

accordance with this interpretation. OSHA welcomes comments from interested parties on this proposed interpretation.

**Authority:** 29 U.S.C. 655; 29 CFR 1910.95(b)(1) & 1926.52(b); Secretary's Order 5–200, 72 FR 31160, June 5, 2007.

Signed at Washington, DC, October 12, 2010.

**David Michaels,**

*Assistant Secretary of Labor for Occupational Safety and Health.*

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## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 49

[EPA–R09–OAR–2010–0683; FRL–9213–7]

#### Source Specific Federal Implementation Plan for Implementing Best Available Retrofit Technology for Four Corners Power Plant: Navajo Nation

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to promulgate a source specific Federal Implementation Plan (FIP) requiring the Four Corners Power Plant (FCPP), located on the Navajo Nation, to achieve emissions reductions required by the Clean Air Act's Best Available Retrofit Technology (BART) provision. In this action, EPA is proposing to require FCPP to reduce emissions of oxides of nitrogen (NO<sub>x</sub>) and particulate matter (PM). These pollutants are significant contributors to visibility impairment in the numerous mandatory Class I Federal areas surrounding FCPP. For NO<sub>x</sub> emissions, EPA is proposing to require FCPP to meet an emission limit of 0.11 lb/MMBtu, representing an 80% reduction from current NO<sub>x</sub> emissions. This NO<sub>x</sub> limit is achievable by installing and operating Selective Catalytic Reduction (SCR) technology on Units 1–5. For PM, EPA is proposing to require FCPP to meet an emission limit of 0.012 lb/MMBtu for Units 1–3 and 0.015 lb/MMBtu for Units 4 and 5. These emissions limits are achievable by installing and operating any of several equivalent controls on Units 1–3, and through proper operation of the existing baghouse on Units 4 and 5. EPA is proposing to require FCPP to meet a 10% opacity limit on Units 1–5 to ensure proper operation of the PM controls. EPA is requesting comment on

whether APS can satisfy BART on Units 1–3 by operating the existing venturi scrubbers to meet an emission limit of 0.03 lb/MMBtu with a 20% opacity limit. EPA is also proposing to require FCPP to comply with a 20% opacity limit on its coal and material handling operations.

**DATES:** Comments must be submitted no later than December 20, 2010.

**ADDRESSES:** Submit comments, identified by docket number EPA–R09–OAR–2010–0683, by one of the following methods:

*Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the on-line instructions.

*E-mail:* [r9air\\_fcpcbart@epa.gov](mailto:r9air_fcpcbart@epa.gov).

*Mail or deliver:* Anita Lee (Air-3), U.S. Environmental Protection Agency Region IX, 75 Hawthorne Street, San Francisco, CA 94105–3901.

*Instructions:* All comments 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 Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Information that you consider CBI or otherwise protected should be clearly identified as such and should not be submitted through <http://www.regulations.gov> or e-mail. <http://www.regulations.gov> is an “anonymous access” system, and EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send e-mail directly to EPA, your e-mail address will be automatically captured and included as part of the public comment. 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.

*Hearings:* EPA intends to hold public hearings in two locations in New Mexico to accept oral and written comments on the proposed rulemaking. EPA anticipates these hearings will occur in Shiprock and Farmington. EPA will provide notice and additional details at least 30 days prior to the hearings in the **Federal Register**, on our Web site, and in the docket.

*Docket:* The index to the docket for this action is available electronically at <http://www.regulations.gov> and in hard copy at EPA Region IX, 75 Hawthorne Street, San Francisco, California. While all documents in the docket are listed in the index, some information may be publicly available only at the hard copy location (e.g., copyrighted material), and some may not be publicly available in

either location (e.g., CBI). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed in the **FOR FURTHER INFORMATION CONTACT** section.

**FOR FURTHER INFORMATION CONTACT:** Anita Lee, EPA Region IX, (415) 972–3958, [r9air\\_fcpcbart@epa.gov](mailto:r9air_fcpcbart@epa.gov).

#### **SUPPLEMENTARY INFORMATION:**

Throughout this document, “we”, “us”, and “our” refer to EPA.

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## I. Background

### A. Statutory and Regulatory Framework for Addressing Visibility

Part C, Subpart II, of the Act, establishes a visibility protection program that sets forth “as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution.” 42 U.S.C. 7491A(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.* 7491A(g)(6). A fundamental requirement of the visibility protection program is for EPA, in consultation with the Secretary of the Interior, to promulgate a list of “mandatory Class I Federal areas” where visibility is an important value. *Id.* 7491A(a)(2). These areas include national wilderness areas and national parks greater than six thousand acres in size. *Id.* 7472(a).

On November 30, 1979, EPA identified 156 mandatory Class I Federal areas where visibility is an important value, including for example: Grand Canyon National Park in Arizona (40 CFR 81.403); Mesa Verde National Park and La Garita Wilderness Area in Colorado (*Id.* 81.406); Bandelier Wilderness Area in New Mexico (*Id.* 81.421); and Arches, Bryce Canyon, Canyonlands and Capitol Reef National Parks in Utah (*Id.* 81.430). These mandatory Class I Federal areas are within an approximately 300 km (or 186 mile) radius of FCPP.

On December 2, 1980, EPA promulgated the first phase of the required visibility regulations, codified at 40 CFR 51.300–307. 45 FR 80084. The 1980 regulations deferred regulating regional haze from multiple sources finding that the scientific data were inadequate at that time. *Id.* at 80086.

Congress added Section 169B to the Act in the 1990 CAA Amendments, requiring EPA to take further action to reduce visibility impairment in broad geographic regions. 42 U.S.C. 7492. In 1993, the National Academy of Sciences released a comprehensive study required by the 1990 Amendments concluding that “current scientific knowledge is adequate and control technologies are available for taking regulatory action to improve and protect visibility.” *Protecting Visibility in*

*National Parks and Wilderness Areas*, Committee on Haze in National Parks and Wilderness Areas, National Research Council, National Academy Press (1993).

EPA promulgated regulations to address regional haze on April 22, 1999. 64 FR 35765. Consistent with the statutory requirement in 42 U.S.C. 7491(b)(2)(a), EPA’s 1999 regional haze regulations include a provision requiring States to require certain major stationary sources “in existence on August 7, 1977, but which ha[ve] not been in operation for more than fifteen years as of such date” which emit pollutants that are reasonably anticipated to cause or contribute to any visibility impairment to procure, install and operate BART. In determining BART, States are required to take into account five factors identified in the CAA and EPA’s regulations. 42 U.S.C. 7491(g)(2) and 40 CFR 51.308.

### B. Statutory and Regulatory Framework for Addressing Sources Located in Indian Country

When the Clean Air Act was amended in 1990, Congress included a new provision, Section 301(d), granting EPA authority to treat Tribes in the same manner as States where appropriate. See 40 U.S.C. 7601(d). Congress also recognized, however, that such treatment may not be appropriate for all purposes of the Act and that in some circumstances, it may be inappropriate to treat tribes identically to states. Therefore, Section 301(d)(2) of the Act directed EPA to promulgate regulations “specifying those provisions of [the CAA] for which it is appropriate to treat Indian tribes as States.” *Id.* 7601(d)(2). In addition, Congress provided that “[i]n any case in which [EPA] determines that the treatment of Indian tribes as identical to States is inappropriate or administratively infeasible, the Administrator may provide, by regulation, other means by which the Administrator will directly administer such provisions so as to achieve the appropriate purpose.” *Id.* 7601(d)(4).

In 1998, EPA promulgated regulations at 40 CFR part 49 (which have been referred to as the Tribal Authority Rule or TAR) relating to implementation of CAA programs in Indian Country. See 40 CFR part 49; see also 59 FR 43956 (Aug. 25, 1994) (proposed rule); 63 FR 7254 (Feb. 12, 1998) (final rule); *Arizona Public Service Company v. EPA*, 211 F.3d 1280 (DC Cir. 2000), *cert. den.*, 532 U.S. 970 (2001) (upholding the TAR). The TAR allows EPA to treat eligible Indian Tribes in the same manner as States “with respect to all provisions of the [CAA] and implementing

regulations, except for those provisions [listed] in 49.4 and the [EPA] regulations that implement those provisions.” 40 CFR 49.3. EPA recognized that Tribes were in the early stages of developing air planning programs known as Tribal Implementation Plans (TIPs) and that Tribes would need additional time to develop air quality programs. 62 FR 7264–65. Thus, EPA determined that it was not appropriate to treat Tribes in the same manner as States for purposes of those provisions of the CAA imposing air program submittal deadlines. See 59 FR at 43964–65; 63 FR at 7264–65. Similarly, EPA determined that it would be inappropriate to treat Tribes the same as States for purposes of the related CAA provisions establishing sanctions and federal oversight mechanisms where States fail to meet applicable air program submittal deadlines. *Id.* Thus, one of the CAA provisions that EPA determined was not appropriate to apply to Tribes is Section 110(c)(1). See 40 CFR 49.4(d). In particular, EPA found that it was inappropriate to impose on Tribes the provisions in Section 110(c)(1) for EPA to promulgate a FIP within 2 years after a State fails to make a required plan submission.

Although EPA determined that the requirements of CAA section 110(c)(1) were not applicable to Tribes, EPA also determined that under other provisions of the CAA it has the discretionary authority to promulgate “such federal implementation plan provisions as are necessary or appropriate to protect air quality” when a Tribe has not submitted a TIP. 40 CFR 49.11. EPA determined in promulgating the TAR that it could exercise discretionary authority to promulgate FIPs based on Section 301(a) of the CAA, which authorizes EPA to prescribe such regulations as are necessary to carry out the Act, and Section 301(d)(4), which authorizes EPA to directly administer CAA provisions for which EPA has determined it is inappropriate or infeasible to treat Tribes as identical to States. 40 CFR 49.11. See also 63 FR at 7265. Specifically, 40 CFR 49.11(a) provides that EPA shall promulgate without unreasonable delay such Federal implementation plan provisions as are necessary or appropriate to protect air quality, consistent with the provisions of sections 301(a) and 301(d)(4), if a tribe does not submit a tribal implementation plan or does not receive EPA approval of a submitted tribal implementation plan.

EPA has previously promulgated FIPs under the TAR to regulate air pollutants emitted from the two coal fired electric generating facilities on the Navajo

Nation, FCPP and Navajo Generating Station (NGS). In 1991, EPA also revised an existing FIP that applied to Arizona to include a requirement for NGS to substantially reduce its SO<sub>2</sub> emissions by installing scrubbers based on finding that the SO<sub>2</sub> emissions were contributing to visibility impairment at the Grand Canyon National Park. 56 FR 50172 (Oct. 3, 1991); *see also Central Arizona Water Conservation District v. United States Environmental Protection Agency*, 990 F.2d 1531 (9th Cir. 1993).

In 1999, after several years of negotiations, EPA proposed concurrent but separate FIPs for FCPP and NGS. Those FIPs proposed to fill the regulatory gap that existed because permits and SIP rules by New Mexico (for FCPP) and Arizona (for NGS) were not applicable or enforceable on the Navajo Nation, and the Tribe had not sought approval of a TIP covering the plants. 64 FR 48731 (Sept. 8, 1999).

Before EPA finalized the 1999 FIPs, the operator of FCPP began negotiations to reduce SO<sub>2</sub> emissions from FCPP by making upgrades to improve the efficiency of its SO<sub>2</sub> scrubbers. The negotiations resulted in an agreement for FCPP to increase the SO<sub>2</sub> control from a 72% reduction of the potential SO<sub>2</sub> emissions to an 88% reduction. As a result of this increased scrubber efficiency, FCPP's SO<sub>2</sub> emissions decreased by a total of 57% from the historical levels. The parties to the negotiations requested EPA to make those SO<sub>2</sub> reductions enforceable through a source specific FIP. Therefore, EPA proposed new FIPs for FCPP and NGS in September 2006. 71 FR 53631 (Sept. 12, 2006). In these concurrent but separate FIPs, EPA proposed to make emissions limits contained in State permits or rules that had previously been followed by FCPP and NGS federally enforceable. In addition, for FCPP, EPA proposed to establish a significantly lower SO<sub>2</sub> emissions limit based on the increased scrubber efficiency, resulting in a reduction of approximately 22,000 tons of SO<sub>2</sub> per year. EPA indicated in the final FIP for FCPP that the new SO<sub>2</sub> emissions limits were close to or the equivalent of the emissions reductions that would have been required in a BART determination. 72 FR 25698 (May 7, 2007). The FIP also required FCPP to comply with a 20% opacity limit on both the combustion and fugitive dust emissions coal handling operations. EPA finalized the FIP for FCPP in May 2007. Id.

APS, the operator of FCPP, and the Sierra Club each filed Petitions seeking judicial review of EPA's promulgation of the 2007 FIP for FCPP, on separate grounds. APS argued that EPA did not

have authority to promulgate a source-specific FIP for FCPP without its consent. APS also argued that EPA did not have authority to promulgate a 20% opacity standard on the combustion equipment unless we provided an exemption for malfunctions. Finally, APS argued that EPA had not established an adequate basis for requiring a 20% opacity limit on the fugitive dust from the coal handling operations. In contrast, Sierra Club argued that EPA could not promulgate a "gap filling" FIP that did not include modeling and an analysis to show continued attainment of the NAAQS.

The Court of Appeals for the Tenth Circuit rejected both Petitions. With respect to the Sierra Club's arguments, the Court considered the regulatory language in 40 CFR 49.11(a) and concluded that "[t]his language does not impose upon the EPA the duty the Environmentalists propose. It provides the EPA discretion to determine what rulemaking is necessary or appropriate to protect air quality and requires the EPA to promulgate such rulemaking." *Arizona Public Service v. EPA*, 562 F.3d 1116, 1125 (10th Cir. 2009). The Court also rejected arguments by APS that EPA could not impose a continuous opacity limitation during operations, provided EPA set forth a reasonable basis for its decision. *Id.* at 1129 ("That APS does not agree with the EPA's rejection of the substance of its proposed 0.2% allowance is irrelevant; as long as EPA's decision making process may reasonably be discerned, we will not set aside the federal plan on account of a less-than-ideal explanation." [citation omitted]). The Court agreed with EPA's request for a voluntary remand of the opacity limit for the fugitive dust for the material handling operations and remanded that narrow aspect of the 2007 FIP. *Id.* at 1131.

The FIP that EPA is proposing today is promulgated under the same authority in 40 CFR 49.11(a). EPA is proposing to find that it is necessary or appropriate to establish BART requirements for NO<sub>x</sub> and PM emissions from FCPP, and is proposing specific NO<sub>x</sub> and PM limits as BART. EPA is proposing to establish a 10% opacity limit from Units 1–5 to ensure continuous compliance with the PM emissions limit. EPA is also proposing a 20% opacity limit to apply to FCPP's material handling operations in response to the remand from the 2007 FIP.

### C. Statutory and Regulatory Framework for BART Determinations

When Congress enacted Section 169A of the CAA to protect visibility, it directed EPA to promulgate regulations that, inter alia, would require applicable implementation plans to include a determination of BART for certain major stationary sources. 42 U.S.C. 7491(b)(2)(A) & (g). These major stationary sources are fossil-fuel fired steam electric plants of more than 250 MMBtu/hr heat input, kraft pulp mills, Portland cement plants and other listed industrial sources that came into operation between 1962 and 1977 and are "reasonably anticipated to cause or contribute to any impairment of visibility in any [Class I area]." *Id.* EPA guidelines must be followed in making BART determinations for fossil fuel fired electric generating plants larger than 750 MW. *See* 40 CFR Part 51, Appendix Y.

F CPP and NGS are the only eligible BART sources located on the Navajo Nation. *See* Western Regional Air Partnership, <http://www.wrapair.org/forums/ssjf/bart.html>, XLS Spreadsheet, Line 184, 185, Column N. An eligible BART source with a predicted impact of 0.5 dv or more of impairment in a Class I area "contributes" to visibility impairment and is subject to BART. 70 FR 39104, 39121 (July 6, 2005). FCPP contributes to impairment at many surrounding Class I areas well in excess of this threshold.

EPA's guidelines for evaluating BART for such sources are set forth in Appendix Y to 40 CFR Part 51. *See also* 40 CFR 51.308(e)(1)(ii)(A). Consistent with statutory and regulatory requirements, the Guidelines require consideration of "five factors" in making BART determinations. *Id.* at IV.A. Those factors, from the Act's statutory definition of BART, which are applied to all technically feasible control technologies, are: (1) The costs of compliance, (2) the energy and non-air quality environmental impacts of compliance, (3) any pollution control equipment in use or in existence 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).

In this proposed action, EPA has taken into consideration each of the five factors after identifying feasible control technologies for FCPP's NO<sub>x</sub> and PM emissions.

#### D. Factual Background

##### 1. Four Corners Power Plant

FCPP is a privately owned and operated coal-fired power plant located on the Navajo Nation Indian Reservation near Farmington, New Mexico. Based on lease agreements signed in 1960, FCPP was constructed and has been operating on real property held in trust by the Federal government for the Navajo Nation. The facility consists of five coal-fired electric utility steam generating units with a total capacity of 2060 megawatts (MW). Units 1, 2, and 3 at FCPP are owned entirely by Arizona Public Service (APS), which serves as the facility operator, and are rated to 170 MW (Units 1 and 2) and 220 MW (Unit 3). Units 4 and 5 are each rated to a capacity of 750 MW, and are co-owned by six entities: Southern California Edison (48%), APS (15%), Public Service Company of New Mexico (13%), Salt River Project (SRP) (10%), El Paso Electric Company (7%), and Tucson Electric Power (7%).

Based on 2009 emissions data from the EPA Clean Air Markets Division,<sup>1</sup> FCPP is the largest source of NO<sub>x</sub> emissions in the United States (over 40,000 tons per year (tpy) of NO<sub>x</sub>). FCPP, located near the Four Corners region of Arizona, New Mexico, Utah, and Colorado, is approximately 300 kilometers (km) from sixteen mandatory Class I Federal areas: Arches National Park (NP), Bandelier National Monument (NM), Black Canyon of the Gunnison Wilderness Area (WA), Canyonlands NP, Capitol Reef NP, Grand Canyon NP, Great Sand Dunes NP, La Garita WA, Maroon Bells-Snowmass WA, Mesa Verde NP, Pecos WA, Petrified Forest NP, San Pedro Parks WA, West Elk WA, Weminuche WA, and Wheeler Park WA.

APS provided information relevant to a BART analysis to EPA on January 29, 2008. The information consisted of a BART engineering and cost analysis conducted by Black and Veatch (B&V) dated December 4, 2007 (Revision 3), a BART visibility modeling protocol prepared by ENSR Corporation (now called AECOM and referred to as AECOM throughout this document) dated January 2008, a BART visibility modeling report prepared by AECOM dated January 2008, and a document titled APS BART Analysis conclusions, dated January 29, 2008. APS provided supplemental information on cost and visibility modeling in correspondence dated May 28, 2008, June 10, 2008, November 2008, March 16, 2009,

October 29, 2009, and April 22, 2010. All of these documents are available in the docket for this proposal.

##### 2. Relationship of NO<sub>x</sub> and PM to Visibility Impairment

Particulate matter less than 10 microns (millionths of a meter) in size (PM<sub>10</sub>) interacts with light. The smallest particles in the 0.1 to 1 micron range interact most strongly as they are about the same size as the wavelengths of visible light. The effect of the interaction is to scatter light from its original path. Conversely, for a given line of sight, such as between a mountain scene and an observer, light from many different original paths is scattered into that line. The scattered light appears as whitish haze in the line of sight, obscuring the view.

PM emitted directly into the atmosphere, also called primary PM, is emitted both from the boiler stacks and from material handling. Of primary PM emissions, those in the smaller particle size range, less than 2.5 microns, tend to have the most impact on visibility. PM emissions from the boiler stacks can have varying particle size makeup depending on the PM control technology. PM from material handling, though, tends to be coarse, *i.e.* around 10 microns, since it is created from the breakup of larger particles of soil and rock.

PM that is formed in the atmosphere from the condensation of gaseous chemical pollutants, also called secondary PM, tends to be fine, *i.e.* smaller than 1 micron, since it is formed from the buildup of individual molecules. This *secondary* PM tends to contribute more to visibility impairment than primary PM because it is in the size range where it most effectively interacts with visible light. NO<sub>x</sub> and SO<sub>2</sub> emissions from coal fired power plants are two examples of gaseous chemical pollutants that react with other compounds in the atmosphere to form secondary PM. Specifically, NO<sub>x</sub> is a gaseous pollutant that can be oxidized to form nitric acid. In the atmosphere, nitric acid in the presence of ammonia forms particulate ammonium nitrate. The formation of particulate ammonium nitrate is dependent on temperature and relative humidity, and therefore, varies by season. Particulate ammonium nitrate can grow into the size range that effectively interacts with light by coagulating together and by taking on additional pollutants and water. The same principle applies to SO<sub>2</sub> and the formation of particulate ammonium sulfate.

In air quality models, secondary PM is tracked separately from primary PM

because the amount of secondary PM formed depends on weather conditions and because it can be six times more effective at impairing visibility. This is reflected in the equation used to calculate visibility impacts from concentrations measured by the Interagency Monitoring of Protected Visual Environments (IMPROVE) monitoring network covering Class I areas.<sup>2</sup>

## II. EPA's Proposed Action on the Five Factor Test

### A. A BART Determination for FCPP Is Necessary or Appropriate

The numerous Class I areas that surround FCPP are sometimes known as the Golden Circle of National Parks. See [http://www.nps.gov/history/history/online\\_books/nava/adhi/adhi4e.htm](http://www.nps.gov/history/history/online_books/nava/adhi/adhi4e.htm). Millions of tourists visit these areas, many visiting from other countries to view the unique vistas of the Class I areas in the Four Corners region.

As Congress recognized, visibility is an important value and must be protected in these areas. Yet, air quality and visibility are impaired in the 16 Class I areas surrounding FCPP. The National Park Service noted in 2008 that “[v]isibility is impaired to some degree at all units where it is being measured and remains considerably higher than the target national conditions in many places, particularly on the haziest days.” *Air Quality in National Parks*, 2008 Annual Performance & Progress Report, National Resource Report NPS/NRPC/ARD/NRR-2009/151, September 2009, p. 30. Mesa Verde, Grand Canyon, Bryce Canyon and Canyonlands are among the areas the Park Service is monitoring. *Id.* Table 3, p. 19. Although not directly related to visibility, NO<sub>x</sub> is also a precursor to ozone formation and the National Park Service also determined that ozone concentrations in Mesa Verde appears to be trending upward over the 1994–2007 period and the Park’s annual 4th-highest 8-hour ozone concentrations “are approaching the [NAAQS] standard.” *Id.* at 16. FCPP, which emitted over 42,000 tons of NO<sub>x</sub> in 2009,<sup>3</sup> was built roughly four decades ago and has not installed any new NO<sub>x</sub> controls since the 1990’s, including modern combustion technology such as post-2000 low-NO<sub>x</sub> burners (LNB) or separated overfire air.

Based on the importance of visibility as a value in this Golden Circle of

<sup>2</sup> Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule, U.S. Environmental Protection Agency”, EPA-454/B-03-005, September 2003; <http://www.epa.gov/ttn/oarpg/t1pgm.html>.

<sup>3</sup> Clean Air Markets Division—Data—Maps.

<sup>1</sup> “Clean Air Markets—Data and Maps: <http://camdataandmaps.epa.gov/gdm/>.

National Parks, and the substantial NO<sub>x</sub> and PM emissions generated by operating FCPP, EPA is proposing to find that BART emission limits are necessary or appropriate.

*B. Summary of Proposed BART Emissions Limits*

On August 28, 2009, EPA published an Advanced Notice of Proposed Rulemaking (ANPRM) concerning two of the five factors in the BART analysis: Cost of compliance and anticipated visibility improvement. 74 FR 44314. EPA received numerous comments on the ANPRM, including comments from the Navajo Nation, APS, National Park Service and environmental groups. EPA has considered relevant comments we received on the ANPRM in determining which NO<sub>x</sub> and PM emission limitations we are proposing today as BART for FCPP.

Based on the available control technologies and the five factors discussed in more detail below, EPA is proposing to require FCPP to meet a NO<sub>x</sub> emission limit on Units 1–5 of 0.11 lb/MMBtu. EPA is proposing a PM emission limit on Units 1–3 of 0.012 lb/MMBtu and on Units 4 and 5 of 0.015 lb/MMBtu as BART. EPA is taking comment on an alternative PM emissions limit for Units 1–3 described in more detail in Section II.D.

EPA is not proposing to require each unit to achieve the specified NO<sub>x</sub> emission limit. EPA is proposing to require FCPP to meet a plant-wide heat input weighted 30-day rolling average emission limit of 0.11 lb/MMBtu for NO<sub>x</sub> for Units 1–5. For PM, we are

proposing a BART emission limit of 0.012 lb/MMBtu from Units 1–3 on a 6-hour average basis and 0.015 lb/MMBtu averaged over a 6-hour period for Units 4 and 5, which should be achievable with proper operation of the existing baghouses. EPA is also proposing that Units 1–5 meet a 10% opacity limit which will reasonably assure continuous compliance with the PM emission limits. EPA is taking comment on an alternative PM emission limit for Units 1–3.

The available control technologies and EPA’s evaluation of each of the five factors supporting our proposed BART emissions limits for NO<sub>x</sub> and PM are discussed in more detail below and in EPA’s accompanying Technical Support Document (TSD).

*C. Available and Feasible Control Technologies and Five Factor Analysis for NO<sub>x</sub> Emissions*

APS identified sixteen options as available retrofit technologies to control NO<sub>x</sub>. Generally, NO<sub>x</sub> control techniques use: (1) Combustion control to reduce the production of NO<sub>x</sub> from fuel-bound nitrogen and high temperature combustion; (2) post-combustion add-on control to reduce the amount of NO<sub>x</sub> emitted in flue gas by converting NO<sub>x</sub> to diatomic nitrogen (N<sub>2</sub>); or (3) a combination of combustion and post-combustion controls. EPA approached the five factor analysis using a top-down method. A top-down analysis entails ranking the control options in descending order starting with the most stringent option. The top control option is evaluated and if eliminated based on

one of the five factors, the next most stringent option is considered, and so on. The top option for NO<sub>x</sub> control is a combination of a post-combustion add-on control, *i.e.*, selective catalytic reduction (SCR), and combustion controls, *i.e.*, low-NO<sub>x</sub> burners plus overfire air (LNB + OFA). SCR without LNB + OFA represents the next most stringent option, and LNB + OFA without SCR represents a low-mid level of control. As described in detail below, EPA believes LNB + OFA are not likely to be effective control technologies at FCPP due to the inherent limitations of the existing boilers on all units. Therefore, EPA started our top-down analysis of the five factors with SCR without combustion controls. More details on the control options are provided in Section 2 of the TSD.

As described in our ANPRM, APS has claimed that combustion controls (*i.e.*, low-NO<sub>x</sub> burners (LNB) on Units 1 and 2 and low NO<sub>x</sub> burners plus overfire air (LNB + OFA) on Units 3–5) would provide NO<sub>x</sub> reductions sufficient to meet the presumptive limits for NO<sub>x</sub> identified in the BART Guidelines (40 CFR Part 51 Appendix Y). Table 1 shows the presumptive NO<sub>x</sub> limits for boilers burning either sub-bituminous or bituminous coal and the emission limits APS considers achievable for Units 1–5. APS submitted NO<sub>x</sub> emission limits it considers achievable to EPA in January 2008, March 2009, and October 2009. The coal burned at FCPP has historically been classified as sub-bituminous. APS, however, in its BART analysis has claimed that the coal is bituminous.

TABLE 1—PRESUMPTIVE NO<sub>x</sub> LIMITS<sup>4</sup> AND NO<sub>x</sub> EMISSIONS (IN LB/MMBTU) FROM LNB (UNITS 1 AND 2) LNB + OFA (UNITS 3–5) CLAIMED ACHIEVABLE BY APS

	Bituminous coal	Sub-Bituminous coal	Emissions after LNB or LNB+OFA (Jan 2008 <sup>5</sup> )	Emissions after LNB or LNB+OFA (Oct 2009 <sup>6</sup> )
Unit 1 .....	N/A	N/A	0.48	0.40
Unit 2 .....	N/A	N/A	0.48	0.40
Unit 3 .....	0.39	0.23	0.39	0.32
Unit 4 .....	0.40	0.45	0.40	0.35
Unit 5 .....	0.40	0.45	0.40	0.35

EPA, however, disagrees with APS’s contention that EPA should rely only on

presumptive limits for BART for NO<sub>x</sub> and with APS’s claim that LNB and LNB + OFA will be effective at achieving

NO<sub>x</sub> emissions lower than the presumptive BART emissions limits.

<sup>4</sup> Presumptive limits for Unit 3 based on dry-bottom wall-fired boiler and Units 4 and 5 on cell burner boilers. Presumptive limits do not apply to Units 1 and 2 because they are smaller than 200 MW.

<sup>5</sup> From 2008-01\_APS\_4\_Corners\_BART\_Analysis\_Conclusions.pdf.

<sup>6</sup> From APS’s Comment Letter to EPA dated October 28, 2009.

EPA's presumptive BART limits were not intended to supplant a case-by-case BART determination. For NO<sub>x</sub>, for most types of boilers, EPA's presumptive BART limits were intended to indicate what should generally be achievable with combustion modifications such as modern LNB with OFA for a given type of boiler firing either bituminous or sub-bituminous coal. In establishing the presumptions, EPA concluded that these controls were highly cost-effective at large power plants generally and that installation of such controls would result in meaningful visibility improvement at any 750 MW power plant. Thus, these controls are required at a minimum at these facilities unless there are source-specific circumstances that would justify a different conclusion. EPA did not consider the question of what more stringent control technologies might be appropriately determined to be BART, however, especially in the case where the visibility benefits may be substantial. A full case-by-case BART analysis is required for each facility. In this instance, given the fact that FCPP is the largest source of NO<sub>x</sub> emissions in the United States and that it is surrounded by 16 mandatory Class I areas, EPA considers it appropriate to carefully consider NO<sub>x</sub> emission limits based on a full analysis of the five BART factors. In this rulemaking, EPA is undertaking a complete BART analysis for the FCPP for the first time, an analysis that is specific to FCPP and that takes into consideration the five factors set forth in the CAA.

Because EPA is relying on the five-factor analysis and not the presumptive NO<sub>x</sub> levels in the BART guidelines, it is not necessary for EPA to make a determination on the classification of coal used by APS as bituminous or sub-bituminous. EPA is taking the coal characteristics into account in establishing the NO<sub>x</sub> BART emission limit, but the classification as bituminous or sub-bituminous is only relevant for choosing presumptive limits, which we are not doing in this proposal. Although the emissions level claimed by APS for LNB + OFA retrofit of Units 4 and 5 are below the presumptive limits for both sub-bituminous coal and bituminous coal, we note that the presumptive levels of 0.40 and 0.45 lb/MMBtu provide little reduction of baseline NO<sub>x</sub> emissions (0.49 lb/MMBtu) from these units.

In our ANPRM, EPA questioned the ability of LNB and LNB + OFA to result in the magnitude of NO<sub>x</sub> reductions being claimed as achievable by APS. APS has submitted two different reports concerning the potential for NO<sub>x</sub>

reductions at FCPP. The first report written by Andover Technology Partners<sup>7</sup> (Andover Report) was submitted by APS by letter dated August 7, 2009, prior to the publication of the ANPRM.<sup>8</sup> The Andover Report outlined the considerable challenges associated with LNB and OFA retrofits on each unit, including boiler design and size, and FCPP coal characteristics. Although four different technology suppliers claimed they could achieve NO<sub>x</sub> reductions with burner retrofits, the Andover Report concluded that LNB retrofits were not likely to be beneficial for the boilers at FCPP because the risk of adverse operational side effects outweighed the potentially modest improvement in emissions performance.

The fireboxes for Units 1, 2 and 3 are considered to be too small to effectively use modern approaches to low NO<sub>x</sub> combustion, which require separated OFA. Unit 2 was retrofitted with a 1990-designed LNB and, according to APS, had considerable operational problems subsequent to this retrofit. Units 1 and 2 are identical boilers. Thus due to operational difficulties following the Unit 2 retrofit, APS did not attempt a retrofit on Unit 1, which continues to emit NO<sub>x</sub> at a concentration as high as 0.8 lb/MMBtu.

Units 4 and 5 were originally designed and operated with cell burners. This type of combustion burner inherently creates more NO<sub>x</sub> than conventional wall-fired burners. Although the type of burners in the cell boilers were replaced in the 1980s, the design of a cell boiler limits the NO<sub>x</sub> reduction that can be achieved with modern low NO<sub>x</sub> combustion techniques. EPA set different presumptive levels of 0.40 lb/MMBtu or 0.45 lb/MMBtu for the expected achievable NO<sub>x</sub> reductions for cell burner boilers with combustion modifications due to this design limitation. Thus, the efficacy of LNB + OFA on Units 4 and 5 will also be limited by their inherent design. Even if retrofit of Units 4 and 5 results in some improvement in NO<sub>x</sub> performance (approaching 0.40 lb/MMBtu), the Andover Report did not recommend burner retrofits because potential operational problems on the two largest units at FCPP were not worth the small

<sup>7</sup> "Assessment of Potential for Further NO<sub>x</sub> Reduction by Combustion-Based Control at the Four Corners Steam Electric Station", April 5, 2004.

<sup>8</sup> EPA received the Andover Report only a few days prior to signature of the ANPRM. Therefore the report was not considered in the ANPRM or made available in the ANPRM docket. APS claimed the report Confidential Business Information (CBI) and on July 9, 2010, EPA's Regional Counsel determined this report was not CBI.

incremental reduction in NO<sub>x</sub> emissions.

A subsequent report prepared by APS and submitted to EPA as Attachment J of its October 28, 2009 comment letter on the ANPRM, indicated that Units 1 and 2 could achieve 0.40 lb/MMBtu with LNB retrofit, Unit 3 could achieve 0.32 lb/MMBtu and Units 4 and 5 could achieve 0.35 lb/MMBtu with a combination of LNB + OFA retrofit. See Table 1 above. APS cited examples of several boilers with LNB or LNB + OFA retrofits that achieve emission rates of 0.4 lb/MMBtu or below.

EPA Clean Air Markets Division (CAMD) evaluated the boiler examples from Attachment J to assess the emissions reductions that have been achieved with modern combustion modification retrofits. CAMD concluded that other boilers have achieved NO<sub>x</sub> emissions of approximately 0.4 lb/MMBtu, but could not determine if Units 3–5 at FCPP were indeed comparable to those boilers. APS did not provide enough information in Attachment J to assess the level of similarity. Based on information provided in the Andover Report and the EPA CAMD review of Attachment J provided by APS, EPA determined that combustion controls are not likely to be effective control technologies at FCPP due to the inherent limitations of the existing boilers on all units. Therefore, EPA rejected the top control option, SCR in combination with LNB + OFA, and focused our five factor analysis on the next most stringent technology, SCR without LNB + OFA, which can reduce NO<sub>x</sub> emissions by 80%.

#### i. Factor 1: Cost of Compliance

The cost effectiveness of controls is expressed in cost per ton of pollutant reduced (\$/ton). 40 CFR Part 51, App. Y, IV.D.4.c. Cost effectiveness is calculated by first estimating the total capital and annual costs of the BART controls. The second step requires calculating the amounts of the pollutants which will be reduced by the control technology selected as BART. This second step compares the uncontrolled baseline emissions (*i.e.* emissions from current operations) to the proposed BART emissions limits. *Id.*

APS submitted cost estimates for all feasible control options in January 2008 and submitted revised cost estimates for SCR on March 16, 2009 to reflect higher costs of construction services and materials. In our August 28, 2009 ANPRM, we presented APS's cost estimates for emissions controls for NO<sub>x</sub>, which included the revised SCR costs submitted in March 2009, and cost estimates from the National Park Service

(NPS). In the ANPRM, EPA revised the annual operating cost estimates submitted by APS based on the ratio of annual to capital costs from other facilities in the western United States. NPS conducted an independent analysis strictly adhering to the *EPA Control Cost Manual* and calculated significantly lower cost effectiveness. In subsequent comments on the ANPRM, NPS submitted revised cost estimates for each unit. All of these cost estimates are described in detail in the TSD.

Subsequent to the ANPRM, APS submitted revised cost estimates for the NO<sub>x</sub> control technologies. APS provided these revised cost estimates to EPA via electronic mail on April 22, 2010, in a report dated February 10,

2010. Costs estimated for Unit 1–3 were dated May 2008, whereas revised cost estimates were provided for Units 4 and 5 were dated February 2010. All cost estimates in the 2010 submission were lower than those submitted previously. The report updated cost estimates for Units 4 and 5 in 2010 dollars and provided cost estimates for Units 1–3 in 2008 dollars that are lower than the costs APS submitted in March 2009 upon which the ANPRM relied. Because APS only recently withdrew a claim of confidentiality for the 2010 cost estimates, however, this proposal is based on the costs submitted in March 2009. The TSD also contains a further discussion of these costs.

For this NPR, EPA evaluated the capital and annual cost estimates APS submitted in March 2009 against the *EPA Control Cost Manual*. Although EPA has generally accepted the costs estimates APS submitted, we have eliminated any line item costs that are not explicitly included in the *EPA Control Cost Manual* and we have revised the costs where EPA determined alternate costs were more appropriate, e.g., cost of catalysts, or interest rates. Additional detailed information and the results of our revisions to the cost estimates are included in Table 13 of the TSD. EPA’s cost effectiveness estimates and those estimated by NPS and APS are shown in Table 2.

TABLE 2—EPA, NPS, AND APS COST EFFECTIVENESS FOR SCR ON UNITS 1–5

	EPA Cost effectiveness (\$/ton)	NPS Cost effectiveness (\$/ton)	APS Cost effectiveness (\$/ton)
Unit 1 .....	\$2,515	\$1,326	\$4,887
Unit 2 .....	3,163	1,882	6,170
Unit 3 .....	2,678	1,390	5,142
Unit 4 .....	2,622	1,453	5,197
Unit 5 .....	2,908	1,598	5,764

EPA’s cost effectiveness calculations in this NPR are lower than we presented in the ANPRM. The estimates continue to be lower than those estimated by APS but higher than those estimated by NPS. The range of cost effectiveness that EPA has calculated and upon which this proposal is based, from \$2,515–\$3,163/ton of NO<sub>x</sub> removed, is lower than or within the range of other BART evaluations. Some BART analyses for other electric generating facilities evaluated SCR with a range of costs: Pacificorps Jim Bridger Units 2–4: \$2,256–\$4,274/ton of NO<sub>x</sub> removed; Pacificorps Naughton Units 1–3: \$2,751–\$2,830/ton of NO<sub>x</sub> removed; PGE Boardman: \$3,096/ton of NO<sub>x</sub> removed; M.R. Young Units 1 and 2: \$3,950–\$4,250/ton of NO<sub>x</sub> removed; and Centralia Power Plant Units 1 and 2: \$9,091/ton of NO<sub>x</sub> removed. San Juan Generating Station in Farmington, New Mexico, is a nearby coal fired power plant that was built shortly after FCPP and uses coal with almost identical characteristics. On June 21, 2010, the New Mexico Environmental Department proposed requiring SCR as BART for the four units at San Juan Generating Station based on cost-effectiveness calculations ranging from \$5,946/ton NO<sub>x</sub> reduced to \$7,398/ton NO<sub>x</sub> reduced.

EPA considers its revised cost-effectiveness estimates of \$2,515–

\$3,163/ton of NO<sub>x</sub> removed to be more accurate and representative of the actual cost of compliance. However, even if EPA had decided to accept APS’s worst-case cost estimates of \$4,887–\$6,170/ton of NO<sub>x</sub> removed, EPA considers that estimate to be cost effective for the purpose of proposing an 80% reduction in NO<sub>x</sub>, achievable by installing and operating SCR as BART at FCPP.

ii. *Factor 2: Energy and Non-Air Quality Impacts*

The Navajo Nation has expressed concerns that requiring additional controls at FCPP could result in lost Navajo employment and royalties if FCPP were to shut down or curtail operations. EPA has received no definitive information indicating that FCPP intends to shut down or curtail operations, but to assess the possibility that today’s proposed BART limits could have such an effect, EPA conducted an economic analysis that looked at the impact of requiring SCR on FCPP.

Based on an economic analysis of the increase in electricity generation costs as a result of SCR compared to the estimated cost to purchase electricity on the wholesale market, FCPP is expected to remain competitive relative to the wholesale market, suggesting that the incremental cost increase for SCR alone should not force FCPP to shut down. This analysis estimates that the average

cost of electricity generation over the 20 year amortization period as a result of SCR implementation will increase by 22%, or \$0.00740/kWh.

Retail electricity consumers, however, pay more than just the generation costs of power. Retail rates include the cost to transmit and distribute electricity as well as generate electricity. Additionally, for APS customers, for example, the generation cost increase on FCPP due to SCR would flow into a broader retail rate impact calculation based on the entire portfolio of APS generation assets and purchases power contracts, which include coal (of which FCPP is only a portion of APS’ total coal portfolio), natural gas, nuclear, and some renewables. For these reasons, EPA expects the potential rate increase to APS rate payers resulting from SCR on FCPP to be significantly lower than 22%. This topic is discussed in more detail in the TSD.

In addition to concerns about possible facility shut down, EPA received comments regarding potential impacts of increased transportation emissions associated with urea deliveries to FCPP for SCR and concerns of the affect of SCR on salability of fly ash. EPA conducted an analysis to evaluate any increase in health risks resulting from increased diesel truck traffic to and from FCPP and determined that the increase in cancer and non-cancer health risks

associated with transportation emissions in the most impacted census block in San Juan County, New Mexico, are well below background levels and will not result in a significant health risk.

The Salt River Pima Maricopa Indian Community expressed concern about the impact of SCR on their Phoenix Cement Company fly ash business unit at FCPP. Ammonia adsorption (resulting from ammonia injection from SCR or selective noncatalytic reduction—SNCR) to fly ash is generally less desirable due to odor but does not impact the integrity of the use of fly ash in concrete. However, other NO<sub>x</sub> control technologies, including LNB, also have undesirable impacts on fly ash. LNBs increase the amount of unburned carbon in the fly ash, also known as Loss of Ignition (LOI), which does affect the integrity of the concrete. Commercial-scale technologies exist to remove ammonia and LOI from fly ash. Therefore, EPA has determined that the impact of SCR on the fly ash at FCPP is smaller than the impact of LNB on the fly ash, and in both cases, the adverse effects can be mitigated.

EPA concludes that the energy and non-air quality impacts of SCR do not warrant elimination of SCR as the top control option for NO<sub>x</sub>.

#### iii. *Factor 3: Existing Controls at the Facility*

There are some existing controls at FCPP for NO<sub>x</sub>. APS has installed a variety of LNB on Units 2–5 although these controls are all about 20 years old and there have been significant advances in the technology for most EGU boilers. Unit 1 does not have any NO<sub>x</sub> controls. The controls that APS is operating at FCPP for NO<sub>x</sub> do not result in the magnitude of NO<sub>x</sub> emissions reduction that are consistent with BART and do not represent current control technologies.

#### iv. *Factor 4: Remaining Useful Life of Facility*

The remaining useful life of the facility can be relevant if the facility may shut down before the end of the amortization period used to annualize the costs of control for a technology. In its analysis, APS used an amortization period of 20 years, the standard amortization period recommended by EPA, and indicated that it anticipated that the remaining useful life of Units 1–5 is at least 20 years. As it appears that the FCPP facility will continue to operate for at least 20 years, EPA agrees with the use of an amortization period of 20 years to estimate costs.

#### v. *Factor 5: Degree of Visibility Improvement*

The fifth factor to consider under EPA's BART Guidelines is the degree of visibility improvement from the BART control options. See 59 FR at 39170. The BART guidelines recommend using the CALPUFF air quality dispersion model to estimate the visibility improvements of alternative control technologies at each Class I area, typically those within a 300 km radius of the source, and to compare these to each other and to the impact of the baseline (*i.e.*, current) source configuration. APS included sixteen Class I Areas in its modeling analysis; fifteen are within 300 km of FCPP and one Class I area, Grand Canyon National Park, is just beyond 300 km from FCPP. These areas are listed in Table 22 of the TSD.

The BART guidelines recommend comparing visibility improvements between control options using the 98th percentile of 24-hour delta deciviews, which is roughly equivalent to the facility's 8th highest visibility impact day. The "delta" refers to the difference between total deciview impact from the facility plus natural background, and deciviews of natural background alone, so "delta deciviews" is the estimate of the facility's impact. Visibility is traditionally described in terms of visual range in kilometers or miles. However, the visual range scale does not correspond to how people perceive visibility because how a given increase in visual range is perceived depends on the starting visibility against which it is compared. Thus, an increase in visual range may be perceived to be a big improvement when starting visibility is poor, but a relatively small improvement when starting visibility is good.

The "deciview" scale is designed to address this problem. It is linear with respect to perceived visibility changes over its entire range, and is analogous to the decibel scale for sound. This means that a given change in deciviews will be perceived as the same amount of visibility change regardless of the starting visibility. Lower deciview values represent better visibility and greater visual range, while increasing deciview values represent increasingly poor visibility. In the BART guidelines, EPA noted that a 1.0 deciview impact from a source is sufficient to "cause" visibility impairment and that a source with a 0.5 deciview impact must "contribute" to visibility impairment. Generally, 0.5 deciviews is the amount of change that is just perceptible to a human observer.

Under the BART guidelines, the improved visibility in deciviews from installing controls is determined by using the CALPUFF air quality model. CALPUFF, generally, simulates the transport and dispersion of FCPP emissions, and the conversion of SO<sub>2</sub> emitted from FCPP to particulate sulfate and NO<sub>x</sub> to particulate nitrate, at a rate dependent on meteorological conditions and background ozone concentration. These concentrations are then converted to delta deciviews by the CALPOST post-processor. The CALPUFF model and CALPOST post-processing are explained in more detail in the TSD.

The "delta deciviews" estimated by the modeling represents the facility's impact on visibility at the Class I areas. Each modeled day and location in the Class I area will have an associated delta deciviews. For each day, the model finds the maximum visibility impact of all locations (*i.e.*, receptors) in the Class I area. From among these daily values, the BART guidelines recommend use of the 98th percentile, which is roughly equivalent to the 8th highest day for a given year, for comparing the base case and the effects of various controls. The 98th percentile is recommended rather than the maximum value to avoid undue influence from unusual meteorological conditions. Meteorological conditions are modeled using the CALMET model.

APS conducted modeling for FCPP according to a modeling protocol submitted to EPA. See BART Visibility Modeling Protocol for the Arizona Public Service Four Corners Power Plant, ENSR Corporation, January 2008. APS's modeling used the CALMET and CALPUFF versions recommended by EPA but in blending in meteorological station wind observations, APS used a lower radius of influence for stations. This change resulted in smoother wind fields. After initial input from the Federal Land Managers, EPA requested APS to change certain other CALMET option settings. These changes resulted in a more refined approach that is more consistent with approaches used in PSD permit application modeling. Further details about the CALPUFF and CALMET modeling are in the TSD, and the relevant CALMET settings are listed in Table 23.

In addition to the different CALPUFF emission rates described above, EPA's evaluation of anticipated visibility improvement used revised post-processor settings from those originally used by APS. The USFS informed EPA that the ammonia background concentrations modeled by APS in January 2008 were lower than observed



concentrations.<sup>9</sup> The USFS recommended a method of back-calculating the ammonia background based on monitored values of sulfate and nitrate. EPA's ANPRM provided results based on using the USFS's back-calculation methodology.

The visibility modeling supporting today's proposal, however, uses a constant ammonia background of 1 ppb, which is the default value recommended for western areas. IWAQM Phase 2 document.<sup>10</sup> The TSD contains supplemental modeling using back-calculated ammonia concentrations, a thorough discussion of the back-calculation methodology and the sensitivity results based on selecting different concentrations of background ammonia.

The background values of ammonia are important because it is a precursor to particulate ammonium sulfate and ammonium nitrate, both of which degrade visibility. Ammonia is present in the air from both natural and anthropogenic sources. The latter may include livestock operations, fertilizer application associated with farming, and ammonia slip from the use of ammonia in SCR and SNCR technologies to control NO<sub>x</sub> emissions. Sensitivity of the model results to other ammonia assumptions are discussed in the TSD, and do not change the ranking of control options for evaluating visibility improvement, or the overall conclusions of the visibility analysis.

In our modeling input for ammonia, EPA assumed that the remaining ammonia in the flue gas following SCR reacts to form ammonium sulfate or

ammonium bisulfate before exiting the stack. This particulate ammonium is represented in the modeling as sulfate (SO<sub>4</sub>) emissions. Thus, EPA addressed ammonia solely as a background concentration.

In the supplemental sensitivity analyses using different ammonia values described in the TSD, ammonia concentrations for Mesa Verde National Park were not based on the back-calculation method, but instead were derived from measured ammonia concentrations in the Four Corners area, as described in Sather *et al.*, (2008).<sup>11</sup> Monitored data were available within Mesa Verde NP, but because particulate formation happens within a pollutant plume as it travels, rather than instantaneously at the Class I area, EPA also examined data at locations outside Mesa Verde NP itself. Monitored 3-week average ammonia at the Substation site, some 30 miles south of Mesa Verde, were as high as 3.5 ppb, though generally levels were less than 1.5 ppb. Maximum values in Mesa Verde were 0.6 ppb, whereas other sites' maxima ranged from 1 to 3 ppb, but generally values were less than 2 ppb. EPA used values estimated from Figure 5 of Sather *et al.*, (2008), in the mid-range of the various stations plotted. The results ranged from 1.0 ppb in winter to 1.5 ppb in summer. See TSD, Table 33.

The BART determination guidelines recommend that visibility impacts should be estimated in deciviews relative to natural background conditions. CALPOST, a CALPUFF post-processor, uses background

concentrations of various pollutants to calculate the natural background visibility impact. EPA used background concentrations from Table 2-1 of "Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule."<sup>12</sup> Although the concentration for each pollutant is a single value for the year, this method allows for monthly variation in its visibility impact, which changes with relative humidity. The resulting deciviews differ by roughly 1% from those resulting from the method originally used by APS.

To assess results from the CALPUFF model and post-processing steps, in addition to considering deciview changes directly, EPA used a least-squares regression analysis of all visibility modeling output from the 2001-2003 modeling period to determine the percent improvement in FCPP's visibility impact (in delta deciviews) resulting from the application of control technologies compared to the FCPP's baseline impacts.

As outlined in the 1999 Regional Haze rule (64 FR 35725, July 1, 1999), a one deciview change in visibility is a small but noticeable change in visibility under most circumstances when viewing scenes in a Class I area. Table 3 presents the visibility impacts of the 98th percentile of daily maxima for each Class I area for each year, averaged over 2001-2003.<sup>13</sup> The modeled visibility improvement at all Class I areas exceeds 0.5 deciviews and at most Class I areas exceeds 1 deciview.

TABLE 3—EPA MODELING RESULTS—8TH HIGH DELTA  $\Delta v$  IMPROVEMENT AND PERCENT CHANGE IN DELTA DECIVIEW ( $\Delta v$ ) IMPACT FROM NO<sub>x</sub> CONTROLS COMPARED TO BASELINE IMPACTS FROM 2001-2003 USING 1 PPB AMMONIA BACKGROUND SCENARIO

Class I area	Distance to FCPP	Baseline impact	Improvement from LNB/LNB + OFA		Improvement from SCR	
	Kilometers (km)	Delta $\Delta v$	Delta $\Delta v$	%	Delta $\Delta v$	%
Arches National Park .....	245	4.11	0.87	18	2.40	55
Bandelier Wilderness Area .....	216	2.90	0.54	21	1.62	57
Black Canyon of the Gunnison WA .....	217	2.36	0.46	23	1.42	60
Canyonlands NP .....	214	5.24	0.79	16	2.81	51
Capitol Reef NP .....	283	3.23	0.77	18	1.87	52
Grand Canyon NP .....	345	1.63	0.34	20	0.88	55
Great Sand Dunes NM .....	279	1.16	0.31	25	0.67	62
La Garita WA .....	202	1.72	0.44	25	1.05	62
Maroon Bells Snowmass WA .....	294	1.04	0.27	26	0.64	63

<sup>9</sup>Letter from Rick Cables (Forest Service R2 Regional Forester) and Corbin Newman (Forest Service R3 Regional Forester) to Deborah Jordan (EPA Region 9 Air Division Director) dated March 17, 2009.

<sup>10</sup>Interagency Workgroup On Air Quality Modeling (IWAQM) Phase 2 Summary Report And Recommendations For Modeling Long Range Transport Impacts (EPA-454/R-98-019), EPA

OAQPS, December 1998, <http://www.epa.gov/scram001/7thconf/calpuff/phase2.pdf>.

<sup>11</sup>Mark E. Sather *et al.*, 2008. "Baseline ambient gaseous ammonia concentrations in the Four Corners area and eastern Oklahoma, USA". Journal of Environmental Monitoring, 2008, 10, 1319-1325, DOI: 10.1039/b807984f.

<sup>12</sup>U.S. Environmental Protection Agency, EPA-454/B-03-005, September 2003, on web page

<http://www.epa.gov/ttn/oarpg/t1pgm.html>, with direct link [http://www.epa.gov/ttn/oarpg/t1/memoranda/rh\\_envcurhr\\_gd.pdf](http://www.epa.gov/ttn/oarpg/t1/memoranda/rh_envcurhr_gd.pdf).

<sup>13</sup>EPA did not average the 98th percentiles from each year as did APS, rather EPA used the 98th percentile from all three years taken together. This does not significantly affect the overall results.

TABLE 3—EPA MODELING RESULTS—8TH HIGH DELTA dv IMPROVEMENT AND PERCENT CHANGE IN DELTA DECIVIEW (dv) IMPACT FROM NO<sub>x</sub> CONTROLS COMPARED TO BASELINE IMPACTS FROM 2001–2003 USING 1 PPB AMMONIA BACKGROUND SCENARIO—Continued

Class I area	Distance to FCPP	Baseline impact	Improvement from LNB/LNB + OFA		Improvement from SCR	
	Kilometers (km)	Delta dv	Delta dv	%	Delta dv	%
Mesa Verde NP .....	62	5.95	0.62	13	2.43	45
Pecos WA .....	258	2.16	0.52	23	1.15	58
Petrified Forest NP .....	224	1.40	0.27	21	0.65	56
San Pedro Parks WA .....	160	3.88	0.68	19	2.02	53
Weminuche WA .....	137	1.87	0.49	25	1.19	62
West Elk WA .....	245	2.76	0.65	23	1.70	60
Wheeler Peak WA .....	265	1.53	0.37	24	0.84	59
Total Delta dv or Average % Change in Delta dv .....		42.94	8.39	21	23.34	57

Because installation and operation of SCR at FCPP to reduce NO<sub>x</sub> emissions by 80% will provide perceptible and significant visibility improvements at all of the surrounding Class I areas, and because LNB will result in much less visibility improvement than SCR, EPA is proposing to require FCPP to reduce NO<sub>x</sub> by 80% by meeting a plant-wide emissions limit of 0.11 lb/MMBtu, which is achievable with SCR. Our analysis also shows that the visibility improvement from the emissions reductions achieved with LNB are significantly lower.

#### D. Available and Feasible Control Technologies and Five Factor Analysis for PM Emissions

For PM, APS identified seven options as available retrofit technologies that would rely on post-combustion capture of the emissions. APS determined three options were technically feasible for PM control on Units 1–3: Wet electrostatic precipitators (ESPs), dry ESPs, and pulse jet fabric filters (PJFF or baghouses). These three control options were determined to all have similar levels of PM control of 99.9%. One control option, called the GE-MAX-9 hybrid, which is an ESP using a fabric filter collection bag, is estimated to have a PM control efficiency of 99.999% and has been used in a demonstration project, but has not been demonstrated on larger units. Therefore, EPA considered the other top three options, wet and dry ESP and baghouses, for PM control at FCPP.

APS has been operating venturi scrubbers on Units 1–3 at FCPP since the 1970s resulting in PM reductions as well as SO<sub>2</sub> reductions. PM is controlled on Units 4 and 5 with baghouses. Venturi scrubbers have been used by large coal fired electric generating units (EGUs), but since promulgation of the

New Source Performance Standards, have largely been replaced by more advanced technology that can achieve better PM reductions and provide better compliance assurance. Units 1–3 at FCPP are the last EGUs in Region 9 to continue to operate venturi scrubbers. The other EGUs in Region 9 have generally been retrofit with baghouses.

In this NPR, EPA is proposing to require APS to upgrade its PM controls as described below to meet an emission limit of 0.012 lb/MMBtu and 10% opacity on Units 1–3, which is achievable either through installing baghouses or ESPs. Because of the high incremental cost of both options, however, EPA is also asking for comment on whether APS can satisfy BART by operating the existing venturi scrubbers to meet an emissions limit of 0.03 lb/MMBtu with a 20% opacity limit to demonstrate continuous compliance. EPA is proposing to require APS to operate the existing baghouse for Units 4 and 5 to meet an emissions limit of 0.015 lb/MMBtu and 10% opacity.

#### i. Factor 1: Cost of Compliance

EPA is proposing to require APS to install ESPs (wet or dry) or PJFFs for Units 1–3 to comply with an emissions limit of 0.012 lb/MMBtu and a 10% opacity limit. For Units 4 and 5, APS would not need to install any controls in addition to the baghouses currently in place but would be required to operate the baghouses to meet an emission limit of 0.015 lb/MMBtu and a 10% opacity limit.

The wet-membrane ESP is the lowest cost approach to meeting the proposed PM BART limit of 0.012 lb/MMBtu for Units 1–3, but a wet membrane ESP would result in a very high cost effectiveness value for incremental cost because the existing venturi scrubbers are removing much of the PM. In other

words, any control device, such as an ESP, placed downstream of the venturi scrubbers will result in a high incremental cost because the denominator (tons removed) of the cost effectiveness calculation will be relatively small.

Alternatively, APS could install baghouses on Units 1–3 at FCPP upstream of the venturi scrubbers. The baghouses would be the most likely choice for APS for PM control if APS also wants to achieve significant mercury (“Hg”) reduction from these units. Installing baghouses would make those controls the primary PM control device (*i.e.* the downstream venturi scrubbers would primarily control SO<sub>2</sub> emissions) and the cost effectiveness for Units 1–3 would average less than \$110 per ton of PM removed. These costs are discussed further in Section 3 of the TSD.

Baghouses have already been installed on the four other coal fired EGUs in Region 9 that had historically used venturi scrubbers for PM control, including the only other venturi scrubber owned and operated by APS at its Cholla Unit 1. NV Energy Reid Gardner offered to install baghouses at Units 1, 2, and 3 as extra injunctive relief in a settlement agreement. Those baghouses are installed and operating (despite the high incremental dollars per ton of PM removed) to allow the units to achieve continuous compliance with PM and opacity limits and to prepare for the upcoming utility MACT regulation of Hg.

EPA considers installation of either ESPs (wet or dry) or baghouses as reasonable-cost technology capable of achieving the proposed BART emission limit of 0.012 lb/MMBtu for Units 1–3. However, because of the high incremental costs associated with ESPs or baghouses, EPA is also asking for

comment on whether APS can satisfy BART by continuing to operate the venturi scrubbers on Units 1–3, demonstrating compliance with an emissions limit of 0.03 lb/MMBtu with a continuous opacity limit of 20%. EPA’s basis for establishing a PM emissions limit of 0.03 lb/MMBtu is consistency with NSPS Subpart Da, which has been the applicable emissions limit for any boiler placed into service after 1978. We believe that an emissions limit that has been in place for over 35 years should be achievable with the venturi scrubbers. We provide further discussion of this issue in Subsection D.3 below and the TSD.

ii. *Factor 2: Energy and Non-Air Quality Impacts*

EPA is not aware of any energy and non-air quality impacts associated with any of the technologies discussed above that would eliminate them from consideration as BART.

iii. *Factor 3: Existing Controls at the Facility*

Units 1–3 are controlled by venturi scrubbers, which also are used for SO<sub>2</sub> control. These scrubbers operate at pressure drops less than 10 inches of water. Venturi scrubbers have not been installed for PM pollution control on any coal fired EGU in Region 9 since the early 1970s. Venturi scrubbers have not been in use since that time principally

due to concerns over the ability of venturi scrubbers to continuously meet the 0.10 lb/MMBtu standard established by a New Source Performance Standard in 1971. See 40 CFR Part 60 Subpart D. Fossil fuel fired boiler standards for coal fired units were revised for units built after 1978 and the PM limit was lowered to 0.03 lb/MMBtu. See 40 CFR Part 60 Subpart Da. Most current coal fired boilers now use baghouses which are capable of meeting PM limits of about 0.01 to 0.012 lb/MMBtu.

As mentioned earlier in the cost discussion, baghouses have already been installed on the four other coal fired EGUs in Region 9 that had historically used venturi scrubbers for PM control, including APS’s Cholla Unit 1. These baghouses were installed, despite the very high incremental dollars per ton of PM removed, to allow the companies to continue to operate the units in continuous compliance with their PM and opacity limits.

EPA notes that Units 1–3 at FCPP were operated with a re-heat of the scrubber exhaust. This allows the use of Continuous Opacity Monitors (COMs) in their stacks and provides an ongoing measurement of the opacity compliance. EPA understands that these three units originally installed and operated a re-heat system, but FCPP discontinued its use. EPA Region 9 is not aware of when APS discontinued using the re-heat system. The three venturi-equipped

units, Units 1–3, do not have COMs or opacity limits, which are required on all other EGUs in Region 9 and likely all across the U.S. because SIPs, such as Arizona’s, generally include a 20% opacity standard. Opacity standards are a regulatory tool that allows agencies and the public to ensure continuing compliance for PM.

Over the past several years the PM source testing for Units 1 and 2 have consistently complied with the PM limit of 0.03 lb/MMBtu by operating the venturi scrubbers. Unit 3 exceeded the limit in 2007 but after subsequent source tests averages an emission rate of below 0.03 lb/MMBtu.

EPA is requesting comment on allowing APS to continue to operate the venturi scrubbers on Units 1–3 provided it can demonstrate compliance with an emissions limit of 0.03 lb/MMBtu (as required by the NSPS Subpart Da for all post 1978 units) and a continuous opacity limit of 20%.

iv. *Factor 4: Remaining Useful Life of Facility*

As with NO<sub>x</sub>, EPA is assuming that the remaining useful life of the facility is 20 years.

v. *Factor 5: Degree of Visibility Improvement*

The modeled visibility improvements resulting from additional PM control are relatively small. See Table 4.

TABLE 4—EPA MODELING RESULTS—8TH HIGH DELTA dv IMPROVEMENT AND PERCENT CHANGE IN DELTA DECIVIEW (dv) IMPACT FROM PM CONTROL COMPARED TO BASELINE IMPACTS FROM 2001–2003 USING 1 PPB AMMONIA BACKGROUND SCENARIO

Class I area	Distance to FCPP	Baseline impact	Improvement from PM control	
	Kilometers (km)	Delta dv	Delta dv	%
Arches National Park .....	245	4.11	0.01	0
Bandelier Wilderness Area .....	216	2.90	0.01	0
Black Canyon of the Gunnison WA .....	217	2.36	0	0
Canyonlands NP .....	214	5.24	0.02	0
Capitol Reef NP .....	283	3.23	0.01	0
Grand Canyon NP .....	345	1.63	0.01	0
Great Sand Dunes NM .....	279	1.16	0	0
La Garita WA .....	202	1.72	0	0
Maroon Bells Snowmass WA .....	294	1.04	0	0
Mesa Verde NP .....	62	5.95	0.02	1
Pecos WA .....	258	2.16	0.01	0
Petrified Forest NP .....	224	1.40	0.01	0
San Pedro Parks WA .....	160	3.88	0.02	1
Weminuche WA .....	137	1.87	0	0
West Elk WA .....	245	2.76	0	0
Wheeler Peak WA .....	265	1.53	0.01	0
Total Delta dv or Average % Change in Delta dv .....	.....	42.94	0.13	0

However, this factor may be somewhat misleading because the

model does not include consideration of the visibility impairing plume that is

almost always present after the steam plume from Units 1–3 evaporates. The

term EPA uses for this plume is a "secondary visible plume". This secondary visible plume often stretches for over 20 miles from FCPP and is most apparent in the early mornings when the typical inversions cap the dispersion of the secondary visible plume. EPA does not have any information as to whether this secondary visible plume can be seen from Mesa Verde National Park, the closest Class 1 area to FCPP. EPA Region 9 staff has observed this secondary visible plume in New Mexico out as far as Aztec and Bloomfield en route to Farmington from Albuquerque. Therefore, EPA is specifically seeking information on this secondary visible plume, its frequency and persistence, and whether or not it affects or can be observed from any Class 1 area.

In the TSD, EPA discusses this secondary visible plume and whether it is related to the poor control of fine particulates by the venturi scrubbers. EPA is also seeking information as to whether this plume has been observed from Units 4 and 5. Although the modeled visibility improvements from requiring additional PM controls are small, EPA considers eliminating the secondary visible plume from Units 1–3 to be important for visibility in the area. EPA is proposing to require APS to install either ESPs (wet or dry) or baghouses to meet an emissions limit of 0.012 lb/MMBtu with a 10% opacity limit. EPA is also taking comment on whether BART can be satisfied by allowing APS to continue to operate its existing venturi scrubbers on Units 1–3 to demonstrate compliance with an emissions limit of 0.03 lb/MMBtu with a 20% opacity limit.

### III. EPA Proposed Action on Material Handling Limits

EPA is also proposing dust control requirements for FCPP. These requirements were included in the FIP that EPA finalized in 2007. APS appealed this portion of the 2007 FIP and EPA agreed to a voluntary remand of the dust control requirements to provide further justification in the record.

FCPP receives approximately 10 million tons of coal per year for combusting in the Units 1–5. This material moves by conveyor belt across the property line through numerous transfer points before being loaded to the storage silos that feed the individual Units. Each of these transfer points along with the conveyor belts has the potential for PM emissions. The PM can be minimized by collecting devices or dust suppression techniques such as covered conveyors or spraying devices at the transfer points.

After combustion, FCPP has a very large amount of ash that needs to be handled properly to prevent PM emissions to the air. The coal APS combusts at FCPP has as much as 25% ash. This means that there are over a million tons of ash that must be properly transported within the plant and then disposed. Some of this ash is stored in ash silos and is sold to companies that use it as an additive for making concrete. Much of the ash is currently disposed at a relatively new onsite ash landfill. All of this ash, which has the potential to become airborne PM, must be properly handled to prevent PM<sub>10</sub> NAAQS issues.

FCPP's property line abuts the coal mine property and the entire coal handling and fly ash storage is within close proximity to Morgan Lake which is a recreational lake just beyond the FCPP's property line. EPA has received numerous complaints from Navajo Tribal members concerning excess dust generated from the new landfill. For these reasons, EPA considers it necessary or appropriate for dust/PM suppression measures to be enforceable to protect the ambient air quality.

EPA is proposing to require APS to implement a dust control plan and a 20% opacity standard for all material handling operations. The dust plan must provide measures to ensure that the coal handling, ash handling and disposal and general dust generating sources do not exceed 20% opacity. Dust control measures at coal fired power plants are important for maintaining the PM<sub>10</sub> NAAQS in the areas adjacent to the power plant properties. Most coal fired power plants that are grandfathered from the NSPS Subpart Y (40 CFR part 60) and from Prevention of Significant Deterioration (PSD) case by case BACT determinations are covered by general SIP rules regulating emissions and have associated opacity standards to assure proper operation of dust control or suppression measures during the times when stack testing is not conducted. Grandfathered facilities usually were subject to process weight PM limits under SIPs. These limits used an exponential equation approach to setting the allowable lb/hr PM based on the amount of material processed per hour. The limits typically become more stringent as a ratio of the allowable emissions to the throughput as the amount of material throughput increases. The SIPs also apply a general opacity limit to these PM emitting units.

Because FCPP is located on the Navajo Reservation where generally applicable limits that often are included in SIPs do not exist, and because dust

control measures at coal fired power plants are important for maintaining the PM<sub>10</sub> NAAQS in the areas adjacent to the power plant properties, EPA finds that it is necessary or appropriate to impose measures to limit the amount of PM emissions from these material handling emission sources. EPA recently imposed similar dust control requirements at the Navajo Generating Station which is also on the Navajo Nation Reservation.

### IV. Administrative Requirements

#### 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) because it is a proposed rule that applies to only one facility and is not a rule of general applicability. This proposed rule, therefore, is not subject to review under EO 12866. This action proposes a source-specific FIP for the Four Corners Power Plant on the Navajo Nation.

#### 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, Four Corners Power Plant, the Paperwork 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 Four Corners Power Plant being proposed today does not impose any new requirements on small entities. See *Mid-Tex Electric Cooperative, Inc. v. FERC*, 773 F.2d 327 (DC Cir. 1985).

### D. Unfunded Mandates Reform Act (UMRA)

This proposed rule, if finalized, will impose an enforceable duty on the private sector owners of FCPP. However, this rule does not contain a Federal mandate that may result in expenditures of \$100 million (in 1996 dollars) or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. EPA's estimate for the total annual cost to install and operate SCR on all five units at FCPP and the cost to install and operate new PM controls on Units 1–3 does not exceed \$100 million (in 1996 dollars) in any one year. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA. This proposed action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This rule will not impose direct compliance costs on the Navajo Nation, and will not

preempt Navajo law. This proposed action will, if finalized, reduce the emissions of two pollutants from a single source, the Four Corners Power Plant.

### E. Executive Order 13132: Federalism

Under section 6(b) of Executive Order 13132, EPA may not issue an action that has federalism implications, that imposes substantial direct compliance costs on State or local governments, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed action. In addition, under section 6(c) of Executive Order 13132, EPA may not issue an action that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed action.

EPA has concluded that this proposed action, if finalized, may have federalism implications because it makes calls for emissions reductions of two pollutants from a specific source on the Navajo Nation. However, the proposed rule, if finalized, will not impose substantial direct compliance costs on the Tribal government, and will not preempt Tribal law. Thus, the requirements of sections 6(b) and 6(c) of the Executive Order do not apply to this action.

Consistent with EPA policy, EPA nonetheless consulted with representatives of Tribal governments<sup>14</sup> early in the process of developing the proposed action to permit them to have meaningful and timely input into its development.

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

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, Nov. 9, 2000), requires EPA to develop "an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." Under Executive Order 13175, to the extent practicable and permitted by law, EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs on Indian tribal governments, and that is not required by

statute, unless the Federal government provides the funds necessary to pay direct compliance costs incurred by tribal governments, or EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement. In addition, to the extent practicable and permitted by law, EPA may not issue a regulation that has tribal implications and pre-empts tribal law unless EPA consults with tribal officials early in the process of developing the proposed regulation and prepares a tribal summary impact statement.

EPA has concluded that this proposed rule, if finalized, may have tribal implications because it will require emissions reductions of two pollutants by a major stationary source located and operating on the Navajo reservation. However, this proposed rule, if finalized, will neither impose substantial direct compliance costs on tribal governments nor pre-empt Tribal law because the proposed FIP imposes obligations only on the owners or operator of the Four Corners Power Plant.

EPA has consulted with officials of the Navajo Nation in the process of developing this proposed FIP. EPA had an in-person meeting with Tribal representatives prior to the proposal and will continue to consult with Tribal officials during the public comment period on the proposed FIP. In addition, EPA provided Navajo Nation and other tribal governments additional time to submit formal comments on our Advanced Notice of Proposed Rulemaking. Several tribes, including the Navajo, submitted comments which EPA considered in developing this NPR. Therefore, EPA has allowed the Navajo Nation to provide meaningful and timely input into the development of this proposed rule and will continue to consult with the Navajo Nation and other affected Tribes prior to finalizing our BART determination.

### 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

<sup>14</sup> "Representatives of State and local governments" include non-elected officials of State and local governments and any representative national organizations not listed in footnote 3.

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 requires emissions reductions of two pollutants from a single stationary source. Because this proposed action only applies to a single 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 reduce emissions of PM and NO<sub>x</sub>, which contributes to ozone formation, the rule will have a beneficial effect on children's health by reducing air pollution that causes or exacerbates childhood asthma and other respiratory issues.

*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 (10) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures and business practices) that are developed or adopted by the VCS bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when the Agency decides not to use available and applicable VCS.

Consistent with the NTTAA, the Agency conducted a search to identify potentially applicable VCS. For the measurements listed below, there are a number of VCS that appear to have possible use in lieu of the EPA test methods and performance specifications (40 CFR Part 60, Appendices A and B) noted next to the measurement requirements. It would not be practical to specify these standards in the current proposed rulemaking due to a lack of sufficient data on equivalency and validation and because some are still under development. However, EPA's

Office of Air Quality Planning and Standards is in the process of reviewing all available VCS for incorporation by reference into the test methods and performance specifications of 40 CFR Part 60, Appendices A and B. Any VCS so incorporated in a specified test method or performance specification would then be available for use in determining the emissions from this facility. This will be an ongoing process designed to incorporate suitable VCS as they become available. EPA is requesting comment on other appropriate VCS for measuring opacity or emissions of PM and NO<sub>x</sub>.

Particulate Matter Emissions—EPA Methods 1 through 5.

Opacity—EPA Method 9 and Performance Specification Test 1 for Opacity Monitoring.

NO<sub>x</sub> Emissions—Continuous Emissions Monitors.

*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 requires emissions reductions of two pollutants from a single stationary source, Four Corners Power Plant.

**List of Subjects in 40 CFR Part 49**

Environmental protection, Administrative practice and procedure, Air pollution control, Indians, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: October 6, 2010.

**Jared Blumenfeld,**  
*Regional Administrator, Region IX.*

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

**PART 49—[AMENDED]**

1. The authority citation for part 49 continues to read as follows:

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

2. Section 49.23 is amended by adding paragraphs (i) and (j) to read as follows:

**§ 49.23 Federal Implementation Plan Provisions for Four Corners Power Plant, Navajo Nation.**

\* \* \* \* \*

(i) Regional Haze Best Available Retrofit Technology limits for this plant are in addition to the requirements in paragraphs (a) through (h) of this section. All definitions and testing and monitoring methods of this section apply to the limits in paragraph (i) of this section except as indicated in paragraphs (i)(1) through (4) of this section. Within 180 days of the effective date of this paragraph (i), the owner or operator shall submit a plan to the Regional Administrator that identifies the control equipment and schedule for complying with this paragraph (i). The owner or operator shall amend and submit this amended plan to the Regional Administrator as changes occur. The interim limits for each unit shall be effective 180 days after re-start of the unit after installation of SCR controls for that unit and until the plant-wide limit goes into effect. The plant-wide NO<sub>x</sub> limit shall be effective no later than 5 years after the effective date of this rule. APS may elect to meet the plant-wide limit early to remove the individual unit limits. Particulate limits for Units 1, 2, and 3 shall be effective 180 days after re-start of the units after installation of the PM controls but no later than 5 years after the effective date of this paragraph (i). Particulate limits for Units 4 and 5 shall be effective 180 days after re-start of the units after installation of the SCR controls.

(1) Particulate Matter for units 1, 2, and 3 shall be limited to 0.012 lb/MMBtu for each unit as measured by the average of 3 test runs with each run collecting a minimum of 60 dscf of sample gas and with a duration of at least 120 minutes. Sampling shall be performed according to 40 CFR Part 60 Appendices A-1 through A-3, Methods 1 through 4 and Method 5 or Method 5e. The averaging time for any other demonstration of the Particulate Matter compliance or exceedance shall be

based on a 6 hour average. Particulate testing shall be performed annually as required by paragraph (e)(3) of this section. This test with 2 hour test runs may be substituted and used to demonstrate compliance with the particulate limits in paragraph (d)(2) of this section.

(2) Particulate Matter from units 4 and 5 shall be limited to 0.015 lb/MMBtu for each unit as measured by the average of 3 test runs with each run collecting a minimum of 60 dscf of sample gas and with a duration of at least 120 minutes. Sampling shall be performed according to 40 CFR Part 60 Appendices A-1 through A-3, Methods 1 through 4 and Method 5 or Method 5e. The averaging time for any other demonstration of the particulate matter compliance or exceedance shall be based on a 6 hour average.

(3) No owner or operator shall discharge or cause the discharge of emissions from the stacks of Units 1, 2, 3, 4 or 5 into the atmosphere exhibiting greater than 10% opacity, excluding uncombined water droplets, averaged over any six (6) minute period.

(4) Plantwide nitrogen oxide emission limits.

(i) The plantwide nitrogen oxide limit, expressed as nitrogen dioxide, shall be 0.11 lb/MMBtu as averaged over a rolling 30 calendar day period. NO<sub>2</sub> emissions for each calendar day shall be determined by summing the hourly emissions measured in pounds of NO<sub>2</sub> for all operating units. Heat input for each calendar day shall be determined by adding together all hourly heat inputs, in millions of BTU, for all operating units. Each day the thirty day rolling average shall be determined by adding together that day and the preceding 29 days pounds of NO<sub>2</sub> and dividing that total pounds of NO<sub>2</sub> by the sum of the heat input during the same 30 day period. The results shall be the 30 day rolling pound per million BTU emissions of NO<sub>x</sub>.

(ii) The interim NO<sub>x</sub> limit for each individual boiler with SCR control shall be as follows:

(A) Unit 1 shall meet a rolling 30 calendar day NO<sub>x</sub> limit of 0.21 lb/MMBtu,

(B) Unit 2 shall meet a rolling 30 calendar day limit of 0.17 lb/MMBtu,

(C) Unit 3 shall meet a rolling 30 calendar day limit of 0.16 lb/MMBtu,

(D) Units 4 and 5 shall meet a rolling 30 calendar day limit of 0.11 lb/MMBtu, each.

(iii) Testing and monitoring shall use the 40 CFR part 75 monitors and meet the 40 CFR part 75 quality assurance requirements. In addition to these 40 CFR part 75 requirements, relative

accuracy test audits shall be performed for both the NO<sub>2</sub> pounds per hour measurement and the heat input measurement. These shall have relative accuracies of less than 20%. This testing shall be evaluated each time the 40 CFR part 75 monitors undergo relative accuracy testing.

(iv) If a valid NO<sub>x</sub> pounds per hour or heat input is not available for any hour for a unit, that heat input and NO<sub>x</sub> pounds per hour shall not be used in the calculation of the 30 day plant wide rolling average.

(v) Upon the effective date of the plantwide NO<sub>x</sub> average, the owner or operator shall have installed CEMS and COMS software that complies with the requirements of this section.

(j) Dust. Each owner or operator shall operate and maintain the existing dust suppression methods for controlling dust from the coal handling and ash handling and storage facilities. Within ninety (90) days after promulgation of this paragraph (j), the owner or operator shall develop a dust control plan and submit the plan to the Regional Administrator. The owner or operator shall comply with the plan once the plan is submitted to the Regional Administrator. The owner or operator shall amend the plan as requested or needed. The plan shall include a description of the dust suppression methods for controlling dust from the coal handling and storage facilities, ash handling, storage and landfilling, and road sweeping activities. Within 18 months of promulgation of this paragraph (j) each owner or operator shall not emit dust with opacity greater than 20 percent from any crusher, grinding mill, screening operation, belt conveyor, or truck loading or unloading operation.

[FR Doc. 2010-26262 Filed 10-18-10; 8:45 am]

**BILLING CODE 6560-50-P**

## **ENVIRONMENTAL PROTECTION AGENCY**

### **40 CFR Part 52**

[EPA-R06-OAR-2005-TX-0031; FRL-9215-1]

### **Approval and Promulgation of Air Quality Implementation Plans; Texas; Revisions to Rules and Regulations for Control of Air Pollution; Permitting of Grandfathered and Electing Electric Generating Facilities**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The EPA is proposing to partially approve and partially disapprove revisions of the Texas State Implementation Plan (SIP) submitted by the Texas Commission on Environmental Quality (TCEQ, or Commission) on January 3, 2000, and July 31, 2002, as supplemented on August 5, 2009. These revisions are to regulations of the TCEQ which relate to application and permitting procedures for grandfathered electric generating facilities (EGFs). The revisions address a mandate by the Texas Legislature under Senate Bill 7 to achieve nitrogen oxide (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>) and particulate matter (PM) emission reductions from grandfathered EGFs. These emissions reductions will contribute to achieving attainment and help ensure attainment and continued maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone, sulfur dioxide, and particulate matter in the State of Texas. As a result of these mandated emissions reductions, in accordance with section 110(l) of the Federal Clean Air Act, as amended (the Act, or CAA), partial approval of these revisions will not interfere with attainment of the NAAQS, reasonable further progress, or any other applicable requirement of the Act. EPA is proposing that the revisions, but for a severable provision, meet section 110, part C, and part D of the Federal Clean Air Act (the Act or CAA) and EPA's regulations. Therefore, EPA is proposing to approve the revisions but for a severable portion that allows collateral emissions increases of carbon monoxide (CO) created by the imposition of technology controls to be permitted under the State's Standard Permit (SP) for Pollution Control Projects (PCP). EPA is proposing to disapprove this severable portion concerning the issuance of a PCP SP for the CO collateral emissions increases. EPA is taking comments on this proposal and plans to follow with a final action.

**DATES:** Written comments must be received on or before November 18, 2010.

**ADDRESSES:** Submit your comments, identified by Docket No. R06-OAR-2005-TX-0031, by one of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>.

- Follow the on-line instructions for submitting comments.

- *U.S. EPA Region 6 "Contact Us" Web site:* <http://epa.gov/region6/r6comment.htm>. Please click on "6PD (Multimedia)" and select "Air" before submitting comments.