over the past decade, and the portion of degradation due to nitrate has increased (while there has been no trend in degradation due to sulfate).” For NO_x emissions, we are proposing to require the SJGS to meet an emission limit of 0.05 pounds per million British Thermal Units (lb/MMBtu) at Units 1, 2, 3, and 4, representing an approximately 83% reduction from the SJGS’s baseline NO_x emissions. This NO_x limit is achievable by installing and operating Selective Catalytic Reduction (SCR). For SO₂, we are proposing to require the SJGS to meet an emission limit of 0.15 lb/MMBtu. Both of these emission limits would be measured on the basis of a 30-day rolling average. We are also proposing hourly average emission limits for sulfuric acid (H₂SO₄) and ammonia (NH₃) for the SJGS, to minimize the contribution of these compounds to visibility impairment of Class I areas.

Furthermore, we propose that compliance with the emission limits be

¹ Unless otherwise specified, when we say the “San Juan Generating Station,” or “SJGS,” we mean units 1, 2, 3, and 4, inclusive.

² Power Plants Section, Four Corners Air Quality Task Force, Report of Mitigation Options, November 1, 2007, available at: http://www.nmenv.state.nm.us/aqb/4C/Docs/4CAQTF_Report_FINAL_PowerPlants.pdf.

within three (3) years of the effective date of our final rule. Additionally, we are proposing monitoring, recordkeeping, and reporting requirements to ensure compliance with emission limitations. Please see Section IV (Proposed Action) and the proposed regulation language at the end of this **Federal Register** action for more information.

II. Background

A. SIP and FIP Background

The CAA requires each state to develop a plan that provides for the implementation, maintenance, and enforcement of the NAAQS. CAA section 110(a). We establish NAAQS under section 109 of the CAA. Currently, the NAAQS address six (6) criteria pollutants: Carbon monoxide, nitrogen dioxide, ozone, lead, particulate matter, and sulfur dioxide. The plan developed by a state is referred to as the SIP. The content of the SIP is specified in section 110 of the CAA, other provisions of the CAA, and applicable regulations. A primary purpose of the SIP is to provide the air pollution regulations, control strategies, and other means or techniques developed by the state to ensure that the ambient air within that state meets the NAAQS. However, another important aspect of the SIP is to ensure that emissions from within the state do not have certain prohibited impacts upon the ambient air in other states through the interstate transport of pollutants. CAA section 110(a)(2)(D)(i). States are required to update or revise SIPs under certain circumstances. See CAA section 110(a)(1). One such circumstance is our promulgation of a new or revised NAAQS. *Id.* Each state must submit these revisions to us for approval and incorporation into the federally-enforceable SIP.

If a State fails to make a required SIP submittal or if we find that the State’s submittal is incomplete or unapprovable, then we must promulgate a FIP to fill this regulatory gap. CAA section 110(c)(1). As discussed elsewhere in this notice, we have made findings related to New Mexico SIP revisions needed to address interstate transport and the requirement that emissions from New Mexico sources do not interfere with measures required in the SIP of any other state to protect visibility, pursuant to section 110(a)(2)(D)(i)(II) of the CAA. We are proposing a FIP to address the deficiencies in the New Mexico Interstate Transport SIP.

B. Statutory and Regulatory Framework Addressing Interstate Transport and Visibility

1. The 1997 NAAQS for Ozone and PM_{2.5} and CAA 110(a)(2)(D)(i)

On July 18, 1997, we promulgated new NAAQS for 8-hour ozone and for PM_{2.5}. 62 FR 38652. Section 110(a)(1) of the CAA requires states to submit SIPs to address a new or revised NAAQS within 3 years after promulgation of such standards, or within such shorter period as we may prescribe. Section 110(a)(2) of the CAA lists the elements that such new SIPs must address, as applicable, including section 110(a)(2)(D)(i), which pertains to the interstate transport of certain emissions.

On April 25, 2005, we published a “Finding of Failure to Submit SIPs for Interstate Transport for the 8-hour Ozone and PM_{2.5} NAAQS.” 70 FR 21147. This included a finding that New Mexico and other states had failed to submit SIPs for interstate transport of air pollution affecting visibility, and started a 2-year clock for the promulgation of a FIP by us, unless a State made a submission to meet the requirements of section 110(a)(2)(D)(i) and we approved the submission. *Id.*

On August 15, 2006, we issued our “Guidance for State Implementation Plan (SIP) Submission to Meet Current Outstanding Obligations Under Section 110(a)(2)(D)(i) for the 8-Hour Ozone and PM_{2.5} National Ambient Air Quality Standards” (2006 Guidance). We developed the 2006 Guidance to make recommendations to states for making submissions to meet the requirements of section 110(a)(2)(D)(i) for the 1997 8-hour ozone standards and the 1997 PM_{2.5} standards.

As identified in the 2006 Guidance, the “good neighbor” provisions in section 110(a)(2)(D)(i) of the CAA require each state to submit a SIP that prohibits emissions that adversely affect another state in the ways contemplated in the statute. Section 110(a)(2)(D)(i) contains four distinct requirements related to the impacts of interstate transport. The SIP must prevent sources in the state from emitting pollutants in amounts which will: (1) Contribute significantly to nonattainment of the NAAQS in other states; (2) interfere with maintenance of the NAAQS in other states; (3) interfere with provisions to prevent significant deterioration of air quality in other states; or (4) interfere with efforts to protect visibility in other states.

The 2006 Guidance stated that states may make a simple SIP submission confirming that it was not possible at that time to assess whether there is any

interference with measures in the applicable SIP for another state designed to “protect visibility” for the 8-hour ozone and PM_{2.5} NAAQS until RH SIPs are submitted and approved. RH SIPs were required to be submitted by December 17, 2007. *See* 74 FR 2392 (January 15, 2009); *see also* discussion *infra* section II.B.2.

On September 17, 2007 we received a SIP from New Mexico to address the interstate transport provisions of CAA 110(a)(2)(D)(i) for the 1997 8-hour ozone and PM_{2.5} NAAQS. In this submission, the state indicated that it intended to meet the requirements of section 110(a)(2)(D)(i)(II) with respect to visibility by submission of a timely RH SIP. To date, the state has not made a RH SIP submission. In addition, the state has not made a submission demonstrating noninterference with the visibility programs of other states in accordance with section 110(a)(2)(D)(i)(II) by any other means.

In prior actions, we approved the New Mexico SIP submittal for (1) the “significant contribution to nonattainment” prong of section 110(a)(2)(D)(i) (75 FR 33174, June 11, 2010) and (2) the “interfere with maintenance” and “interfere with measures to prevent significant deterioration” prongs of section 110(a)(2)(D)(i) (75 FR 72688, November 26, 2010). In this action, we are proposing to disapprove the New Mexico Interstate Transport SIP with respect to the requirement that emissions from New Mexico sources do not interfere with measures required in the SIP of any other state to protect visibility. *See* CAA section 110(a)(2)(D)(i)(II). We are proposing to promulgate a FIP in order to cure this defect in the New Mexico Interstate Transport SIP.

2. Visibility Protection

In section 169A of the 1977 Amendments to the 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 areas³ which impairment

results from manmade air pollution.” CAA § 169A(a)(1). The terms “impairment of visibility” and “visibility impairment” are defined in the Act to include a reduction in visual range and atmospheric discoloration. *Id.* section 169A(g)(6). In 1980, we promulgated regulations to address visibility impairment in Class I areas that is “reasonably attributable” to a single source or small group of sources, *i.e.*, “reasonably attributable visibility impairment” (RAVI). 45 FR 80084 (December 2, 1980). These regulations represented the first phase in addressing visibility impairment. We deferred action on RH that emanates from a variety of sources until monitoring, modeling and scientific knowledge about the relationships between pollutants and visibility impairment were improved. *Id.*

Congress added section 169B to the CAA in 1990 to address RH issues, and we promulgated regulations addressing RH in 1999. 64 FR 35714 (July 1, 1999), codified at 40 CFR part 51, subpart P (the regional haze rule or RHR). The RHR revised the existing visibility regulations to integrate provisions addressing RH impairment and established a comprehensive visibility protection program for Class I areas. The requirements for RH, found at 40 CFR 51.308 and 51.309, are included in our visibility protection regulations at 40 CFR 51.300–309. States were required to submit the first SIP addressing RH visibility impairment no later than December 17, 2007. 40 CFR 51.308(b).

On January 15, 2009, we published a “Finding of Failure to Submit State Implementation Plans Required by the 1999 regional haze rule.” 74 FR 2392. We found that New Mexico and other states had failed to submit for our review and approval complete SIPs for improving visibility in the nation’s national parks and wilderness areas by the required date of December 17, 2007. We found that New Mexico failed to submit the plan elements required by 40 CFR 51.309(g), the reasonable progress requirements for areas other than the 16 Class I areas covered by the Grand Canyon Visibility Transport Commission Report. New Mexico also failed to submit the plan element required by 40 CFR 51.309(d)(4), which

³ Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence on August 7, 1977. CAA section 162(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. *See* 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes

in boundaries, such as park expansions. CAA section 162(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to “mandatory Class I Federal areas.” Each mandatory Class I Federal area is the responsibility of a “Federal Land Manager” (FLM). CAA section 302(i). When we use the term “Class I area” in this action, we mean a “mandatory Class I Federal area.”

requires BART for stationary source emissions of NO_x and PM under either 40 CFR 51.308(e)(1) or 51.308(e)(2).⁴ This finding started a 2-year clock for the promulgation of a FIP by EPA, unless the State made a RH SIP submission and we approved it.

3. Best Available Retrofit Technology

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain major stationary sources with the potential to emit greater than 250 tons or more of any pollutant, in order to address visibility impacts from these sources. Specifically, it requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal, including a requirement that certain categories of existing major stationary sources built between 1962 and 1977 procure, install, and operate the "Best Available Retrofit Technology," as determined by the State or us in the case of a plan promulgated under section 110(c) of the CAA. CAA section 169A(b)(2)(A). States are directed to conduct BART determinations for such sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. The RHR required all states to submit implementation plans that, among other measures, contain either emission limits representing BART for certain sources constructed between 1962 and 1977, or alternative measures that provide for greater reasonable progress than BART. 40 CFR 51.308(e). On July 6, 2005, we published the *Guidelines for BART Determinations Under the Regional Haze Rule* ("BART Guidelines") to assist states in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. 70 FR 39104.

The process of establishing BART emission limitations can be logically broken down into three steps: first, states identify those sources which meet the definition of "BART-eligible source" set forth in 40 CFR 51.301⁵; second, states determine whether each source "emits any air pollutant which may reasonably be anticipated to cause or

contribute to any impairment of visibility in any such area" (a source which fits this description is "subject to BART"); and third, for each source subject to BART, states then identify the appropriate type and the level of control for reducing emissions.

States must consider the following factors in making BART determinations: (1) The costs of compliance; (2) the energy and nonair quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. 40 CFR 51.308(e)(1)(ii)(A). Section 51.308(e)(1)(ii)(B) requires that BART determinations for fossil fuel-fired electric generating plants with a total generating capacity in excess of 750 megawatts, must be made according to the BART Guidelines.⁶ A state is encouraged, but not required, to follow the BART Guidelines in making BART determinations for other types of sources.

States must address all visibility-impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are SO₂, NO_x, and PM. We have stated that states should use their best judgment in determining whether volatile organic compounds (VOCs) or ammonia (NH₃) and ammonia compounds impair visibility in Class I areas.

The Regional Planning Organizations (RPOs) provided air quality modeling to the states to help them in determining whether potential BART sources can be reasonably expected to cause or contribute to visibility impairment in a Class I area. Under the BART Guidelines, states may select an exemption threshold value for their BART modeling, below which a BART-eligible source would not be expected to cause or contribute to visibility impairment in any Class I area. 70 FR 39104. The state must document this exemption threshold value in the SIP and must state the basis for its selection of that value. *Id.* Any source with emissions that model above the threshold value would be subject to a BART determination review. *Id.* The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting

the Class I areas at issue and the magnitude of the individual sources' impacts. *Id.* Any exemption threshold set by the state should not be higher than 0.5 deciview. *Id.*

The RHR establishes the deciview (dv) as the principal metric for measuring visibility. *Id.* This visibility metric expresses uniform changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility is sometimes expressed in terms of the visual range which is the greatest distance, in kilometers or miles, at which a dark object can just be distinguished against the sky. The deciview is a more useful measure for tracking progress in improving visibility, because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one deciview.

A RH SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. Once a state has made its BART determination, the BART controls must be installed and in operation as expeditiously as practicable, but no later than five (5) years after the date of our approval of the RH SIP. CAA section 169(g)(4); 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source. *See* CAA section 110(a)(2).

4. The Western Regional Air Partnership and Evaluation of Regional Haze Impacts

The Western Regional Air Partnership (WRAP) is a voluntary partnership of state, tribal, federal, and local air agencies dealing with regional air quality issues in the West. Member states include Alaska, Arizona, California, Colorado, Idaho, Montana, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. The WRAP established various committees to assist in managing and developing RH work products. New Mexico is a WRAP member. The WRAP evaluates air quality impacts, including RH impacts, associated with regionally significant emission sources. In so doing, the WRAP has conducted air quality modeling. The states in the West have

⁴ NM has an option to submit a RH SIP under either section 51.308 or section 51.309. Although they have indicated their preference is for the latter, the NO_x BART FIP we are proposing would apply to either.

⁵ BART-eligible sources are those sources, which have the potential to emit 250 tons or more of a visibility-impairing air pollutant, that were put in place between August 7, 1962 and August 7, 1977, and whose operations fall within one or more of 26 specifically listed source categories.

⁶ Appendix Y to 40 CFR Part 51—Guidelines for BART Determinations Under the Regional Haze Rule.

used this modeling to establish their reasonable progress goals for RH.⁷

The RH program, as reflected in the regulations, recognizes the importance of addressing the long-range transport of pollutants for visibility and encourage states to work together to develop plans to address haze. The regulations explicitly require each State to address its "share" of the emission reductions needed to meet the reasonable progress goals for surrounding Class I areas. States working together through a regional planning process are required to address an agreed upon share of their contribution to visibility impairment in the Class I areas of their neighbors. 40 CFR 51.308(d)(3)(ii). The States in the West worked together through the WRAP to determine their contribution to visibility impairment at the relevant federal Class I areas in the region and the emissions reductions from each State needed to attain the reasonable progress goals for each area. Regional planning organizations (RPOs) such as the WRAP provided much of the technical work necessary to develop RH SIPs, including the modeling used to establish reasonable progress goals. The WRAP evaluated air quality impacts, including RH impacts, associated with regionally significant emission sources. In so doing, the WRAP conducted air quality modeling. The modeling done by the RPOs relied on assumptions regarding emissions over the relevant planning period. Embedded in these assumptions were anticipated emissions reductions from each of the states in the RPO, including reductions from BART and other measures to be adopted as part of the states long-term strategy for addressing RH. The states in the West, in turn, have used this modeling to establish their reasonable progress goals for RH. The reasonable progress goals in the draft and final RH SIPs that have now been prepared by states in the West accordingly are based, in part, on the emissions reductions from nearby states that were agreed on through the WRAP process.

III. Our Evaluation

A. New Mexico's Interstate Transport SIP

We received a SIP from New Mexico to address the interstate transport provisions of CAA 110(a)(2)(D)(i) for the 1997 8-hour ozone and PM_{2.5} NAAQS on September 17, 2007. Concerning the provision preventing sources in the state from emitting pollutants in amounts which will interfere with efforts to

protect visibility in other states, New Mexico stated that:

- New Mexico sources of emissions do not interfere with implementation of reasonably attributable visibility impairment;
- Its December 2003 RH SIP demonstrated reasonable progress in reducing impacts on Class I areas on the Colorado Plateau;⁸ and
- The 2007 SIP update for RH will analyze any impacts from New Mexico that extend beyond the Colorado Plateau and determine appropriate long-term strategies for control measures. As mentioned previously, New Mexico has yet to provide this SIP revision.

New Mexico's submission addressed the requirement that it not interfere with the visibility programs of other states by stating that it would submit an approvable RH SIP by December 2007. The state did not otherwise establish that emissions from its sources would not interfere with the visibility programs of other states. After intervening events precluded the development of an approvable RH SIP, the state did not make any subsequent SIP submission to address the requirements of section 110(a)(2)(D)(i)(II) with respect to impacts on the visibility programs of other states. Consequently, because the State did not submit a RH SIP or an alternative means of demonstrating that emissions from its sources would not interfere with the visibility programs of other States, we are proposing disapproval of the SIP received September 17, 2007, with respect to 110(a)(2)(D)(i)(II) and visibility protection. Further, as described in subsequent sections, we are proposing that additional controls are necessary to prevent emissions from New Mexico from interfering with measures to protect visibility in other States.

B. Federal Implementation Plan To Address Interstate Transport and Visibility and the BART Requirements for NO_x

As an initial matter, we note that section 110(a)(2)(D)(i)(II) does not explicitly specify how we should

⁸ In December, 2003, New Mexico submitted its RH SIP pursuant to the requirements of sections 169A and 169B of the CAA and the regional haze rule. However, in *American Corn Growers Ass'n v. EPA*, 291 F.3d 1 (DC Cir. 2002), the U.S. Court of Appeals for the District of Columbia Circuit issued a ruling vacating and remanding the BART provisions of the regional haze rule. In 2006, EPA issued BART guidelines to address the court's ruling in that case. See 70 FR 39104 (July 6, 2005). On January 13, 2009, New Mexico resubmitted portions of its RH SIP, but not the requirements addressing reasonable progress pursuant to 40 CFR 51.309(g).

ascertain whether a state's SIP contains adequate provisions to prevent emissions from sources in that state from interfering with measures required in another state to protect visibility. Thus, the statute is ambiguous on its face, and we must interpret that provision.

Our 2006 Guidance recommended that a state could meet the visibility prong of the transport requirements of section 110(a)(2)(D)(i)(II) of the CAA by submission of the RH SIP, due in December 2007. Our reasoning was that the development of the RH SIPs was intended to occur in a collaborative environment among the states. In fact, in developing their respective reasonable progress goals, WRAP states consulted with each other through the WRAP's work groups.⁹ As a result of this process, the common understanding was that each State would take action to achieve the emissions reductions relied upon by other states in their reasonable progress demonstrations under the RHR. This effort included all states in the WRAP region contributing information to a Technical Support System (TSS) which provides an analysis of the causes of haze, and the levels of contribution from all sources within each state to the visibility degradation of each Class I area. The WRAP states consulted in the development of reasonable progress goals, using the products of this technical consultation process to co-develop their reasonable progress goals for the Western Class I areas.

We believe that the analysis conducted by the WRAP provides an appropriate means for designing a FIP that will ensure that emissions from sources in New Mexico are not interfering with the visibility programs of other states, as contemplated in section 110(a)(2)(D)(i)(II). In developing their visibility projections using photochemical grid modeling, the WRAP states assumed a certain level of emissions from sources within New Mexico. Although we have not yet received all RH SIPs, we understand that the WRAP states used the visibility projection modeling to establish their own respective reasonable progress goals. Thus, we believe that an implementation plan that provides for emissions reductions consistent with the assumptions used in the WRAP modeling will ensure that emissions from New Mexico sources do not

⁹ Consultation provided through the WRAP have been documented in calls and meetings on the WRAP Web site, available at <http://www.wrapair.org/cal/calendar.php>.

⁷ More information on WRAP and their work can be found on the Internet at <http://www.wrapair2.org> and in the TSD for this action.

interfere with the measures designed to protect visibility in other states.

Accordingly, we have reviewed the WRAP photochemical modeling emission projections used in the demonstration of reasonable progress towards natural visibility conditions and compared them to current emission levels from sources in New Mexico. We have concluded that all of the sources in New Mexico are achieving the emission levels assumed by the WRAP in its modeling except for the SJGS. The WRAP modeling assumed the SJGS's NO_x emissions would be 0.27 lbs/MMBtu for units 1 and 3, and 0.28 lbs/MMBtu for units 2 and 4, in 2018. The WRAP modeling also assumed SO₂ emissions would be 0.15 lbs/MMBtu in 2018 for the four SJGS units.

The SJGS consists of four (4) coal-fired generating units and associated support facilities. Each coal-fired unit burns pulverized coal and No. 2 diesel oil (for startup) in a boiler, and produces high-pressure steam which powers a steam turbine coupled with an electric generator. Electric power produced by the units is supplied to the electric power grid for sale. Coal for the units is supplied by the adjacent San Juan Mine and is delivered to the facility by conveyor. Units 1 and 2 have a unit capacity of 350 and 360 MW, respectively. Units 3 and 4 each have a unit capacity of 544 MW.

In 2005, the operator of the SJGS, Public Service Company of New Mexico (PNM), entered into a consent decree with the Grand Canyon Trust, Sierra Club, and the New Mexico Environment Department (NMED) to reduce emissions of NO_x, SO₂, particulate matter and mercury.¹⁰ The consent decree imposed emissions restrictions, including the following:

- NO_x: 0.30 lb/mmBtu on a 30-day rolling average.
- SO₂: 90% annual average control, not to exceed 0.250 lb/mmBtu for a seven-day block average.

In a permit modification to the construction permit for SJGS, NMED issued a revised construction permit (NSR Air Quality Permit No. 0063-M6) on April 22, 2008 to incorporate some of the conditions from the consent decree. The construction permit was issued by the Air Quality Bureau of the NMED to SJGS pursuant to the New Mexico Air Quality Control Act and regulations and is considered a federally

enforceable permit. We were not a party to the consent decree, but the inclusion of limits from the consent decree that have been included in the construction permit for the facility were issued pursuant to the federally approved construction permitting program of the New Mexico SIP. Specifically, the construction permit includes the NO_x and SO₂ limits from the consent decree that are identified above.¹¹ Therefore, these NO_x and SO₂ emissions restrictions are federally enforceable. This permit has since been superseded by a further construction permit modification that also includes the consent decree limits on NO_x and SO₂ emissions and is federally enforceable.¹²

Although the SJGS is subject to a federally enforceable permit, the permit's 30-day rolling average NO_x emission limit of 0.30 lb/mmBtu for all units is less restrictive than the emission rates modeled by the WRAP of 0.27 lbs/MMBtu for units 1 and 3, and 0.28 lbs/MMBtu for units 2 and 4 in assessing the daily visibility impacts. We also note the WRAP photochemical modeling utilized an SO₂ emission rate of 0.15 lbs/MMBtu on a continuous basis for all four units. In previous communications to New Mexico and the WRAP, PNM indicated that the 90% annual average control specified in the permit would be expected to yield roughly an annual average emission rate of 0.195 lb/mmBtu of SO₂,¹³ which is much higher than the 0.15 lb/mmBtu emission rate utilized in the WRAP's photochemical modeling for assessing daily level impacts. Also, the 90% SO₂ control restriction specified in the permit is an annual average, which allows for short term fluctuations. It also is not directly translatable to an emission limit (e.g., lbs/MMBtu), and requires knowledge of the sulfur content of the coal being burned. Therefore, this limit can further fluctuate depending upon the annual average sulfur content of the coal. This presents an unnecessary enforcement complication. The permit also specifies a 0.250 lb/mmBtu on a 7-day block average for each unit, which is much less restrictive

¹¹ NO_x limit of 0.30 lb/mmBtu on a 30-day rolling average for each of the four units; SO₂ limit of 90% annual average control for each unit, with a short-term limit not to exceed 0.250 lb/mmBtu for a seven-day block average.

¹² New Mexico Environment Department Air Quality Bureau NSR Air Quality Permit No. 0063-M6R1 was issued on September 12, 2008 and superseded Permit No. 0063-M6.

¹³ Comments Received to-Date on the Draft 2018 Base Case Projections, Version: December 21, 2005, available at http://www.wrapair.org/forums/ssjf/documents/eiccts/Projections/Summary%20of%20Comments_122105_final.pdf, pdf pagination 20.

than the 0.15 lb/mmBtu emission rate that was used within the WRAP's photochemical modeling.

Therefore, the permit does not provide the necessary emission limits and enforceable mechanisms to ensure the NO_x and SO₂ emissions used in the WRAP photochemical modeling for the SJGS units will be met. In the absence of an approvable RH SIP, we do not have an enforceable mechanism for ensuring that sources in New Mexico do not impact visibility in other states. Other WRAP states are relying on levels modeled for the SJGS units, developed in consultation, in their demonstration of reasonable progress towards natural visibility conditions. Therefore, any discrepancies between what was included in the WRAP photochemical modeling and what is presently enforceable, is a concern. We have evaluated these discrepancies and determined they are significant due to the changes in visibility projections in the modeling. We have concluded that it is appropriate to establish federally enforceable limits for pollutants that impact visibility projections within the WRAP photochemical modeling.

As discussed in II.A, we are proposing to disapprove New Mexico Interstate Transport SIP provisions that address the requirement of section 110(a)(2)(D)(i)(II) that emissions from New Mexico sources do not interfere with measures required in the SIP of any other state under part C of the CAA to protect visibility. In addition, since New Mexico has not submitted a complete RH SIP that should have, among other things, included a review of BART for NO_x at the SJGS, and for both of these requirements we have made a finding of failure to submit,¹⁴ giving us the authority and responsibility to issue a FIP to address the deficiencies in the State's plan, we are also proposing to find that New Mexico sources, except the SJGS, are sufficiently controlled to eliminate interference with the visibility programs of other states. For the SJGS we are proposing to impose specific emissions limits that will eliminate such interstate interference based on current emissions that satisfies the assumptions in the WRAP modeling.

The following sections outline our proposal for addressing the BART requirements for NO_x at SJGS and for ensuring that the SJGS has the controls necessary to prevent emissions from

¹⁴ See Finding of Failure to Submit SIPs for Interstate Transport for the 8-hour Ozone and PM_{2.5} NAAQS, 70 FR 21147 (April 25, 2005); see also Finding of Failure To Submit State Implementation Plans Required by the 1999 Regional Haze Rule, 74 FR 2392 (January 15, 2009).

¹⁰ Consent Decree in *The Grand Canyon Trust and Sierra Club, Plaintiffs, The State of New Mexico, Plaintiff-Intervenor, v. Public Service Company of New Mexico, Defendant*, (CV 02-552 BB/ACT (ACE)), lodged in the United States District Court, District of New Mexico, on March 10, 2005, at 15-16.

New Mexico from interfering with the reasonable progress goals in other states.

1. Additional SO₂ Emission Limits for the SJGS

As we discuss above, there are no federally enforceable limits that restrict the SJGS's SO₂ emissions at 0.15 lbs/MMBtu, the rate assumed by the WRAP in its modeling. Therefore, as part of this action, we are proposing to impose an SO₂ emission rate of 0.15 lbs/MMBtu on a 30 day rolling average for units 1, 2, 3, and 4 of the SJGS. By imposing this limit through this action, we will insure that SO₂ emissions from this source are not interfering with the visibility programs of other states. We note an examination of the SJGS's actual emission rates based on emissions reported by our Clean Air Markets Division¹⁵ indicates units 1, 2, 3, and 4 of the SJGS are already meeting these SO₂ emission limits.

We are not making a finding that this SO₂ emission limit satisfies BART for SO₂. NMED has indicated they will submit a RH SIP under 40 CFR 51.309, thus SO₂ BART for the SJGS will be addressed through New Mexico's participation in an SO₂ trading program, under 40 CFR 51.309(d)(4). Should NMED instead submit a RH SIP under 40 CFR 51.308, the SJGS would be subject to an SO₂ BART analysis under 40 CFR 51.308(e).

2. Need for Additional NO_x Controls

As we discuss above, the WRAP assumed in its modeling that the SJGS would achieve NO_x emission rates of 0.27 lbs/MMBtu for units 1 and 3, and 0.28 lbs/MMBtu for units 2 and 4 in its evaluation of daily impacts in photochemical modeling. Based on our approach of relying on the assumptions in the WRAP modeling, additional control would, therefore, be necessary to ensure that emissions from New Mexico sources do not interfere with efforts to protect visibility in other states pursuant to the requirements of section 110(a)(2)(D)(i)(II) of the CAA.

Unlike the case for SO₂, the SJGS will have to install controls and therefore make capital investments to achieve these additional NO_x reductions. As we note above, on January 15, 2009, we published a "Finding of Failure to Submit State Implementation Plans Required by the 1999 regional haze rule." 74 FR 2392. This finding included the plan element required by 40 CFR 51.309(d)(4), which requires BART for stationary source emissions of NO_x and PM under either 40 CFR 51.308(e)(1) or

51.308(e)(2). Therefore, rather than making an initial determination to require the controls needed to prevent interference with the visibility programs of other states based on the assumptions in the WRAP photochemical modeling to meet section 110(a)(2)(D)(i)(II) requirements, followed soon thereafter by a separate NO_x BART evaluation, we find it is appropriate to perform that BART evaluation at this time. Addressing both outstanding obligations at this time will be more efficient and will provide greater certainty to the source as to the appropriate NO_x controls needed to meet these two separate but related requirements. Our evaluation of BART for NO_x follows.

3. NO_x BART Evaluation

In June, 2007, PNM submitted its BART evaluation to NMED. That evaluation was revised multiple times to incorporate additional visibility modeling analyses, control technology considerations, and cost analyses. Although not officially submitted to us, NMED completed a NO_x and PM BART determination for the SJGS (referred to herein as the "NMED BART evaluation"), which we have found to be thorough and comprehensive.¹⁶ In making our NO_x BART determination for the SJGS, we drew heavily upon the NO_x BART portion of that document, and used it to help inform our NO_x BART determination for the SJGS. We have incorporated it into our Technical Support Document (TSD) found in the electronic docket for this action. The electronic docket can be found at the Web site <http://www.regulations.gov> (docket number EPA-R06-OAR-2010-0846).

We have determined, as outlined below, that the SJGS is subject to BART and are proposing to require that units 1, 2, 3, and 4 meet an emission limit for NO_x of 0.05 lbs/MMBtu. This limit is based on the installation of SCR on each of the units. The following steps outline how we came to this determination. For more detail, please see the TSD. Any BART determinations for other pollutants that may be warranted under the RHR will be addressed in future rulemakings.

a. The SJGS Is a BART-Eligible Source

The first step of a BART evaluation is to determine whether a source meets the definition of a "BART-eligible source" in

40 CFR 51.301. BART-eligible sources are those sources which have the potential to emit 250 tons or more of a visibility-impairing air pollutant, were put in place between August 7, 1962 and August 7, 1977, and whose operations fall within one or more of 26 specifically listed source categories. We find, based on emissions reported by our Clean Air Markets Division,¹⁷ that units 1, 2, 3, and 4 of the SJGS each have historically emitted much more than 250 tons of NO_x. Also, according to the NMED SJGS Title V Statement of Basis, units 1, 2, 3, and 4 of the SJGS meet the requirement of being "in existence" on August 7, 1977 but not "in operation" before August 7, 1962. Lastly, we find that units 1, 2, 3, and 4 of the SJGS fall under category 1 of the 26 listed BART categories, which is fossil-fuel fired steam electric plants of more than 250 million British thermal units (BTU) per hour heat input. Therefore, we propose to find that units 1, 2, 3, and 4 of the SJGS are BART-eligible.

b. The SJGS Is Subject to BART

Section III of the BART Guidelines outlines several approaches for identifying sources that are subject to BART. This entails making a determination of whether the units of the SJGS cause or contribute to visibility impairment in nearby Class I areas. Among the options we recommended was the use of dispersion modeling for assessing the impacts of a single source. As we note in the BART Guidelines, one of the first steps in this approach to determining whether a source causes or contributes to visibility impairment is to establish a threshold (measured in deciviews). A single source that is responsible for a 1.0 deciview change or more should be considered to "cause" visibility impairment; a source that causes less than a 1.0 deciview change may still contribute to visibility impairment and thus be subject to BART. We note in the BART Guidelines that states (and by extension EPA when promulgating a FIP) have flexibility in determining an appropriate threshold for determining whether a source "contributes to any visibility impairment" for the purposes of BART. However, this threshold should not be higher than 0.5 deciviews.¹⁸ In the case of the SJGS, this establishment of a precise threshold for contribution is moot, since visibility modeling indicates that even using the upper bound contribution threshold of 0.5 deciviews, the SJGS contributes to

¹⁶ New Mexico Environment Department, Air Quality Bureau, BART Determination, Public Service Company of New Mexico, San Juan Generating Station, Units 1-4, June 21, 2010, available at http://www.nmenv.state.nm.us/aqb/reg/haz/documents/AppxA_NM_SJGS_NOxBART_Determination_06212010.pdf.

¹⁷ <http://camddataandmaps.epa.gov/gdm/index.cfm>.

¹⁸ 40 FR 39161 (July 6, 2005).

¹⁵ <http://camddataandmaps.epa.gov/gdm/index.cfm>.

visibility impairment at a number of Class I areas.

The WRAP performed the initial BART screening modeling for the state of New Mexico. The procedures used are outlined in the WRAP Regional Modeling Center (RMC) BART Modeling Protocol.¹⁹ The WRAP screening modeling evaluated sources that were identified as BART-eligible and determined the only sources that did not screen out were the SJGS units. The results of this analysis indicated that SJGS, on a facility-wide basis, causes visibility impairment at all 16 Class I areas within 300 km of the facility. However, this modeling was based on the installed control technology at the time and does not reflect emission reductions due to the installation of consent decree controls. Revised modeling performed by NMED and by us, including controls required by the consent decree and currently installed, further confirmed that SJGS still “causes” visibility impairment at more than half of the Class I areas in the vicinity of the facility and contributes (above 0.5 deciviews) to visibility impairment at the remaining areas on a facility-wide basis. On an individual unit basis, all units “cause” visibility impairment at Mesa Verde National Park, and cause or contribute to visibility impairment at a number of other Class I areas. Our modeling indicates that the visibility impairment is primarily dominated by nitrate particulates. Therefore, as the WRAP screening modeling has previously concluded and further New Mexico and our modeling confirms that even with post-consent decree control levels on SJGS units, the SJGS units 1, 2, 3, and 4 still have a significant impact at surrounding Class I areas. Consequently, we propose to find that units 1, 2, 3, and 4 of the SJGS are subject to BART. More details on this determination can be found in the TSD.

c. The SJGS NO_x BART Determination

Having established that units 1, 2, 3, and 4 of the SJGS are subject to BART, the next requirement is to perform the BART Analysis. 40 CFR 51.308(e)(1)(ii); *see also* BART Guidelines, Section IV.

¹⁹“CALMET/CALPUFF Protocol for BART Exemption Screening Analysis for Class I Areas in the Western United States”, Western Regional Air Partnership (WRAP); Gail Tonnesen, Zion Wang; Ralph Morris, Abby Hoats and Yiqin Jia, August 15, 2006, available at http://pah.cert.ucr.edu/aqm/308/bart/WRAP_RMC_BART_Protocol_Aug15_2006.pdf.

The BART analysis identifies the best system of continuous emission reduction and, as laid out in the BART Guidelines, consists of the following five basic steps:

- Step 1: Identify All Available Retrofit Control Technologies;
- Step 2: Eliminate Technically Infeasible Options;
- Step 3: Evaluate Control Effectiveness of Remaining Control Technologies;
- Step 4: Evaluate Impacts and Document the Results; and
- Step 5: Evaluate Visibility Impacts.

As we stated above, for our BART analysis we have heavily drawn upon the NMED BART Evaluation. Except for the following points, we agree with NMED’s conclusions regarding Steps 1–5:

- PNM’s cost estimate. NMED questioned PNM’s cost estimate for the installation of SCR but accepted it as being cost effective. We too questioned PNM’s cost estimate for SCR, and hired a consultant to undertake an accurate assessment of the cost of SCR and the emission limits that SCR is capable of attaining. (For more information, please see the TSD).
- BART for NO_x. NMED evaluated the visibility benefits of SCR at the SJGS based on an emission limit of 0.07 lbs/MMBtu, but noted the potential for greater control at rates as low as 0.03 lbs/MMBtu. As discussed further below, we have concluded that a NO_x emission limit of 0.05 lbs/MMBtu is BART for the SJGS, and performed our visibility modeling on that basis. (Additional information is provided in the TSD).
- SO₂ to SO₃ Conversion. NMED concluded BART for the SJGS was SCR plus sorbent injection to remove sulfur trioxide (SO₃) in the flue gas by reaction with an alkaline material. As discussed further below, we have concluded that sorbent injection is not necessary, as the SJGS burns a low sulfur coal, and catalysts are available with a low SO₂ to SO₃ conversion rate. (Please see the TSD for further information).

The following is a summary of our BART analysis. In general, our analysis is the same as NMED’s analysis of Steps 1–5, as modified to incorporate the areas discussed above in which we differ with NMED.

i. Identification of All Available Retrofit Emission Control Technologies

To address step 1, NMED reviewed a number of potential retrofitable NO_x

control technologies, including: Selective Non Catalytic Reduction (SNCR), SCR, SNCR/SCR Hybrid, Natural Gas Reburn, Nalco Mobotec ROFA and Rotamix, NOxStar, ECOTUBE, PowerSpan ECO, Phenix Clean Combustion, and e-SCRUB. We drew upon PNM’s June, 2007 BART submission to NMED and its subsequent revisions in our evaluation, and agree that the potential technologies for NO_x controls that have been identified.

ii. Elimination of Technically Infeasible Options

For step 2, again drawing upon the NMED analysis, we have determined the following potentially retrofitable NO_x control technologies are not technically feasible, or have not been thoroughly demonstrated on similar size and type units: Natural Gas Reburn, NOxStar, ECOTUBE, PowerSpan ECO, Phenix Clean Combustion, and e-SCRUB. In determining BART, we have considered the remaining technologies, SCR, SNCR, SNCR/SCR Hybrid, and the Nalco Mobotec ROFA and Rotamix to be technically feasible.

iii. Evaluation of Control Effectiveness of Remaining Control Technologies

Step 3 involves evaluating the control effectiveness of all the technically feasible control alternatives identified in Step 2. Two key issues in this process include: (1) Ensuring the degree of control is expressed using a metric that ensures a level comparison of emissions performance levels among options; and (2) giving appropriate treatment and consideration of control techniques that can operate over a wide range of emission performance levels. With the exception of SCR, Table 1 represents the control efficiencies and control emission rates PNM reported as part of its BART analyses²⁰ to NMED for the NO_x controls that were found to be technically feasible. In our own SCR cost analysis, which we present later in this section, we have revised the control efficiency for SCR from 0.07 lbs/MMBtu to 0.05 lbs/MMBtu.

²⁰Public Service Company of New Mexico, San Juan Generating Station, Best Available Retrofit Technology Analysis, June 6, 2007.

PNM San Juan Generating Station, BART Analysis of SNCR, May 30, 2008.

PNM San Juan Generating Station, BART Analysis of Nalco Mobotec NO_x Control Technologies, August 29, 2008.

TABLE 1—PROJECTED NO_x CONTROL EFFECTIVENESS FOR UNITS 1–4

| Control technology | Control efficiency (%) | Controlled emission rate (lb/MMBtu) |
|-----------------------|------------------------|-------------------------------------|
| ROFA | 13–15 | 0.26 |
| Rotamix (SNCR) | 23–25 | 0.23 |
| ROFA/Rotamix | 33–35 | 0.20 |
| SCR/SNCR Hybrid | 40–41 | 0.18 |
| SCR | 77 | 0.07 |

iv. Evaluation of Impacts and Documentation of Results

Under step 4 of the BART determination process, we conducted the following analysis of the possible impacts due to the installation of the technically feasible NO_x control options:

- Costs of Compliance.
- Energy Impacts.
- Non-Air Quality Environmental Impacts.
- Remaining Useful Life.

When performing BART analyses on each of the technically feasible NO_x control options, PNM considered the energy impacts, non-air quality

environmental impacts, and the remaining useful life. PNM accounted for the additional cost of certain energy impacts in the cost impacts analysis. It did not note any other energy impacts as being significant. With regard to non-air quality environmental impacts, PNM did not identify any significant or unusual environmental impacts associated with the control alternatives that had the potential to affect the selection or elimination of that control alternative. For SCR and SCR/SNCR Hybrid technologies, the non-air quality environmental impacts included the consideration of water usage and waste

generated from each control technology. Lastly, the remaining useful life was defined by PNM as 20 years. Therefore, no additional cost adjustments for a short remaining useful boiler life were claimed by PNM.

PNM calculated the costs of each of the technically feasible NO_x control options²¹. This information was assessed by NMED in its BART analysis. We checked that information and present it below in Tables 2–5 (with a few minor corrections). It summarizes our evaluation of the impacts of the BART analyses, including updated cost data for the SCR option:

TABLE 2—IMPACT ANALYSIS AND COST EFFECTIVENESS OF NO_x CONTROL TECHNOLOGIES FOR UNIT 1

| Control technology | Emission limit (lbs/MMBtu) | NO _x emissions (tpy) | NO _x reduction (tpy) | Total capital investment (TCI) (1,000\$) | Total annualized cost (TAC) (1,000\$) | Cost effectiveness (\$/ton) | Incremental cost effectiveness (\$/ton) | Energy impacts (1,000\$) | Non-air impacts (1,000\$) |
|----------------------|----------------------------|---------------------------------|---------------------------------|--|---------------------------------------|-----------------------------|---|--------------------------|---------------------------|
| SCR + sorbent | 0.07 | 966 | 3,174 | 164,732 | 21,998 | 6,931 | 3,815 | 1,569 | ¹ NA |
| SNCR/SCR Hybrid .. | 0.18 | 2,484 | 1,656 | 104,436 | 16,207 | 9,787 | 34,221 | 706 | 1,762 |
| ROFA/Rotamix | 0.20 | 2,760 | 1,380 | 29 | 6,762 | 4,900 | 7,766 | 1,413 | 3 |
| Rotamix (SNCR) | 0.23 | 3,174 | 966 | 11,306 | 3,547 | 3,672 | 222 | 51 | 4 |
| ROFA | 0.26 | 3,588 | 552 | 18,293 | 3,455 | 6,259 | -2,896 | 1,363 | ¹ NA |
| Consent Decree | 0.30 | 4,140 | 1,254 | 14,580 | 1,422 | 1,134 | NA | ¹ NA | ¹ NA |

TABLE 3—IMPACT ANALYSIS AND COST EFFECTIVENESS OF NO_x CONTROL TECHNOLOGIES FOR UNIT 2

| Control technology | Emission limit (lbs/MMBtu) | NO _x emissions (tpy) | NO _x reduction (tpy) | Total capital investment (TCI) (1,000\$) | Total annualized cost (TAC) (1,000\$) | Cost effectiveness (\$/ton) | Incremental cost effectiveness (\$/ton) | Energy impacts (1,000\$) | Non-air impacts (1,000\$) |
|----------------------|----------------------------|---------------------------------|---------------------------------|--|---------------------------------------|-----------------------------|---|--------------------------|---------------------------|
| SCR + sorbent | 0.07 | 961 | 3,158 | 177,178 | 23,364 | 7,399 | 4,432 | 1,565 | ¹ NA |
| SNCR/SCR Hybrid .. | 0.18 | 2,471 | 1,648 | 108,628 | 16,670 | 10,118 | 36,082 | 346 | 1,762 |
| ROFA/Rotamix | 0.20 | 2,746 | 1,373 | 29,350 | 6,762 | 4,925 | 7,805 | 1,413 | 3 |
| Rotamix (SNCR) | 0.23 | 3,158 | 961 | 11,306 | 3,547 | 3,691 | 223 | 51 | 4 |
| ROFA | 0.26 | 3,570 | 549 | 18,293 | 3,455 | 6,291 | -1,375 | 1,363 | ¹ NA |
| Consent Decree | 0.30 | 4,119 | 2,060 | 14,126 | 1,378 | 669 | NA | ¹ NA | ¹ NA |

TABLE 4—IMPACT ANALYSIS AND COST EFFECTIVENESS OF NO_x CONTROL TECHNOLOGIES FOR UNIT 3

| Control technology | Emission limit (lbs/MMBtu) | NO _x emissions (tpy) | NO ₃ reduction (tpy) | Total capital investment (TCI) (1,000\$) | Total annualized cost (TAC) (1,000\$) | Cost effectiveness (\$/ton) | Incremental cost effectiveness (\$/ton) | Energy impacts (1,000\$) | Non-air impacts (1,000\$) |
|---------------------|----------------------------|---------------------------------|---------------------------------|--|---------------------------------------|-----------------------------|---|--------------------------|---------------------------|
| SCR + sorbent | 0.07 | 1,501 | 4,930 | 227,774 | 30,527 | 6,192 | 2,087 | 2,267 | ¹ NA |

²¹ Tables 2–5 were constructed to incorporate costs due to sorbent injection, as a means of SO₃ control in conjunction with SCR. This was done by

PNM in response to a request by NMED. As NMED notes in its BART analysis, it understands there are SCR catalysts now on the market that are capable

of a much smaller SO₂ to SO₃ conversion. In our own analysis, we have concurred with this finding and hence do not consider sorbent injection.

TABLE 4—IMPACT ANALYSIS AND COST EFFECTIVENESS OF NO_x CONTROL TECHNOLOGIES FOR UNIT 3—Continued

| Control technology | Emission limit (lbs/MMBtu) | NO _x emissions (tpy) | NO ₃ reduction (tpy) | Total capital investment (TCI) (1,000\$) | Total annualized cost (TAC) (1,000\$) | Cost effectiveness (\$/ton) | Incremental cost effectiveness (\$/ton) | Energy impacts (1,000\$) | Non-air impacts (1,000\$) |
|----------------------|-------------------------------|------------------------------------|------------------------------------|--|---|--------------------------------|--|-----------------------------|------------------------------|
| SNCR/SCR Hybrid .. | 0.18 | 3,859 | 2,572 | 168,507 | 25,606 | 9,954 | 37,221 | 507 | 2,658 |
| ROFA/Rotamix | 0.20 | 4,287 | 2,144 | 34,070 | 9,648 | 4,501 | 7,338 | 2,810 | 5 |
| Rotamix (SNCR) | 0.23 | 4,930 | 1,501 | 13,316 | 4,929 | 3,285 | −303 | 84 | 5 |
| ROFA | 0.26 | 5,574 | 857 | 20,983 | 5,124 | 5,976 | −2,264 | 2,725 | ¹ NA |
| Consent Decree | 0.30 | 6,431 | 2,573 | 12,715 | 1,240 | 482 | NA | ¹ NA | ¹ NA |

TABLE 5—IMPACT ANALYSIS AND COST EFFECTIVENESS OF NO_x CONTROL TECHNOLOGIES FOR UNIT 4

| Control technology | Emission limit (lbs/MMBtu) | NO _x emissions (tpy) | NO _x reduction (tpy) | Total capital investment (TCI) (1,000\$) | Total annualized cost (TAC) (1,000\$) | Cost effectiveness (\$/ton) | Incremental cost effectiveness (\$/ton) | Energy impacts (1,000\$) | Non-air impacts (1,000\$) |
|----------------------|-------------------------------|------------------------------------|------------------------------------|--|---|--------------------------------|--|-----------------------------|------------------------------|
| SCR + sorbent | 0.07 | 1,472 | 4,837 | 211,764 | 28,760 | 5,946 | 1,691 | 2,288 | ¹ NA |
| SNCR/SCR Hybrid .. | 0.18 | 3,785 | 2,524 | 161,572 | 24,849 | 9,847 | 36,141 | 507 | 2,658 |
| ROFA/Rotamix | 0.20 | 4,206 | 2,103 | 34,070 | 9,648 | 4,588 | 7,480 | 2,810 | 5 |
| Rotamix (SNCR) | 0.23 | 4,837 | 1,472 | 13,316 | 4,929 | 3,348 | −309 | 84 | 5 |
| ROFA | 0.26 | 5,468 | 841 | 20,983 | 5,124 | 6,091 | −2,299 | 2,275 | ¹ NA |
| Consent Decree | 0.30 | 6,309 | 2,524 | 12,870 | 1,256 | 498 | NA | ¹ NA | ¹ NA |

¹ PNM performed an impact analysis for these technologies and incorporated any monetized energy or non-air environmental impacts into the cost analysis

We find that the energy impacts, non-air quality environmental impacts, and the remaining useful life do not present sufficient reason to disqualify any of the technically feasible NO_x control technologies.

v. Evaluation of Visibility Impacts and Cost Analysis

Under step 5 of the BART Guidelines, we evaluate the visibility improvement for each feasible control technology. NMED modeled²² the visibility benefits of each of the NO_x control technologies listed in Tables 2–5, above, on 16 Class I areas. NMED used the CALPUFF modeling system, which consists of a meteorological data pre-processor (CALMET), an air dispersion model (CALPUFF), and post-processor programs (POSTUTIL, CALSUM, CALPOST). The CALPUFF modeling system is the recommended model for conducting BART visibility analysis. First, the model was run using the pre-BART, consent decree conditions to establish a baseline. The model was then run for each of the control technologies identified for each unit during the BART engineering analysis. These visibility impacts were then compared to the baseline to evaluate the visibility benefit of each control. NMED

modeled the visibility impacts of each of the control scenarios individually for each of the SJGS units, as well as calculated visibility impacts on a facility-wide basis. The NMED modeling used the original IMPROVE equation within CALPOST to estimate visibility impairment from the modeled pollutant concentrations. Table 6, below, summarizes the results of the latter exercise, for the maximum impacts of the 98th percentile delta-dv impacts from 2001–2003.

All of the WRAP and NMED refined modeling was conducted with the version of the CALPUFF system recommended by the WRAP BART modeling protocol²³ and followed the WRAP protocol for source-specific applications. As we note in the TSD, NMED and the WRAP utilized CALMET version 6.211 to create the necessary meteorological database for input into the CALPUFF model. Some technical concerns have been identified with this non-regulatory version of the model. The concerns are discussed in the technical support document. Our regulatory version of the model is CALMET 5.8, which we used in our modeling. Two pollutants must be given special consideration when estimating the impact of various control

technologies on visibility improvement: Background ammonia (NH₃) and sulfuric acid (H₂SO₄) emissions. NMED utilized a variable monthly background NH₃ concentration rather than using the default recommended value. As discussed later, we utilized both approaches for background NH₃ in our modeling so as to be able to compare the results. For estimating H₂SO₄ emissions, NMED estimated the fraction of particulate matter (PM) emissions that are classified as inorganic condensable PM and assumed that 100% of this fraction is H₂SO₄. Additional H₂SO₄ due to SCR operation was calculated assuming 1% conversion of SO₂ to SO₃. As noted in the TSD and briefly described below, our approach to these two factors differed from the NMED approach. The results provided by NMED, and included in Table 6 below, demonstrate that SCR is by far the most advantageous approach to NO_x control. The differences in our and New Mexico's approaches should not change the relative advantage that SCR has over other control methods in improving visibility since these concerns are present in all the NMED modeling and would have similar impacts on the modeling results.

²² NMED performed some modeling as well as reviewed modeling protocols and results supplied by PNM and prepared by the contractor Black & Veatch found in: Public Service Company of New Mexico BART Technology Analysis for the San Juan Generating Station (June 6, 2007 and submittal

updates). When we say “NMED modeling” or “NMED modeled” we are referring to the modeling performed or reviewed by NMED.

²³ “CALMET/CALPUFF Protocol for BART Exemption Screening Analysis for Class I Areas in

the Western United States”, Western Regional Air Partnership (WRAP); Gail Tonnesen, Zion Wang; Ralph Morris, Abby Hoats and Yiqin Jia, August 15, 2006. available at http://pah.cert.ucr.edu/aqm/308/bart/WRAP_RMC_BART_Protocol_Aug15_2006.pdf.

TABLE 6—NMED MODELED MAXIMUM IMPACTS OF THE 98TH PERCENTILE DELTA-dv IMPACTS FROM 2001–2003

| Class I area | Distance to SJGS (km) | Consent decree baseline | SCR + Sorbent | SCR/ SNCR Hybrid | ROFA/ Rotamix | Rotamix | ROFA |
|---|-----------------------|-------------------------|---------------|------------------|---------------|---------|-------|
| Arches | 222 | 1.69 | 1.10 | 1.58 | 1.58 | 1.61 | 1.63 |
| Bandelier Wilderness | 210 | 1.56 | 0.80 | 1.33 | 1.28 | 1.35 | 1.41 |
| Black Canyon of the Gunnison Wilderness | 203 | 1.15 | 0.63 | 0.94 | 0.93 | 0.98 | 1.04 |
| Canyonlands | 170 | 2.26 | 1.59 | 2.17 | 2.10 | 2.13 | 2.17 |
| Capitol Reef | 232 | 1.81 | 1.08 | 1.64 | 1.55 | 1.62 | 1.68 |
| Grand Canyon | 285 | 0.97 | 0.53 | 0.80 | 0.79 | 0.84 | 0.88 |
| Great Sand Dunes National Monument .. | 269 | 0.71 | 0.40 | 0.64 | 0.60 | 0.61 | 0.65 |
| La Garita Wilderness | 169 | 0.94 | 0.45 | 0.78 | 0.74 | 0.79 | 0.83 |
| Maroon Bells Snowmass Wilderness | 271 | 0.56 | 0.28 | 0.48 | 0.47 | 0.50 | 0.52 |
| Mesa Verde | 40 | 3.80 | 2.46 | 4.42 | 3.58 | 3.58 | 3.59 |
| Pecos Wilderness | 248 | 1.09 | 0.66 | 0.90 | 0.88 | 0.92 | 0.97 |
| Petrified Forest | 213 | 0.82 | 0.48 | 0.73 | 0.73 | 0.77 | 0.78 |
| San Pedro Parks Wilderness | 155 | 2.01 | 1.13 | 1.80 | 1.67 | 1.77 | 1.86 |
| West Elk Wilderness | 216 | 0.91 | 0.43 | 0.73 | 0.71 | 0.76 | 0.80 |
| Weminuche Wilderness | 98 | 1.48 | 0.90 | 1.33 | 1.24 | 1.32 | 1.36 |
| Wheeler Peak Wilderness | 258 | 0.89 | 0.50 | 0.72 | 0.70 | 0.75 | 0.79 |
| Total | | 22.65 | 13.42 | 20.99 | 19.55 | 20.30 | 20.96 |

We note NMED’s modeling indicated there was little difference between the SCR/SNCR hybrid, ROFA/Rotamix, and ROFA NO_x control technologies. However, as Tables 2–5 indicate, there is a significant difference in the cost of those controls, with the SNCR/SCR hybrid being more than twice as expensive as the ROFA/Rotamix, and approximately five times as expensive as both the Rotamix (SNCR) and the ROFA options. None of these NO_x control technologies was capable of significantly improving the visibility at any of the 16 Class I areas; therefore, we did not further evaluate them. However, we note that SCR was capable of uniformly improving the visibility at all of the 16 Class I areas, but at a higher cost.

The costs of the controls in Tables 2–5, were calculated by PNM. Because we found the costs projected by PNM to be high in comparison to other SCR retrofits we have reviewed, we refined

the cost of retrofitting the SJGS with SCR (see the TSD for more information), and the NO_x emission level SCR was capable of achieving when retrofitted to the SJGS. This analysis indicated that the cost of SCR at this source would be considerably lower than calculated by PNM. We believe that PNM overestimated the cost of SCR due to several basic errors that PNM made in constructing its SCR cost analysis:

- PNM did not follow the EPA Air Pollution Control Cost Manual, where possible,²⁴ as directed by the BART Guidelines.²⁵
- PNM scaled many of the cost items from another project that has significant design differences when compared to the SJGS. We made changes in many of these items to adjust them from budgetary to final contract; to exclude equipment and modifications not required for the SJGS SCR installations; to correct errors; and to factor out installation, freight, and other costs that

were included in the contract awards and double counted elsewhere in PNM’s cost estimate. We have concluded that these adjustments are correct, and provide a more accurate estimate of the costs at SJGS.

- PNM performed their SCR cost estimate on the basis of a NO_x control rate of 0.07 lbs/MMBtu. We concluded that SCR could reliably achieve NO_x control at a rate of 0.05 lbs/MMBtu on a 30-day rolling average basis, for each of the four units of the SJGS. Because this did not require a change in the capital cost of the SCR unit, and only necessitated the purchase of additional reagent, this had the effect of improving the cost effectiveness. We have concluded that the analysis concerning the achievability of the emissions limit, and the cost of achieving those limits, is more accurate.

The results of that analysis are presented as Table 7:

TABLE 7—EPA DETERMINED COST EFFECTIVENESS OF SCR FOR THE SJGS

| Unit | Emission limit (lbs/MMBtu) | NO _x emissions (tpy) | NO _x reduction (tpy) | Total capital investment | Total annualized cost | Cost effectiveness (\$/ton) |
|---------|----------------------------|---------------------------------|---------------------------------|--------------------------|-----------------------|-----------------------------|
| 1 | 0.05 | 690 | 3,450 | \$53,230,469 | \$6,373,573 | 1,847 |
| 2 | 0.05 | 686 | 3,433 | 55,664,049 | 6,591,720 | 1,920 |
| 3 | 0.05 | 1,071 | 5,360 | 70,464,306 | 8,631,234 | 1,610 |
| 4 | 0.05 | 1,051 | 5,258 | 67,223,223 | 8,304,143 | 1,579 |

²⁴ U.S. EPA, EPA Air Pollution Control Cost Manual, Report EPA/452/B-02-001, 6th Ed., January 2002 (“Cost Manual”), The EPA Air Pollution Control Cost Manual is the current name for what was previously known as the OAQPS Control Cost Manual, the name for the Cost Manual in previous (pre-2002) editions of the Cost Manual.

²⁵ In order to maintain and improve consistency, cost estimates should be based on the OAQPS Control Cost Manual, where possible. 70 FR 39104, 39166 (2005).

Based on our refined cost and control effectiveness analysis, we conclude that SCR is cost effective for all units of the SJGS.

Although we generally regard the visibility modeling analyses performed by NMED to be of high quality, we noted some minor issues we wished to rectify in order to address consistency with modeling guidance we have provided to the states. We remodeled the visibility impacts of the SJGS using revised emission estimates and meteorology results from the regulatory version of the CALPUFF and CALMET models. As detailed in the TSD, we utilized a different approach based on the best current information from the Electric Power Research Institute (EPRI)²⁶ to estimate the sulfuric acid released from combustion in the boiler for all scenarios and for operation of the SCR, assuming a 0.5% SO₂ to SO₃ conversion efficiency²⁷ of the SCR

catalyst (compared to a 1% conversion assumed by NMED). We determined that the SCR could achieve an emission rate of 0.05 lb NO_x/MMBtu and included this emission rate in modeling the SCR control scenario (compared to 0.07 lb NO_x/MMBtu assumed by NMED). We modeled a revised baseline with the SO₂ emissions lowered to the BART presumptive limit of 0.15 lb/MMBtu that was assumed by the WRAP for regional photochemical visibility modeling to demonstrate reasonable progress towards natural visibility conditions. Finally, modeling was performed utilizing both the monthly variable background NH₃ concentration used by NMED and the default background NH₃ concentration of 1.0 ppb to evaluate the sensitivity of the results to these assumptions. Visibility impairment from our modeled pollutant concentrations were calculated using both the original IMPROVE equation

(Method 6) used by NMED and the revised IMPROVE equation (Method 8) to calculate visibility impairment from the modeled pollutant concentrations.

As Table 8 indicates, in considering the visibility impacts associated with the use of SCR, we focused on the 98th percentile of modeled results to avoid giving undue weight to any extreme results.²⁸ The results are presented as the visibility impacts from SJGS and the associated changes in visibility at each Class I area within 300 kilometers of the facility resulting from the use of SCR. These results employ our revised baseline, a 1 ppb background NH₃ concentration assumption, our revised SO₂ to SO₃ conversion calculation, and the new IMPROVE equation (Method 8). The other methods that we utilized in our sensitivity modeling approaches using Method 6 and/or the variable NH₃ are documented in the TSD.

TABLE 8—EPA MODELED MAXIMUM IMPACTS OF THE 98TH PERCENTILE DELTA-dv IMPACTS FROM 2001–2003

| Class I area | Distance to SJGS (km) | Baseline visibility impact (Δdv) | Visibility impact with SCR (Δdv) | Visibility improvement with SCR (Δdv) |
|---|-----------------------|----------------------------------|----------------------------------|---------------------------------------|
| Arches | 222 | 3.50 | 1.12 | 2.38 |
| Bandelier Wilderness | 210 | 1.39 | 0.48 | 0.91 |
| Black Canyon of the Gunnison Wilderness | 203 | 1.41 | 0.42 | 0.99 |
| Canyonlands | 170 | 4.64 | 1.53 | 3.11 |
| Capitol Reef | 232 | 2.38 | 0.82 | 1.56 |
| Grand Canyon | 285 | 0.93 | 0.33 | 0.60 |
| Great Sand Dunes National Monument | 269 | 1.53 | 0.49 | 1.04 |
| La Garita Wilderness | 169 | 1.93 | 0.57 | 1.36 |
| Maroon Bells Snowmass Wilderness | 271 | 0.70 | 0.28 | 0.42 |
| Mesa Verde | 40 | 5.15 | 2.27 | 2.88 |
| Pecos Wilderness | 248 | 1.27 | 0.47 | 0.80 |
| Petrified Forest | 213 | 0.52 | 0.21 | 0.31 |
| San Pedro Parks Wilderness | 155 | 2.20 | 0.74 | 1.46 |
| West Elk Wilderness | 216 | 1.59 | 0.45 | 1.14 |
| Weminuche Wilderness | 98 | 2.92 | 0.87 | 2.05 |
| Wheeler Peak Wilderness | 258 | 1.12 | 0.44 | 0.68 |
| Total Delta dv | | 33.18 | 11.48 | 21.69 |

As can be seen from Table 8, our visibility modeling indicates that SCR NO_x control offers visibility improvement at every one of the 16 Class I areas and significant visibility improvement at the overwhelming majority of areas. Therefore, after having identified all available retrofittable NO_x control technologies, eliminated those that were not technically feasible, evaluated the NO_x control effectiveness of those remaining, evaluated the impacts and having documented the

results, we propose that NO_x BART for all the units of the SJGS is SCR with a 30 day rolling average of 0.05 lbs/MMBtu.

In addition, our visibility analysis relied in part on estimates of H₂SO₄ mist emissions. The amount of H₂SO₄ emissions depends, in part, on proper design and operation of the SCR unit. Therefore, we believe it is appropriate to set emission limits for H₂SO₄. We believe that our estimates of these emissions are appropriate based on the use of low reactivity catalyst that will

reduce the rate of SO₂ to SO₃ conversion. To ensure these levels are met, we are proposing that emissions of H₂SO₄ be limited to 1.06 x 10⁻⁴ lb/MMBtu for each unit. These emission limits are based on the most current information from the Electric Power Research Institute (EPRI), information on the sulfur content of the coal, and assuming a maximum of 0.5% SO₂ to SO₃ conversion efficiency of the SCR catalyst. We note that there is some potential variation in the methodologies

²⁶ Electric Power Research Institute, Estimating Total Sulfuric Acid Emissions from Stationary Power Plants, 1016384 Technical Update, March 2008.

²⁷ Emails between Anita Lee, EPA Region 9 and Anthony C. Favale P.E., Director—SCR Products, Hitachi Power Systems America, Ltd. Favale: “Catalyst development has progressed over the last

few years to the point that an initial SO₂ conversion rate of 0.5% can be guaranteed with 80 to 90% NO_x reduction.”

²⁸ See 70 FR at 39,121.

and the assumptions used method for calculating H₂SO₄ emissions. The assumptions associated with our calculation are discussed further in the TSD. We are soliciting comment on setting the emission limit in the range between our proposed limit of 1.06 x 10⁻⁴ lb/MMBtu and an upper range of sulfuric acid mist emissions of 7.87 x 10⁻⁴ lb/MMBtu.²⁹ Comments on our proposed H₂SO₄ limit and alternative limits should include consideration of the use of a low conversion rate SCR catalyst and be sufficiently justified.

As there are no continuous emission monitoring techniques for H₂SO₄ mist, we are proposing that compliance be based on an hourly average, confirmed by annual stack testing using EPA Test Method 8A (CTM-013).³⁰ We note that our proposed limits challenge the detection limits of the test method. We solicit comment on this issue, including suggestions for test methods that will better measure these low concentrations and other approaches to determine continuous compliance.

Similarly, our visibility analysis also relied in part on estimates of ammonia (NH₃) slip, emissions of NH₃ that pass through the SCR. NH₃ contribute to visibility impairment. Limiting NH₃ emissions depends on proper design and operation of the SCR. Therefore, we are proposing to set a limit to minimize the contribution of NH₃ to visibility impairment. We are proposing that emissions of NH₃ be limited to 2.0 parts per million volume dry (ppmvd), adjusted to 6 percent oxygen for each of the four SJGS units.³¹ We are also soliciting comment on setting this limit in the range of 2–6 ppmvd, adjusted to 6 percent oxygen. Comments on our proposed limit and alternative limits should consider visibility impairment. Compliance will be based on an hourly average confirmed by an initial performance test using EPA Conditional Test Method 27 (40 CFR 51, Appendix M). We are also proposing that a CEM for NH₃ be installed and operated. We solicit comment on other approaches to determine continuous compliance.

As we note above in section II.B.3, the RHR requires that BART controls must

be installed and in operation as expeditiously as practicable, but no later than five (5) years after the date of our approval of the RH SIP. 40 CFR 51.308(e)(1)(iv). Based on the retrofit of other SCR installations we have reviewed, we find that three (3) years from the date our final determination becomes effective is a conservative and adequate estimate of time for the planning, engineering, installation, and start-up of these controls.³² Many installations have been completed in much shorter times.³³ We solicit comment on alternative timeframes, up to five (5) years from the date our final determination becomes effective.

IV. Proposed Action

We are proposing to disapprove a portion of the SIP revision submitted by the State of New Mexico for the purpose of addressing the “good neighbor” provisions of the CAA section 110(a)(2)(D)(i) for the 1997 8-hour ozone NAAQS and the PM_{2.5} NAAQS. We are proposing to disapprove the New Mexico Interstate Transport SIP provisions that address the requirement of section 110(a)(2)(D)(i)(II) that emissions from New Mexico sources do not interfere with measures required in the SIP of any other state under part C of the CAA to protect visibility. As a result of the proposed disapproval, we are also proposing a FIP to address the requirements of section 110(a)(2)(D)(i)(II) with respect to visibility. With regard to whether emissions from New Mexico sources interfere with the visibility programs of other states, we are proposing to find that New Mexico sources, except the SJGS, are sufficiently controlled to eliminate interference with the visibility programs of other states, and for the SJGS source we are proposing to impose specific SO₂ and NO_x emissions limits that will eliminate such interstate interference. In addition, EPA is proposing the FIP to address the requirement for BART for NO_x for the SJGS.

Based on our evaluation we are proposing to find that the SJGS is subject to BART under section 40 CFR 51.309(d)(4), and/or 51.308(e). Our proposed NO_x controls for SJGS will

partially address the BART requirements of the RH program. Specifically, we are proposing a FIP that imposes NO_x BART limits for the SJGS. Together, the reduction in NO_x from our proposed NO_x BART determination, and the proposed SO₂ emission limits will serve to ensure there are enforceable mechanisms in place to prevent New Mexico NO_x and SO₂ emissions from interfering with efforts to protect visibility in other states pursuant to the requirements of section 110(a)(2)(D)(i)(II) of the CAA.

For NO_x emissions, we are proposing to require the SJGS to meet an emission limit of 0.05 pounds per million British Thermal Units (lb/MMBtu) individually at Units 1, 2, 3, and 4. This NO_x limit is achievable by installing and operating SCR. For SO₂, we are proposing to require the SJGS to meet an emission limit of 0.15 lb/MMBtu. Both of these emission limits would be measured on the basis of a 30 day rolling average. We are also proposing hourly average emission limits of 1.06 x 10⁻⁴ lb/MMBtu for H₂SO₄ and 2.0 ppmvd, for NH₃, to minimize the contribution of these compounds to visibility impairment. Additionally, we are proposing monitoring, recordkeeping and reporting requirements to ensure compliance with emission limitations.

We also propose that compliance with the emission limits be within three (3) years of the effective date of our final rule. We solicit comments on alternative timeframes, up to five (5) years from the effective date our final rule.

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

This proposed action is not a “significant regulatory action” under the terms of Executive Order (EO) 12866, (58 FR 51735, October 4, 1993), and is therefore not subject to review under the Executive Order. This action proposes a source-specific FIP for the San Juan Power Generating Station (SJGS) in New Mexico.

B. Paperwork Reduction Act

This proposed action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* Under the Paperwork Reduction Act, a “collection of information” is defined as a requirement for “answers to * * * identical reporting or recordkeeping requirements imposed on ten or more persons * * *.” 44 U.S.C. 3502(3)(A). Because the proposed FIP applies to a single facility, (SJGS), the Paperwork

²⁹ Upper range value is based on information from PNM’s Toxics Release Inventory report and previous PNM calculations of the amount of additional H₂SO₄ from the installation and operation of SCR. For details on the derivation of this upper bound value, see the TSD.

³⁰ <http://www.epa.gov/ttn/emc/ctm/ctm-013.pdf>.

³¹ PNM materials previously indicated that a 2 ppm ammonia slip limit would be appropriate for SCR at the Public Service Company of New Mexico Black and Veatch report titled: “San Juan Generating Station Best Available Retrofit Technology Analysis” Issue Date and Revision June 6, 2007, Final; Appendix B, page B-3.

³² Typical Installation Timelines for NO_x Emissions Control Technologies on Industrial Sources, Institute of Clean Air Companies, December 4, 2006, available at http://www.icac.7.com/files/public/ICAC_NOx_Control_Installation_Timing_120406.pdf; see also Engineering and Economic Factors Affecting the Installation of Control Technologies for Multipollutant Strategies, EPA-600/R-02/073, October 2002, available at <http://www.epa.gov/clearskies/pdfs/multi102902.pdf>.

³³ *Id.*

Reduction Act does not apply. *See* 5 CFR 1320(c).

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's proposed rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this proposed action on small entities, I certify that this proposed action will not have a significant economic impact on a substantial number of small entities. The FIP for SJGS being proposed today does not impose any new requirements on small entities. *See Mid-Tex Electric Cooperative, Inc. v. FERC*, 773 F.2d 327 (D.C. Cir. 1985).

D. Unfunded Mandates Reform Act (UMRA)

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of \$100 million or more (adjusted to inflation) in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 of UMRA do not apply when they are inconsistent with applicable law. Moreover, section 205 of UMRA allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Under Title II of UMRA, EPA has determined that this proposed rule does not contain a Federal mandate that may result in expenditures that exceed the inflation-adjusted UMRA threshold of \$100 million by State, local, or Tribal governments or the private sector in any 1 year. In addition, this proposed rule does not contain a significant Federal intergovernmental mandate as described by section 203 of UMRA nor does it contain any regulatory requirements that might significantly or uniquely affect small governments.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This action merely prescribes EPA's action to address the State not fully meeting its obligation to prohibit emissions from interfering with other states measures to protect visibility. Thus, Executive Order 13132 does not apply to this action. In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this proposed rule.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997), applies to any rule that: (1) is determined to be economically significant as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This proposed rule is not subject to Executive Order 13045 because it limits emissions of pollutants from an existing single stationary source. Because this proposed action only applies to a single existing source and is not a proposed rule of general applicability, it is not

economically significant as defined under Executive Order 12866, and does not have a disproportionate effect on children. However, to the extent that the rule will limit emissions of NO_x and SO₂ the rule will have a beneficial effect on children's health by reducing air pollution.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA", Public Law 104-113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This proposed rule would require all sources to meet the applicable monitoring requirements of 40 CFR part 75. Part 75 already incorporates a number of voluntary consensus standards. Consistent with the Agency's Performance Based Measurement System (PBMS), part 75 sets forth performance criteria that allow the use of alternative methods to the ones set forth in part 75. The PBMS approach is intended to be more flexible and cost effective for the regulated community; it is also intended to encourage innovation in analytical technology and improved data quality. At this time, EPA is not recommending any revisions to part 75; however, EPA periodically revises the test procedures set forth in part 75. When EPA revises the test procedures set forth in part 75 in the future, EPA will address the use of any new voluntary consensus standards that are equivalent. Currently, even if a test procedure is not set forth in part 75, EPA is not precluding the use of any method, whether it constitutes a voluntary consensus standard or not, as long as it meets the performance criteria specified; however, any alternative

methods must be approved through the petition process under 40 CFR 75.66 before they are used.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994), establishes federal executive policy on environmental justice. Its main provision directs Federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this proposed rule, if finalized, will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. This proposed rule limits emissions of pollutants from a single stationary source, SJGS.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide, Visibility, Interstate transport of pollution, Regional haze, Best available control technology.

Dated: December 20, 2010.

Samuel J. Coleman,

Acting Regional Administrator, Region 6.

Title 40, chapter I, of the Code of Federal Regulations is proposed to be amended as follows:

PART 52—[AMENDED]

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

2. Add § 52.1628 to read as follows:

§ 52.1628 Interstate pollutant transport and regional haze provisions; What are the FIP requirements for San Juan Generating Station emissions affecting visibility?

(a) *Applicability.* The provisions of this section shall apply to each owner or operator of the coal burning

equipment designated as Units 1, 2, 3, or 4 at the San Juan Generating Station in San Juan County, New Mexico (the plant).

(b) *Compliance dates.* Compliance with the requirements of this section is required upon the effective date of this rule unless otherwise indicated by compliance dates contained in specific provisions.

(c) *Definitions.* All terms used in this part but not defined herein shall have the meaning given them in the Clean Air Act and in parts 51 and 60 of this chapter. For the purposes of this section:

24-hour period means the period of time between 12:01 a.m. and 12 midnight.

Air pollution control equipment includes baghouses, particulate or gaseous scrubbers, and any other apparatus utilized to control emissions of regulated air contaminants which would be emitted to the atmosphere.

Daily average means the arithmetic average of the hourly values measured in a 24-hour period.

Heat input means heat derived from combustion of fuel in a Unit and does not include the heat input from preheated combustion air, recirculated flue gases, or exhaust gases from other sources. Heat input shall be calculated in accordance with 40 CFR part 75.

Owner or Operator means any person who owns, leases, operates, controls, or supervises the plant or any of the coal burning equipment designated as Units 1, 2, 3, or 4 at the plant.

Oxides of nitrogen (NO_x) means all oxides of nitrogen except nitrous oxide, as measured by test methods set forth in 40 CFR part 60.

Regional Administrator means the Regional Administrator of EPA Region 6 or his/her authorized representative.

(d) *Emissions limitations and control measures.* (1) Within 180 days of the effective date of this paragraph (d), the owner or operator shall submit a plan to the Regional Administrator that identifies the air pollution control equipment and schedule for complying with paragraph (d) of this section. The owner or operator shall submit amendments to the plan to the Regional Administrator as changes occur. The NO_x and SO₂ limits shall be effective no later than 3 years after the effective date of this rule. No owner or operator shall discharge or cause the discharge of NO_x or SO₂ into the atmosphere from Units 1, 2, 3 and 4 in excess of the limits for these pollutants.

(2) *NO_x emission limit.* The NO_x limit for each unit in the plant, expressed as nitrogen dioxide (NO₂), shall be 0.05 pounds per million British thermal

units (lb/MMBtu) as averaged over a rolling 30 calendar day period. For each unit, NO_x emissions for each calendar day shall be determined by summing the hourly emissions measured in pounds of NO_x. For each unit, heat input for each calendar day shall be determined by adding together all hourly heat inputs, in millions of BTU. Each day the thirty-day rolling average for a unit shall be determined by adding together the pounds of NO_x from that day and the preceding 29 days and dividing the total pounds of NO_x by the sum of the heat input during the same 30-day period. The result shall be the 30-day rolling average in terms of lb/MMBtu emissions of NO_x. If a valid NO_x pounds per hour or heat input is not available for any hour for a unit, that heat input and NO_x pounds per hour shall not be used in the calculation of the 30-day rolling average for NO_x.

(3) *SO₂ emission limit.* The sulfur dioxide emission limit for each unit shall be 0.15 lb/MMBtu as averaged over a rolling 30-calendar-day period. For each unit, SO₂ emissions for each calendar day shall be determined by summing the hourly emissions measured in pounds of sulfur dioxide. For each unit, heat input for each calendar day shall be determined by adding together all hourly heat inputs, in millions of BTU. Each day the thirty-day rolling average shall be determined by adding together pounds of sulfur dioxide from that day and the preceding 29 days and dividing the total pounds of sulfur dioxide by the sum of the heat input during the same 30-day period. The results shall be the 30-day rolling average for lb/MMBtu emissions of SO₂. If a valid SO₂ pounds per hour or heat input is not available for any hour for a unit, that heat input and SO₂ pounds per hour shall not be used in the calculation of the 30-day rolling average for SO₂.

(4) H₂SO₄ emission limit: Emissions of H₂SO₄ from each unit shall be limited to 1.06×10^{-4} lb/MMBtu on an hourly basis.

(5) Ammonia emission limit: Emissions of ammonia (NH₃) from each unit will be limited to 2.0 parts per million by volume, dry (ppmvd), adjusted to 6 percent oxygen, on an hourly average basis.

(e) *Testing and monitoring.* (1) On and after the effective date of this regulation, the owner or operator shall install, calibrate, maintain and operate Continuous Emissions Monitoring Systems (CEMS) for NO_x, SO₂, and NH₃ on Units 1, 2, 3, and 4 in accordance with 40 CFR 60.8 and 60.13(e), (f), and (h), and Appendix B of Part 60. The owner or operator shall comply with the

quality assurance procedures for CEMS found in 40 CFR part 75. Compliance with the emission limits for NO_x, SO₂ and NH₃ shall be determined by using data from a CEMS.

(2) Continuous emissions monitoring shall apply during all periods of operation of the coal burning equipment, including periods of startup, shutdown, and malfunction, except for CEMS breakdowns, repairs, calibration checks, and zero and span adjustments. Continuous monitoring systems for measuring SO₂, NO_x, NH₃ and diluent gas shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Hourly averages shall be computed using at least one data point in each fifteen minute quadrant of an hour. Notwithstanding this requirement, an hourly average may be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant in an hour) if data are unavailable as a result of performance of calibration, quality assurance, preventive maintenance activities, or backups of data from data acquisition and handling system, and recertification events. When valid SO₂ pounds per hour, NO_x pounds per hour, SO₂ pounds per million Btu emission data, NO_x pounds per million Btu emission data, or NH₃ ppmvd data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks, or zero and span adjustments, emission data must be obtained by using other monitoring systems approved by the EPA to provide emission data for a minimum of 18 hours in each 24 hour period and at least 22 out of 30 successive boiler operating days.

(3) Emissions of H₂SO₄ shall be measured within 180 days of start up of the NO_x control device and annually thereafter using EPA Test Method 8A (CTM-013).

(4) Emissions of ammonia shall be measured within 180 days of startup of the NO_x control device using EPA Conditional Test Method 27.

(5) The facility shall install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH₃.

(f) *Reporting and recordkeeping requirements.* Unless otherwise stated all requests, reports, submittals, notifications, and other communications to the Regional Administrator required by this section shall be submitted, unless instructed otherwise, to the Director, Multimedia Planning and Permitting Division, U.S. Environmental Protection Agency, Region 6, to the

attention of Mail Code: 6PD, at 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733. For each unit subject to the emissions limitation in this section and upon completion of the installation of CEMS as required in this section, the owner or operator shall comply with the following requirements:

(1) For each emissions limit in this section, comply with the notification and recordkeeping requirements for CEMS compliance monitoring in 40 CFR 60.7(c) and (d).

(2) For each day, provide the total NO_x and SO₂ emitted that day by each emission unit. For any hours on any unit where data for hourly pounds or heat input is missing, identify the unit number and monitoring device that did not produce valid data that caused the missing hour.

(g) *Equipment operations.* At all times, including periods of startup, shutdown, and malfunction, the owner or operator shall, to the extent practicable, maintain and operate the Plant including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Regional Administrator which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of the Plant.

(h) *Enforcement.* (1) Notwithstanding any other provision in this implementation plan, any credible evidence or information relevant as to whether the Plant would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed, can be used to establish whether or not the owner or operator has violated or is in violation of any standard or applicable emission limit in the plan.

(2) Emissions in excess of the level of the applicable emission limit or requirement that occur due to a malfunction shall constitute a violation of the applicable emission limit.

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