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40 CFR Part 49
Source Specific Federal Implementation Plan for Implementing Best Available Retrofit Technology for Four Corners Power Plant: Navajo Nation; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 49

[EPA–R09–OAR–2010–0683; FRL–9715–9]

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

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is promulgating a source-specific Federal Implementation Plan (FIP) requiring the Four Corners Power Plant (FCPP), a coal-fired power plant located on the Navajo Nation near Farmington, New Mexico, to achieve emissions reductions required by the Clean Air Act's (CAA) Best Available Retrofit Technology (BART) provision. In this final action, EPA is requiring FCPP to reduce emissions of oxides of nitrogen (NO_X) and is setting emission limits for particulate matter (PM) based on emission rates already achieved at FCPP. These pollutants contribute to visibility impairment in the numerous mandatory Class I Federal areas surrounding FCPP. For NO_X emissions, EPA is requiring FCPP to meet a plant-wide emission limit of 0.11 lb/MMBtu on a rolling 30-day heat input-weighted average. This represents an 80 percent reduction from the current NO_X emission rate and is expected to provide significant improvement in visibility. EPA is also finalizing an alternative emission control strategy that gives the owners of FCPP the option to close Units 1–3 and install controls on Units 4 and 5 to each meet an emission limit of 0.098 lb/MMBtu, based on a rolling average of 30 successive boiler operating days. For PM, EPA is requiring Units 4 and 5 at FCPP to meet an emission limit of 0.015 lb/MMBtu, and retaining the existing 20 percent opacity limit. These PM limits are achievable through the proper operation of the existing baghouses. EPA is also requiring FCPP to comply with a 20 percent opacity limit on its coal and material handling operations.

DATES: *Effective Date:* This rule is effective on October 23, 2012.

FOR FURTHER INFORMATION CONTACT: Anita Lee, EPA Region 9, (415) 972–3958, *r9air_fcppbart@epa.gov.*

SUPPLEMENTARY INFORMATION: EPA has established a docket for this action under Docket ID No. EPA–R09–OAR–2010–0683. The index to the docket for this action is available electronically at *http://www.regulations.gov* and in hard copy at EPA Region 9, 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.* Confidential Business Information (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. A reasonable fee may be charged for copies.

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

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I. Background of the Final Rule

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 [1] (48 percent), APS (15 percent), Public Service Company of New Mexico (13 percent), Salt River Project (SRP) (10 percent), El Paso Electric Company (7 percent), and Tucson Electric Power (7 percent).

EPA's proposed BART determination for FCPP, published on October 19, 2010, provided a thorough discussion of the statutory and regulatory framework for addressing visibility through application of BART for sources located in Indian country, and of the factual background for BART determinations at FCPP. 75 FR 64221.

On February 25, 2011, as a result of additional information provided by stakeholders, EPA published a Supplemental Proposal. FR 76 10530. We briefly summarize the provisions of our Proposal and our Supplemental Proposal below.

Part C Subpart II of the 1977 CAA 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). EPA promulgated regional haze regulations 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

[1] Arizona Public Service is currently seeking regulatory approvals to purchase Southern California Edison's share of Units 4 and 5.

regulations include a provision requiring States to require certain major stationary sources to procure, install and operate BART. This provision covers sources ''in existence on August 7, 1977, but which ha[ve] not been in operation for more than fifteen years as of such date'' and which emit pollutants that are reasonably anticipated to cause or contribute to any visibility impairment. EPA has determined that FCPP is a BART-eligible source (75 FR 64221).

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. Those factors 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). EPA's guidelines for evaluating BART are set forth in Appendix Y to 40 CFR Part 51.

In 1998, EPA promulgated the Tribal Authority Rule (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).

In the TAR, EPA determined that it has the discretionary authority to promulgate ''such federal implementation plan provisions as are necessary or appropriate to protect air quality'' consistent with CAA sections 301(a) and 301(d)(4) when a Tribe has not submitted or EPA has not approved a Tribal Implementation Plan (TIP). 40 CFR 49.11(a).

EPA has previously promulgated FIPs under the TAR to regulate air pollutants emitted from FCPP. In 1999, EPA proposed a FIP for FCPP. That FIP proposed to fill the regulatory gap that existed because New Mexico permits and State Implementation Plan (SIP) rules are not applicable or enforceable in the Navajo Nation, and the Tribe had not sought approval of a TIP covering the plant. 64 FR 48731 (Sept. 8, 1999).

Before EPA finalized the 1999 FIP, the operator of FCPP began negotiations to reduce SO_2 emissions from FCPP by making upgrades to improve the efficiency of its SO_2 scrubbers. The parties to the negotiations requested EPA to make those SO_2 reductions enforceable through a source-specific FIP. Therefore, EPA proposed a new FIP for FCPP in September 2006. 71 FR 53631 (Sept. 12, 2006). In the final FIP, EPA indicated that the new SO_2 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 percent opacity limit on both the combustion and fugitive dust emissions from material handling operations.

APS, the operator of FCPP, and Sierra Club each filed Petitions seeking judicial review of EPA's promulgation of the 2007 FIP for FCPP on separate grounds. The Court of Appeals for the Tenth Circuit rejected both Petitions. The Court agreed with EPA's request for a voluntary remand of a single narrow aspect of the 2007 FIP: The opacity limit for the fugitive dust for the material handling operations. Id. At 1131.

On October 19, 2010 (75 FR 64221) EPA proposed a second FIP under 40 CFR 49.11(a) finding it is necessary or appropriate to establish BART requirements for NO_X and PM emissions from FCPP, and proposed specific NO_X and PM limits as BART. For NO_X, EPA proposed a plant-wide emission limit of 0.11 lb/MMBtu, representing an 80 percent reduction from current NO_X emission rates, achievable by installing and operating SCR technology on Units 1–5. For PM, EPA proposed an emission limit of 0.012 lb/MMBtu for Units 1–3 and 0.015 lb/MMBtu for Units 4 and 5 achievable by installing and operating any of several equivalent controls on Units 1–3, and through proper operation of the existing baghouses on Units 4 and 5. EPA also proposed a 10 percent opacity limit from Units 1–5 and a 20 percent opacity limit to apply to FCPP's material handling operations to respond to the voluntary remand EPA took on this issue from the 2007 FIP.

On November 24, 2010, APS, acting on behalf of FCPP's owners, submitted a letter to EPA offering an alternative to reduce visibility-impairing pollution. APS proposed to close Units 1–3 by 2014 and install and operate SCR on Units 4 and 5 to each meet an emission limit of 0.11 lb/MMBtu by the end of 2018. On February 25, 2011, we published a Supplemental Proposal (76 FR 10530) with a technical evaluation of APS' alternative. Our Supplemental Proposal also provides a detailed summary of the legal background for proposing an alternative emission control strategy as achieving better progress towards the national visibility goal (76 FR 10530).

In our Supplemental Proposal, EPA proposed to allow APS the option to comply with the alternative emission control strategy in lieu of complying with our October 19, 2010, proposed BART determination. EPA's alternative emission control strategy involved closure of Units 1–3 by 2014 and installation and operation of add-on post combustion controls on Units 4 and 5 to each meet a NO_X emission limit of 0.098 lb/MMBtu by July 31, 2018. EPA proposed that this alternative emission control strategy represents reasonable progress towards the national visibility goal, under CAA Section 169A(b)(2), because it would result in greater visibility improvement in surrounding Class I areas at a lower cost than our October 19, 2010, BART proposal. The proposal to require PM and opacity limits on Units 1–5, as well as 20 percent opacity limits for controlling dust from coal and ash handling and storage facilities, was unchanged.

II. Summary of Final FIP Provisions

EPA is finding today that it is necessary or appropriate to promulgate a source-specific FIP requiring FCPP to achieve emissions reductions required by the CAA's BART provision. Specifically, EPA is requiring FCPP to meet new emissions limits for NO_X and PM. These pollutants contribute to visibility impairment in the 16 mandatory Class I Federal areas surrounding FCPP. For NO_X emissions, EPA is finalizing a BART determination as well as an optional alternative to BART. FCPP can choose which emissions control strategy to follow and must notify EPA of its choice by July 1, 2013. Our final BART determination requires FCPP to meet a plant-wide heat input-weighted emission limit of 0.11 lb/MMBtu on a rolling 30-calendar day average which represents an 80 percent reduction from current NO_X emission rates. This NO_X limit is achievable by installing and operating add-on post-combustion controls on Units 1–5. Installation and operation of the new NO_X controls on one 750 MW unit must be within 4 years of October 23, 2012. NO_X controls on the remaining units must be installed and operated within 5 years of October 23, 2012.

Alternatively, FCPP may choose to comply with an alternative emission control strategy for NO_X in lieu of complying with EPA's final BART determination for NO_X. This alternative emission control strategy requires permanent closure of Units 1–3 by January 1, 2014, and installation and operation of add-on post combustion controls on Units 4 and 5 to meet a NO_X emission limit of 0.098 lb/MMBtu each, based on a rolling average of 30

successive boiler operating days, by July 31, 2018.

For PM, EPA is requiring Units 4 and 5 to meet a BART emission limit of 0.015 lb/MMBtu within 60 days after restart following the scheduled major outages for Units 4 and 5 in 2013 and 2014. This emission limit is achievable through the proper operation of the existing baghouses. EPA is determining that it is not necessary or appropriate to finalize our proposed PM BART determination for Units 1–3 or our proposed opacity limit of 10 percent on Units 1–5. FCPP must continue to meet the existing 20 percent opacity limit on Units 1–5.

To address our voluntary remand of the material handling requirements from the 2007 FIP, EPA is finalizing our proposal to require FCPP to comply with a 20 percent opacity limit on its material handling operations, including coal handling.

In our final rule, EPA has made several revisions to the proposed rule and Supplemental Proposal based on comments we received during the public comment period. These revisions include: revising the compliance date under BART from within 3 to 5 years [2] of the effective date of the final rule to within 4 to 5 years [3] of the effective date; revising the interim limits to only include an interim limit for one 750 MW unit rather than all units to match the revised compliance timeframes; adding 6 months to the notification dates to EPA on APS's plans to implement BART or the BART Alternative; revising the averaging time for the NO_X limit under the BART Alternative from a 30-day average to a rolling average of 30 successive boiler operating days; retaining the existing opacity limit of 20 percent instead of setting a new 10 percent opacity limit on Units 1–5; determining that it is not necessary or appropriate at this time to finalize a BART determination for PM for Units 1–3; and revising the effective date of the PM emission limit for Units 4 and 5 to the next schedule major outage rather than following installation of new post-combustion NO_X controls. We include the rationale for these revisions in our responses to comments. All comments we received are included in the docket and EPA has summarized and responded to all comments in a separate Response to Comments (RTC) document that is also included in the docket for this final rulemaking. In this **Federal Register** notice, EPA is including a summary of the major comments we received and a summary of our responses.

III. Summary of Major Issues Raised by Commenters

Our October 19, 2010, proposal included a 60-day public comment period that ended on December 20, 2010. On November 12, 2010, EPA published a notice of public hearings to be held in the Four Corners area on December 7–9, 2010 (75 FR 69374). On December 8, 2010, EPA published in the **Federal Register** a notice that EPA received an alternative proposal from APS and would be extending the public comment period to March 18, 2011, and postponing the previously scheduled public hearings in order to evaluate that alternative proposal (75 FR 76331). Notices of public hearings and rescheduled hearings were published in three newspapers near the Four Corners Power Plant [4]. Our supplemental proposal on February 25, 2011, subsequently extended the public comment period until May 2, 2011, and announced four public hearings on the proposed BART determination and supplemental proposal in the Four Corners area on March 29, 30, and 31, 2011. In all, 90 oral testimonies were presented at the public hearings.

We received nearly 13,000 written comments. Of these, over 12,800 comments came from private citizens who submitted substantially similar comments. We received an additional 110 unique written comments (not including duplicates, requests for extension of the public comment period, or requests for additional hearings). We do not consider or address letters or comments unrelated to the rulemaking in this notice or in our response to comments document. The unique comments can be broken down by general type as follows: 78 from private citizens, eight from environmental advocacy groups, four from the owners of FCPP, five from state/local government entities, four from public interest advocacy groups, two from tribes, four from utility industry associations, three from federal agencies, one from a U.S. Senator, and one from the operator of the Navajo Mine.

A. Comments on Factor One—Cost of Controls

We received a number of comments on our approach for estimating the cost of SCR at FCCP, the incremental cost effectiveness of controls, and on our top-down approach for evaluating controls.

1. Comments on the Analysis of the Cost of SCR at FCPP

Comment: Some of the owners of FCPP and a utility industry association stated that in analyzing the cost of SCR at FCPP, EPA improperly reworked and reduced the SCR cost estimates submitted for FCPP by eliminating line item costs that are not explicitly included in the *EPA Control Cost Manual* (citing 75 FR 64227). Commenters noted that APS' estimate was prepared by B&V, an engineering firm with extensive experience with the installation and operation of pollution control equipment and that the prices used in the cost analysis were based on quotes from equipment vendors that reflected current pricing.

Response: EPA disagrees with the comment that EPA improperly reworked and reduced the SCR cost estimates. EPA used a hybrid approach for our cost analysis that relied primarily on the highest of several cost estimates provided by APS, but also followed the BART Guidelines that state ''[i]n order to maintain and improve consistency, cost estimates should be based on the *OAQPS Control Cost Manual,* where possible'',[5] to determine whether APS included cost estimates for services or equipment associated with SCR that were either not needed (*e.g.,* mitigation for increased sulfuric acid emissions or catalyst disposal), or not allowed under the *EPA Control Cost Manual* (*e.g.,* legal fees).

Our cost analysis relied primarily on the highest cost estimates submitted by APS. EPA accepted all site-specific costs provided by APS for cost categories (*e.g.,* purchased equipment, installation) that are typically included in a cost estimate conducted in accordance with the *EPA Control Cost Manual,* and only excluded line item costs that are not explicitly included in the *EPA Control Cost Manual* or in a limited number of cases where EPA determined alternative

[2] We proposed to require phased installation of add-on NO_X controls on at least 560 MW of generation within 3 years of the effective date of the final rule, on at least 1310 MW of generation within 4 years of the effective date, and plant-wide within 5 years of the effective date.

[3] We are finalizing the rule to require phased installation of add-on NO_X controls on at least 750 MW of generation within 4 years of the effective date and on the remaining units within 5 years of the effective date.

[4] Notices of scheduled public hearings were published in the Farmington Daily Times and the Durango Herald on November 3, 2010 and February 17, 2011, and the Navajo Times on November 4, 2010 and February 17, 2011. Notices of the extended public comment period and postponement of the December public hearings were published in the Farmington Daily Times and the Durango Herald on November 24, 2010 and in the Navajo Times on December 2, 2010.

[5] The OAQPS Control Cost Manual is now called the EPA Control Cost Manual. The EPA Control Cost Manual is available from the following Web site: *http://www.epa.gov/ttncatc1/products.html#cccinfo.*

costs were more appropriate (*e.g.,* costs of catalysts, interest rates). We note that EPA's cost estimate presented in the Technical Support Document (TSD)[6] ($718 million total for Units 1–5) is only 18 percent lower than the highest B&V cost estimate and less than 0.6 percent lower than the lowest and most recent B&V cost estimate.

Our detailed, line-by-line analysis [7] was included in the docket for our proposed rulemaking and provided an explanation for why we retained, modified, or rejected each line item in the SCR cost estimate for each of the five units at FCPP.

Comment: One of the owners of FCPP asserted that EPA's estimate of the average cost effectiveness of SCR at FCPP is significantly higher than the level ($1,600 per ton of NO_X removed) that EPA determined was not cost effective in the 2005 BART rules for presumptive BART limits. The commenter asserted that there is no basis for EPA to depart from its own rules by concluding that SCR is BART for FCPP when this technology is many times more expensive than the costs EPA rejected as presumptive BART in the 2005 BART rules. The commenter noted that its cost analysis estimated that the average cost effectiveness of combustion controls for the five units at FCPP would range from $524 to $1,735 per ton of NO_X removed, while the average cost effectiveness of SCR would range from $4,215 to $5,283 per ton. The commenter also noted that EPA's estimate of average cost effectiveness for SCR at FCPP ranged from $2,515 to $3,163 per ton. The commenter stated that, at the low end, only the estimate of the average cost effectiveness of combustion controls is in line with EPA's estimates of cost-effective controls for presumptive BART limits, while the estimate of average cost effectiveness of SCR is significantly higher.

Response: EPA disagrees with this comment. Although the commenters argue that the BART guidelines established a threshold for cost effectiveness against which future BART determinations must be compared, the BART Guidelines did not establish a cost effectiveness threshold for all BART determinations. In developing the presumptive NO_X limits for BART in 2005, EPA did not set the cost effectiveness values estimated for combustion controls as the threshold for determining whether a given control technology was or was not cost effective. The BART Guidelines do not set a numerical definition for ''cost effective'', and the analysis of presumptive limits uses cost effectiveness as a means to broadly compare control technologies, not as threshold for rejecting controls for an individual unit or facility that exceed the average cost effectiveness of combustion controls.

Additionally, a comparison of the average cost effectiveness estimates in the 2005 BART guidelines against EPA's cost effectiveness estimates in 2010 for FCPP is not an ''apples to apples'' comparison. The technical support documentation for the 2005 BART guidelines indicate that cost effectiveness of controls was not determined based on site-specific cost estimates developed for each BART-eligible facility; rather, cost estimates for existing facilities were determined using assumptions for capital and annual costs per kilowatt (kW) [8] or kilowatt-hour (kW-hr), and then scaled according to boiler size at the existing facilities. The supporting information for the 2005 BART Guidelines estimated SCR costs [9] for FCPP Units 4 and 5 that are comparable to SCR cost estimates generated by the National Park Service (NPS) in 2009 using the *EPA Control Cost Manual.*[10] The same commenters have previously dismissed the NPS SCR cost estimates based on the *EPA Control Cost Manual* because it does not include site-specific costs.[11] In short, the commenter's recommendation to use generalized cost estimates from the 2005 BART Guidelines as a bright line threshold for comparison with site-specific 2010 cost estimates is inconsistent with its own criticisms of the *EPA Control Cost Manual.*

In determining that a different level of control than the presumptive limit was warranted as BART for FCPP, EPA evaluated the five statutory factors in our assessment for FCPP. This evaluation was detailed in the Technical Support Document for our proposed BART determination and included an analysis of cost effectiveness, energy and non-air quality impacts of controls, existing controls at the facility, the remaining useful life of the facility, and the visibility improvement reasonably anticipated to result from controls. Therefore, EPA has not improperly disregarded the BART guidelines in our analysis for FCPP.

Comment: A number of commenters stated that EPA's BART analysis for FCPP was inconsistent with its own regulations in that it failed to consider control costs as a function of visibility improvement. These commenters typically stated that EPA's BART determination for FCPP must consider the cost effectiveness of control technology options in terms of dollars per deciview-improved.

Response: The BART Guidelines require that cost effectiveness be calculated in terms of annualized dollars per ton of pollutant removed, or $/ton.[12] The commenters are correct in that the BART Guidelines list the $/deciview ratio as an additional cost effectiveness metric that can be employed along with $/ton for use in a BART evaluation. However, the use of this metric further implies that additional thresholds or notions of acceptability, separate from the $/ton metric, would need to be developed for BART determinations. We have not used this metric for BART purposes at FCPP because (1) it is unnecessary in judging the cost effectiveness of BART, (2) it complicates the BART analysis, and (3) it is difficult to judge. In particular, the $/deciview metric has not been widely used and is not well-understood as a comparative tool. In our experience, $/deciview values tend to be very large because the metric is based on impacts at one Class I area on one day and does not take into account the number of affected Class I areas or the number of days of improvement that result from controlling emissions. In addition, the use of the $/deciview suggests a level of precision in the CALPUFF model that may not be warranted. As a result, the $/deciview can be misleading. We conclude that it is sufficient to analyze the cost

[6] See ''TSD Proposal—Technical Support Document 10–6–10'', Document No. EPA–R09–OAR–2010–0683–0002.

[7] See ''TSD ref [40] Four Corners SCR Cost Analysis (EPA) 8–26–10'', Document No. EPA–R09–OAR–2010–0683–0033.

[8] In the 2005 BART presumptive limit analysis, EPA estimated capital costs at all facilities nationwide assuming that SCR costs were $100/kW, and then scaling by the size of the facility (kW).

[9] The 2005 BART guidelines estimated SCR capital costs at FCPP to be $64 million and total annual costs to be $11 million. Cost effectiveness calculations rely on total annual costs and annual NO_X reductions from the control technology.

[10] In the ANPRM, in addition to reporting APS' cost estimates and EPA's revisions to APS' cost estimates, for reference, EPA also reported cost estimates developed by NPS using the *EPA Control Cost Manual* and provided to EPA during consultations with the FLMs prior to our ANPRM. NPS estimated SCR capital costs to be $53 million and total annual costs to be $10 million. See Table 9 in the October 2010 TSD for the proposed BART determination for FCPP. In its comments on the ANPR, NPS revised its cost estimates for SCR on Units 4 and 5 to $114 million (capital cost) and $18 million (total annual cost)—see Table 12 in the TSD for the proposed BART determination.

[11] APS and other entities provided comments to EPA on the NPS cost estimates reported in the ANPRM, see document titled ''Comments on ANPRM 09 0598 APS Comments and Exhibits'' document ID number EPA–R09–OAR–2009–0598–0195.

[12] 70 FR 39167.

effectiveness of potential BART controls for FCPP using $/ton, in conjunction with an assessment of the modeled visibility benefits of the BART control.

EPA considered cost of controls, including the total capital costs, annual costs, and $/ton of NO_X pollution reduced in our proposed BART determination. Additionally, in response to comments received on our proposal, EPA included calculations and consideration of incremental cost effectiveness (see Section 3.2 of the Response to Comments document in the docket for this final rulemaking). EPA considered visibility impacts, including the degree of impairment, the number of Class I areas affected by FCPP, the deciview improvement resulting from controls, and the percent change in improvement. EPA determined that these metrics are sufficient in completing our five-factor analysis for FCPP.

Comment: One commenter stated that BART must be determined in the context of reasonable progress rather than in isolation and that the cost effectiveness metric used by EPA (i.e., $/ton of NO_X reduced) does not satisfy the statutory requirement to consider the cost to comply with the Regional Haze program because it does not include compliance costs related to requirements for reasonable progress.

Response: Congress identified BART as a key measure for ensuring reasonable progress. We disagree that BART must be determined in the context of reasonable progress. If anything, reasonable progress depends on BART. Because the Class I areas affected by emissions from FCPP are not achieving the glidepath, it is important that states, tribes, and EPA require reasonable measures to be implemented to ensure that progress is made towards the national visibility goal.

The BART guidelines specify that the cost of controls be estimated by identifying the emission units being controlled, defining the design parameters for emission controls, and developing a cost estimate based on those design parameters using the *EPA Control Cost Manual* while taking into account any site-specific design or other conditions that affect the cost of a particular BART control option. The BART guidelines do not require the costs of compliance under BART to consider costs that may be associated with reasonable progress.

Comment: The Navajo Nation commented that EPA should analyze the affordability of controls under the supplemental proposal by performing a detailed analysis, rather than an approximation, of the cost of compliance for installing SCR on Units 4 and 5, including a consideration of the impacts of closing Units 1–3.

Response: EPA disagrees that we should perform a detailed cost analysis of the alternative emission control strategy put forth in the Supplemental Proposal. The Regional Haze Rule, in assessing an alternative measure in lieu of BART (40 CFR 51.308(e)(2)) requires several elements in the alternative plan (*e.g.,* a demonstration that the alternative will achieve greater reasonable progress than BART, and that reductions are surplus to the baseline date of the SIP), but does not require an analysis of the cost of the alternative plan.

Similarly, an affordability analysis of the alternative emission control strategy is not required under the Regional Haze Rule; however, at the request of the Navajo Nation, pursuant to EPA's customary practice of engaging in extensive and meaningful consultation with tribes, EPA commissioned a study to estimate potential adverse impacts to the Navajo Nation of APS's option to close Units 1–3 and will provide the report to the Navajo Nation by letter as a follow-up to our consultation.

2. Comments on Top-Down Analysis Versus Incremental Cost Effectiveness

Comment: A number of commenters note that EPA's proposed BART analysis was inconsistent with its own regulations in that it used a top-down analytic approach and failed to conduct an incremental cost evaluation. Commenters indicated that in using the top-down analysis, EPA failed to carry out the five-factor analysis for each of the technically feasible retrofit technologies as required by the BART Guidelines (citing 40 CFR part 51, Appendix Y, section I.F.2.c), including combustion control technology which the BART Guidelines identify as presumptive BART.

Response: EPA disagrees with these comments. In the preamble to the final BART guidelines, EPA discusses two options presented in the 2001 proposal and 2004 reproposal of the guidelines for evaluating ranked control technology options (See discussion at 70 FR 39130). Under the first option, States would use a sequential process for conducting the analysis, beginning with a complete evaluation of the most stringent control option. The process described is a top-down approach analogous to the analysis we used in our proposed BART determination for FCPP. If the analysis shows no outstanding issues regarding cost or energy and non-air quality environmental impacts, the analysis is concluded and the top level of technically feasible controls is identified as the ''best system of continuous emission reduction''. Therefore, in conducting our BART determination for FCPP, EPA's top-down approach for assessing the five factors was consistent with the discretion allowed under the BART guidelines. EPA additionally notes that the TSD for our proposed rulemaking included analyses of the costs, non-air impacts, and visibility improvements associated with combustion controls at FCPP, but that there is no requirement for a five-factor analysis on all potentially available control options if the top down approach is used and the top level of technically feasible controls is selected (70 FR 39130).

Comment: One of the owners of FCPP asserted that the BART rules require an incremental cost analysis and provided an analysis comparing the costs of combustion controls to the costs of SCR. According to the commenter's analysis, the incremental cost effectiveness of moving from combustion controls to SCR ranges from $6,553 to $8,605 per ton of NO_X reduced for the five units at FCPP. This commenter and another FCPP owner asserted that this ''extraordinarily high'' incremental cost highlights the fact that combustion controls, not SCR, satisfy the cost effectiveness test applied by EPA in adopting the presumptive BART limits in the BART rules.

Response: EPA agrees that the BART Guidelines recommend consideration of both average and incremental cost effectiveness, however, EPA disagrees with the commenter that the incremental cost effectiveness should be a comparison between combustion controls and SCR for this particular facility. As discussed at length in the TSD for our proposed BART determination for FCPP, Region 9 has determined that combustion controls (burner modifications and overfire air, including ROFA) will not be effective at significantly reducing emissions at Four Corners without potential operational difficulties due to inherent design and physical limitations of the boilers. Therefore, in estimating incremental cost, it is inappropriate and misleading to include combustion controls in the analysis for this particular facility. To respond to this comment, EPA conducted an incremental cost effectiveness analysis and included it in our docket for this final rulemaking.[13] Based on our incremental cost analysis, EPA has determined that the incremental cost of SCR compared to

[13] See ''Incremental cost.xlsx'' in the docket for this final rulemaking.

selective non-catalytic reduction (SNCR), the next most stringent option ($2,500 per ton to $3,300 per ton), is reasonable and does not support the commenter's conclusion that SCR is not BART for FCPP.

EPA estimated the total capital cost of BART for NO_X to be $718 million and total annual costs (annualized capital costs plus additional operating costs) to be $93 million per year. This final BART determination is expected to reduce emissions of NO_X by 80 percent, from 43,000 tons per year to 8,500 tons per year, resulting in a facility-wide average cost effectiveness of about $2,700 per ton of NO_X removed. EPA anticipates that this investment will reduce the visibility impairment caused by FCPP by an average of 57 percent at 16 Class I areas within 300 km of the facility. A detailed summary of the cost and visibility benefits were provided in the Technical Support Document for the proposed rulemaking. As discussed in our Supplemental Proposal, although APS did not provide a cost estimate for the BART Alternative and the RHR does not require an evaluation of costs associated with a BART Alternative, if APS chooses to implement the Alternative, EPA anticipates those costs to be approximately 39 percent lower than the cost of BART. The BART Alternative is expected to reduce emissions of NO_X by 87 percent, from 43,000 tons per year to 5,600 tons per year, resulting in a facility-wide average cost effectiveness of roughly $1,600 per ton of NO_X removed.[14] EPA anticipates that implementation of the BART Alternative will reduce visibility impairment caused by FCPP by an average of 72 percent at 16 Class I areas within 300 km of the facility.

B. Comments on Factor Two—Economic, Energy, and Non-Air Quality Environmental Impacts

We received a number of comments on the economic impacts and on the energy and non-air quality environmental impacts.

1. Comments on Economic Impacts

a. General Comments on Economic Impacts

Comment: Several commenters stated that EPA's analysis of historical and expected costs of electricity from FCPP neglect to include public health costs related to air pollution and the negative impacts to tourism resulting from loss of visibility. The commenters concluded that the cost effectiveness metric used to determine BART must account for health costs related to poor air quality.

Response: EPA disagrees with the comment that the cost effectiveness of BART must account for public health costs associated with poor air quality. Neither Section 169A of the CAA, nor the BART Guidelines, require the BART analysis to include or quantify benefits to health or tourism. Moreover, an analysis of health and tourism benefits is unlikely to alter the outcome of our BART determination, which already requires the most stringent control technology available for NO_X.

Comment: The Navajo Nation, one federal agency, and two of the owners of FCPP stated that EPA must consider the collateral adverse effects on the Navajo Nation and the surrounding communities of its BART determination. The commenters provided background on the substantial interest that the Navajo Nation has in the continued operation of FCPP. The commenters indicated that FCPP and its coal supplier, the Navajo Mine operated by BHP Billiton (BHP), together provide income to the Navajo Nation that contributes substantially to the Nation's economic viability and its sustainability as an independent sovereign nation. The commenters added that this resource extraction-based economy is the result of a conscious effort of the United States dating from the 1950s to develop the Nation's coal resources. According to the commenter, if FCPP and the Navajo Mine were to close as the result of the imposition of cost-prohibitive emission controls, the resulting revenue and job losses would be significant for the Navajo Nation.

Response: EPA agrees with commenters that the operation of FCPP and the Navajo Mine contribute significantly to the economy of the Navajo Nation and the Four Corners Region.

It is not EPA's intention to cause FCPP to shut down, nor is it within our regulatory authority under the Regional Haze Rule to require shutdown or redesign of the source as BART. As expressed in comments from the Navajo Nation to our Advanced Notice of Proposed Rulemaking,[15] EPA understands that the Navajo Nation's primary concern regarding the BART determination is the potential for FCPP closure. Therefore, as discussed in our proposed BART determination, EPA conducted an affordability analysis not typically included in a BART five-factor analysis in order to assess whether requiring SCR on all five units at FCPP would cause the power plant to close.

The model was designed to determine which future alternative results in lower power costs: (a) Power produced at FCPP after installation of SCR or, (b) replacing the power from FCPP with the appropriate amount of wholesale power purchases. As discussed in the TSD for our proposed BART determination, the model results suggested that even if the owners of FCPP installed and operated SCR on all five units, the facility could still produce power at a lower cost than the cost to purchase replacement wholesale power on the open market. Thus, EPA concluded in our proposed BART determination that requiring SCR as BART on all five units would not likely result in plant closure. No information was provided by the commenter to change this conclusion in the proposal.

Comment: The Navajo Nation asserted that EPA failed to consult with the Nation prior to publishing the supplemental proposal and failed in its trust responsibility to consider the economic impacts of closing Units 1–3. A federal agency commenter noted that EPA's current analysis focuses primarily on increased costs to rate payers and the companies' profitability, and stated that the analysis needs to incorporate the loss in revenue, jobs, and royalties resulting from the closure of Units 1–3 under the supplemental proposal.

Response: A timeline of correspondence and consultation with the Navajo Nation and other tribes for EPA actions on FCPP and Navajo Generating Station is included in the docket for the final rulemaking.[16] EPA notes that the Regional Administrator of EPA Region 9 called President Joe Shirley on February 9, 2011 to inform him of EPA's Supplemental Proposal. However, government-to-government consultation with the Navajo Nation on FCPP did not occur until May 19, 2011, with additional consultation occurring on June 13, 2012, prior to issuing our final rulemaking. The Navajo Nation raised concerns about the potential adverse impacts of the BART Alternative and requested that EPA conduct an analysis to estimate those impacts.

Although the Regional Haze Rule does not require a cost analysis of a BART alternative, at the request of the Navajo Nation, as part of EPA's customary

[14] EPA estimates facility-wide average cost effectiveness of the BART Alternative to be lower than BART because under the BART Alternative, Units 1–3 can be closed instead of retrofitted with new air pollution controls. On a per unit basis, the cost effectiveness of Units 4 and 5 is not expected to differ between BART or the BART Alternative.

[15] Comment letter from President Joe Shirley, Jr. dated March 1, 2010 in the docket for the ANPR: EPA–R09–OAR–2009–0583–0209.

[16] See document titled: ''Timeline of all tribal consultations on BART.docx'' in the docket for this final rulemaking.

practice of engaging in extensive and meaningful consultation with tribes and tribal authorities with regard to relevant Agency actions, EPA did commission an analysis to estimate potential adverse impacts on the Navajo Nation, with respect to coal- and power plant-related revenues, of the optional BART Alternative to retire Units 1–3. The report will be provided to President Shelly by letter as a follow-up to our consultation with the Navajo Nation.

Comment: One owner of FCPP stated that EPA's proposal to require SCR at FCPP presents significant challenges and risks with regard to its resource planning. The commenter pointed out that implementation of the BART proposal would require the commenter to make a significant capital investment in FCPP, which could only be recovered through long-term operation of the plant. According to the commenter, this would have the effect of locking FCPP into the commenter's generation portfolio for a considerable period or risk stranding those investments.

Response: EPA appreciates the perspectives shared in this comment, but we disagree that our five-factor BART analysis should consider the potential loss of an owner's flexibility to respond to possible future economic or regulatory scenarios. EPA cannot give substantial consideration in our BART analysis to external factors that are of uncertain magnitude and that may or may not occur. EPA further notes that the RHR allows for the development of BART alternatives that achieve greater reasonable progress than BART and EPA appreciates the fact that the owners of FCPP put forth an alternative that gives them more flexibility and results in greater emission reductions at FCPP.

b. Comments on EPA's Economic Analysis

Comment: One public interest advocacy group concurred with the EPA's analysis that the potential increase to APS rate payers as a result of SCR is expected to be less than 5 percent, as described in the TSD. The commenter stated that EPA's estimates are reasonable and that the average increase in the cost of generation at FCPP as a result of SCR implementation would be 22 percent, or $0.0074 per kWh, as stated in the TSD.

One of the owners of FCPP stated that installation of BART controls would increase its average residential customer monthly bills by $5.10 (3.8 percent) and larger industrial customer monthly bills by $17,400 (6.4 percent). The commenter also indicated that installing SCR and baghouses on Units 1–3 would increase the cost of electricity production on a $/MWh basis by more than 50 percent which, in conjunction with other market and regulatory uncertainties, may make the units uneconomical. The commenter also raised concerns related to the economic viability of Units 4 and 5 if SCR were installed on those units.

Another of the owners of FCPP, who also owns part of San Juan Generating Station and Navajo Generating Station, indicated that if SCR was required on all three power plants, its customers would face a rate increase of 4 to 6 percent, which would be significant because the local economy is fragile and has endured an 8 percent rate increase (not adjusted for inflation) since 1992.

Response: EPA agrees with the first commenter that based upon our analysis the potential increase to APS rate payers as a result of SCR is expected to be less than 5 percent. EPA cannot assess the estimated residential and industrial rate increase claimed by the second and third commenters with our economic analysis because the commenters did not provide information for us to evaluate their conclusions. However, EPA notes that the installation of baghouses on Units 1–3 is no longer relevant because EPA has determined that it is not necessary or appropriate at this time to set new PM limits for Units 1–3. This is because the Mercury and Air Toxics Standard (MATS) rule, which sets a filterable PM limit of 0.03 lb/MMBtu, is now final [17] and EPA is finalizing in this rulemaking the option to allow APS to comply with either BART or the BART alternative, which involves closure of Units 1–3.

Comment: One of the owners of FCPP expressed concern that EPA's analysis focuses on the effects on APS and Southern California Edison ratepayers, and not on the other owners of FCPP. This commenter's specific concerns include that the use of a ''return on rate''-based methodology would not apply to organizations of the commenter's type (a publicly owned utility) because it is not an investor-owned utility. In addition, the commenter stated that the EPA analysis did not attempt to determine the impact of different assumptions, such as an uncertainty with the future price of coal, on the conclusions of the analysis. Specifically, the ''small difference'' that EPA estimates between FCPP with SCR installed and the cost of purchasing power to replace FCPP generation suggests that a small change in an underlying assumption (return on rate, coal price, carbon pricing, etc.) could result in model results that show SCR to be a higher cost option than purchasing power. The commenter also raised the concern that EPA's analysis did not examine different ''payback periods,'' but instead relied on a payback period of 25 years, which may be inappropriate because the useful life of the plant is far from certain. The commenter said that EPA should recognize that there is a real risk that one or more owners may decide not to invest in SCR, which would force the shutdown of FCPP unless another owner could be found in a timely manner. The commenter also said that shutdown of FCPP would have significant adverse consequences on the Navajo Nation.

Response: The commenter is correct that EPA calculated rate impacts for only two of the four investor-owned utilities that own FCPP and excluded others, including an owner that operates as a publicly owned utility. The analysis estimating the increase in electricity generation costs is applicable to all owners of FCPP, but the rate impact analysis provided in the model was not intended to capture the rate impacts of all owners. APS and Southern California Edison (SCE) were selected because their combined ownership shares account for nearly 75 percent of the plant's output. In addition to our expectation that the utilities with the largest ownership share in FCPP would generally experience greater ratepayer impacts from capital expenditure projects like SCR installation, we also assumed that ratepayers of investor-owned utilities would likely experience larger impacts than public power customers due to the fundamental difference between their respective approaches to setting rates. Specifically, rates for public power utilities, in contrast to investor-owned utilities, do not include recovery for a margin above cost allowed as part of a regulated rate of return. Thus, all other variables being equal, one would expect the same capital investment to result in a larger rate impact for customers of investor-owned utilities than for customers of public power entities. Therefore, EPA continues to believe that our analysis of ratepayer impacts for only APS and SCE are appropriately conservative to demonstrate worst-case impacts to ratepayers of all six owners.

EPA agrees with the commenter that there are many company-specific factors and a wide range of assumptions that would affect a given owner's decision to make further substantial investments (such as SCR) at FCPP. Although many of those factors were outside the focus of the modeling because they were either unrelated to BART or were related to regulatory uncertainties in the

[17] See 77 FR 9304, February 16, 2012.

future, we included a qualitative discussion in Appendix B to the TSD regarding decision variables that EPA assumed each owner must consider before making capital expenditures. Additionally, EPA notes that the use of low, medium and high future projected prices for the Palo Verde Index in Appendix B to the TSD for the proposed rulemaking represents a sensitivity analysis for the market comparison.

With respect to the comment on the ''payback period'', the economic analysis for the proposed BART determination did not identify ''payback periods''. Rather, the commenter appears to be referring to the 25-year period used in the discounted cash flow model. EPA does not disagree with the commenter's stated concern that a shorter plant life, and thus shorter discounting periods, would yield different economic results. However, EPA disagrees with commenters that a shorter useful life should be considered in the economic analysis because there is no enforceable obligation on APS to cease operations on a given (earlier) date.

2. Comments on Energy and Non-Air Quality Environmental Impacts

Comment: One private citizen stated that no consideration was given to the effect of removing FCPP generation from the grid. According to the commenter, the events of February 2, 2011, show there are times when gas-fired generation cannot replace coal-fired generation because there is not enough gas transportation capacity.

Response: EPA disagrees with the commenter that we should consider the effect of removing FCPP generation from the grid. As stated elsewhere, it is not EPA's intention, nor is it within our regulatory authority, to require closure or require a redefinition of the source, in order to comply with the BART requirement of the Regional Haze Rule. Furthermore, the owners of FCPP did not provide evidence that the installation of SCR would cause FCPP to close.

EPA also notes that APS proposed to purchase the shares of Units 4 and 5 currently owned by Southern California Edison in order to close Units 1–3 (of which APS is sole owner) and install SCR on Units 4 and 5 as an alternative to BART. APS has received approval from the Arizona Corporation Commission and the California Public Utilities Commission to purchase Southern California Edison's share of Units 4 and 5. APS is also seeking approval from the Federal Energy Regulatory Commission to implement its proposal.[18] Decisions on investing in pollution controls or shutting down units are made by the owners in conjunction with their oversight boards or public utility commissions. These oversight bodies are also responsible for assuring the adequacy of electrical generating capacity, whether from coal, gas or nuclear fuels or renewable sources.

Comment: Thirty-seven private citizens commented that FCPP causes significant threats to public health due to its effects on air quality. In addition, a number of environmental and public interest advocacy groups provided comments on health and ecosystem impacts of the pollutants emitted by FCPP.

Regarding health impacts, the commenter noted that the same pollutants that contribute to visibility impairment also harm public health—the fine particulates that cause regional haze can cause decreased lung function, aggravate asthma, and result in premature death in people with heart or lung disease. The commenter added that NO_X and volatile organic compounds (VOCs) can also be precursors to ground-level ozone, which is associated with respiratory diseases, asthma attacks, and decreased lung function. According to the commenter, ozone concentrations in parks in the Four Corners region approach the current health standards, and likely violate anticipated lower standards.

The same commenter also contended that consideration of non-air quality impacts extends to impacts on wildlife and habitat as well as natural and cultural heritage. According to the commenter, haze-causing emissions also harm terrestrial and aquatic plants and animals, soil health, and water bodies by contributing to acid rain, ozone formation, and nitrogen deposition.

With these health and environmental considerations in mind, in addition to visibility and economic considerations discussed in other sections of this document, the commenter urged the EPA to finalize more stringent BART determinations for FCPP.

The commenter noted that FCPP is a significant source of mercury emissions and provided information on the health and ecosystem effects of mercury, as well as on the deposition of mercury and the levels of mercury found in the Four Corners area. In addition, the commenter stated that FCPP emits more than 16 million tons per year (tpy) of CO_2, and that such emissions contribute significantly to climate change which is likely to result in increasing temperatures and increase drought in the Southwest. The commenter noted that the supplemental proposal would reduce emissions of both mercury and CO_2.

One environmental advocacy group stated that a formal Health Impact Assessment should be conducted by independent experts before EPA's final decision to answer such questions as whether shutting down Units 1–3 is sufficient to protect local health, and what health impacts would result from delaying pollution controls on Units 4 and 5 until 2018.

Response: EPA agrees that there are potential benefits to health and the environment from reducing emissions of NO_X. However, quantifying health benefits is not within the scope of the BART five factor analysis required under the CAA (§ 169A(g)). The BART Guidelines provide additional information on how to analyze ''non-air quality environmental impacts, and focuses on adverse environmental impacts associated with control technologies, i.e., generation of solid or hazardous wastes and discharges of polluted water, that have the potential to affect the selection or elimination of a control alternative'' (see 70 FR 39169). Thus, although the BART Guidelines do state that relative environmental impacts (both positive and negative) of alternatives can be compared with each other, they state that ''if you propose to adopt the most stringent alternative, then it is not necessary to perform this analysis of environmental impacts for the entire list of technologies''. EPA agrees with commenters that controlling pollutant emissions may have co-benefits for reducing ozone production and acid deposition. EPA does not interpret the BART Guidelines to require quantification of human health or environmental co-benefits in determining BART, particularly if the most stringent BART option is finalized. Similarly, EPA does not interpret the BART guidelines to require human health or environmental assessments of alternative compliance strategies as long as we have determined that the alternative strategy achieves better progress towards the national visibility goal.

Comment: The commenter stated that human exposure to environmental hazards is an important factor in assessing impacts of FCPP. The commenter encouraged EPA to pursue health studies in collaboration with the Navajo Nation to study local risks

[18] On March 22, 2012, the California Public Utilities Commission (PUC) approved the sale of SCE's ownership share in FCPP to APS. On April 18, 2012, the Arizona Corporation Commission voted to allow APS to purchase SCE's ownership share in FCPP.

associated with exposure to criteria pollutants, indoor air pollutants, and other contributing air pollutants, from which improved public health and effective rulemakings under the CAA may be achieved.

Response: Assessing human exposure and quantifying health benefits are outside the scope of the requirements of the Regional Haze Rule. EPA sets National Ambient Air Quality Standards (NAAQS) to establish levels of air quality that are protective of public health, including the health of sensitive populations, for a number of pollutants including particulate matter. These ''sensitive'' populations include asthmatics, children, and the elderly. At this time the Navajo Nation is not identified as out of attainment with any of the NAAQS. However, EPA recognizes that there are significant concerns about risk and exposure to air pollutants on the Navajo Nation and EPA will continue discussions with the Navajo Nation and will involve other federal agencies, as appropriate, to help address these concerns.

C. Comments on Factor Three—Existing Controls at FCPP

Comment: One of the owners of FCPP agreed with EPA's summary of the existing controls at the plant, but noted that the proposed FIP is only the most recent action in a long line of regulatory and voluntary efforts to reduce emissions of pollutants that impact visibility, including SO_2, NO_X, and PM emissions. The commenter asserted that FCPP has a strong history of retrofitting pollution controls and recounted the facility's history of installing these controls and reducing emissions.

Response: EPA agrees that there have been numerous installations of pollution controls over the several decades that FCPP has been in operation. The most recent voluntary effort by FCPP increased the SO_2 removal from its long-term level of 72 percent removal to 88 percent removal. This was accomplished before the end of 2004 and became effective as a regulatory requirement in June 2007. The improvement in SO_2 removal has resulted in a decrease of over 22,000 tons of SO_2 per year since that time.

D. Comments on Factor Four—Remaining Useful Life at FCPP

Comment: One of the owners of FCPP noted that the BART rules state that the normal amortization period (20 years for NO_X control devices) is appropriate to use as the remaining useful life if the plant's ''remaining useful life will clearly exceed'' that amortization period (citing 70 FR 39169). The commenter asserted, however, that as a result of substantial uncertainty related to multiple factors, it is not at all clear that the plant's remaining useful life is at least 20 years.

Moreover, according to the commenter, one factor that should not be allowed to shorten the useful life under the BART rules is the choice of BART itself—EPA cannot use a 20-year amortization period to justify a specified technology (*e.g.,* SCR) if the application of the technology would be so costly as to make the facility uneconomical and shorten its useful life (citing 70 FR 39164, 39171).

The commenter made a number of arguments related to the possibility of a shorter useful life at FCPP that are briefly summarized here. The excessive cost of SCR will dramatically increase the energy costs of the plant, potentially making it uneconomical. The proposed ''phase-in schedule'' for SCR may force closure of units because APS will not have certainty by the compliance deadline that the lease will be extended or that Southern California Edison's ownership share will have been successfully transitioned. Emerging environmental laws and regulations present cost and operational uncertainty that may shorten FCPP's useful life (including new GHG laws and regulations, MATS, new ash-handling requirements, and new requirements for cooling water intake structures).

Response: EPA disagrees that we must consider a shorter useful life because of uncertainty related to the factors cited by the commenter. It is inappropriate to consider a useful life shorter than 20 years based solely on uncertainty or the possibility of shut down. EPA further notes that in its cost analysis on behalf of APS, B&V stated ''the remaining useful life of Units 1 through 5 was at least 20 years''.[19] Unless there is an enforceable obligation for APS to cease operations or unless APS convincingly demonstrates that controls (rather than uncertainty associated with future requirements) will cause facility closure, the default 20 year amortization period represents the appropriate period for the remaining useful life.

EPA agrees that our proposed ''phase-in'' schedule for installation of add-on post-combustion NO_X controls on Unit 1–3 for BART, which was added in the supplemental proposal, may have allowed less than two years for engineering and installation from the date by which APS intends to make its decision on continuing operation or shutting the units down by 2014. EPA is finalizing a modified schedule for the installation of add-on post combustion controls from what was originally proposed (phased-in installation of controls within three to five years of effective date) by requiring one of the 750 MW units to comply with the BART emission limit within 4 years of the effective date of this final rule and the remaining units (Units 1–3 and either Unit 4 or 5) within 5 years of the effective date of this final rule.

Comment: One industry commenter stated that EPA, rather than evaluate APS' supplemental proposal as an alternative emission control strategy, should instead ''re-determine'' BART for each of the five units at FCPP based on the APS-proposed shutdown scenario for Units 1–3, i.e., reducing the remaining useful life of Units 1–3 to 2014 and then using the short remaining life of those units to determine that BART for Units 1–3 is no additional control. The commenter concluded that a ''better-than-BART'' control strategy does not seem to be necessary for determining the appropriate requirements for FCPP under the APS-proposed shutdown scenario; instead, a BART determination for each unit with appropriate weighting of the statutory factors appears to present a logical and less-burdensome means of applying section 169A(b)(2) of the CAA to FCPP.

Response: EPA disagrees that APS' supplemental proposal should be evaluated in terms of a BART re-determination rather than in terms of its current status as a ''better-than-BART'' alternative measure. The 2006 Regional Haze Rule (71 FR 60612) established the procedures described in 40 CFR 51.308(e)(2) and (3) for scenarios involving programs that may make greater reasonable progress than source-by-source BART. These provisions were specifically included to allow for the flexibility to consider alternative measures such as the one proposed by APS, and EPA considers it the most appropriate method for evaluating APS' supplemental proposal.

Comment: One industry commenter discussed the ''remaining useful life'' statutory factor, noting that under the BART Guidelines remaining useful life is ignored in the majority of BART determinations (citing 40 CFR part 51, Appendix Y, section IV.D.4.k), which the commenter asserted is inappropriate. According to the commenter, Congress designated the remaining useful life of the source as an important consideration because it did not want to impose the burdens of control technology retrofits on sources

[19] See B&V Engineering Analysis for Units 1–5 at FCPP dated December 2007. Document number 0011 in docket for proposed rulemaking: EPA–R09–OAR–2010–0683.

that were more than 15 years old at the time the statute was enacted. Given that it is now 34 years after the BART requirements were enacted, the commenter stated that the ''remaining useful life'' statutory factor should weigh heavily in BART determinations for older sources such as FCPP, instead of being ignored.

Response: EPA disagrees with the commenter that we ignored the ''remaining useful life'' statutory factor in our BART decision. EPA considered this factor in our BART analysis (see pages 42–43 of the TSD for our proposed BART determination). As discussed in the TSD, the remaining useful life of an Electric Generating Unit (EGU) subject to BART is determined by the utility. EPA cannot arbitrarily decide that an EGU has less useful life when it is not within our BART rulemaking authority to require closure of an EGU. If a utility used a shorter useful life than one that would allow the full amortization of any necessary pollution controls, EPA would take that into account in the cost analysis, provided that there was an enforceable obligation for the facility to cease operation by that time.

E. Comments on Factor Five—Anticipated Visibility Improvements

Comment: One of the owners of FCPP presented information on visibility conditions on the Colorado Plateau and the role of NO_X emissions in Western visibility impairment. The commenter noted that SO_2 and NO_X emissions have been decreasing in recent years. The commenter also presented information that purported to show that whether averaged over the haziest 20 percent of days, the clearest 20 percent of days, or all days, power plant NO_X emissions contribute less than 1.5 percent to the light extinction at Mesa Verde National Park.

Another commenter questioned EPA's assertion that NO_X and PM from FCPP are significant contributors to visibility impairment in the numerous mandatory Class I areas surrounding FCPP (citing 75 FR 64221), stating that coal-fired power plants, including FCPP, are relatively small contributors to regional haze in the surrounding Class I Areas.

Response: EPA modeling of FCPP showed visibility impacts ranging from 1.2 to 6.0 deciviews (dv), depending on the Class I area, with the sum of impacts at all sixteen Class I areas totaling 43 dv. This is a significant contribution to visibility impairment. Even if an individual source category appears small to some commenters, the many segments of the emissions inventory together cause significant visibility impairment and must be addressed in order to make progress towards the national goal of remedying visibility impairment from manmade pollution. Section 169A of the CAA requires BART determinations on BART-eligible EGUs regardless of trends or ambient visibility conditions. Application of BART is one means by which we can ensure that downward emission and visibility impairment trends continue. EPA identifies stationary sources as an important category to evaluate in a BART analysis.

Comment: Three of the owners of FCPP, the Navajo Nation, and two utility industry associations argued that EPA's use of Interagency Workgroup on Air Quality Modeling (IWAQM) Phase II default background ammonia values is not appropriate. They argued the following points: (1) Actual field measurements show lower ammonia concentrations than used by EPA; (2) EPA is mistaken in its assumption that background ammonia concentrations along the path of the plant's plume determine nitrate concentrations and their contribution to haze at the receptor site; (3) EPA's ''corroborating'' approach of ''back-calculating'' ammonia is flawed because it erroneously assumes that the ammonia associated with measured sulfate and nitrate would all be available to react with FCPP emissions, whereas in reality those measurements reflect emissions from many sources; (4) EPA's analysis of nitrate predictions as a check on the ammonia values used is also flawed because it erroneously assumes that the resulting measured nitrate levels are solely due to FCPP emissions; (5) comparable analysis using the EPA ammonia value shows substantial and ''physically impossible'' over-predictions of nitrate. The commenters conclude that the use of IWAQM values invalidates EPA's BART modeling and the BART determination that relied on the modeling.

Another utility industry association stated that several measurement programs on the Colorado Plateau show that actual ammonia values in Class I areas near FCPP are significantly lower than the IWAQM default value, indicating that these values typically range from 0.1 to 0.6 ppb. The commenter noted that ammonia concentrations are lowest during the cold season when the visibility impacts of NO_X emissions are the highest. Accordingly, the commenter asserted that using a single ammonia value throughout the year is not scientifically valid and should be replaced with seasonally variable values.

The Navajo Nation expressed concern regarding discrepancies between EPA and APS modeling inputs, given the commenter's understanding that APS obtained advance EPA approval for its modeling protocols. Some commenters stated that EPA had earlier agreed to lower ammonia concentrations, and so should not be using the higher IWAQM value now.

In contrast, one public interest advocacy group concurred with EPA's back-calculation method for ammonia background levels (citing the TSD, page 60). The commenter added that the requests to EPA from other commenters for additional ammonia monitoring data are unrealistic in today's budget environment.

Response: EPA disagrees with commenter objections to the background ammonia concentrations used in our modeling. Our use of the 1 ppb IWAQM Phase II default background ammonia value is appropriate. Most of the objections have already been discussed in EPA's TSD for the proposal; and several of them concern the ''back-calculation'' method that we used only as corroboration for using the 1 ppb results we principally relied on. Also, even if the lower ammonia concentrations urged by some commenters were accepted, EPA's sensitivity modeling results provided in the TSD for our proposed BART determination showed the visibility benefits would still support EPA's BART determination. EPA also provided the results of modeling runs that used the lower ammonia background concentrations recommended by some commenters (see TSD Table 37). The visibility benefits of the NO_X controls for BART are substantial under all ammonia scenarios, including the lower background ammonia concentrations recommended by commenters. For 12 Class I areas, modeling even with those lower background concentrations showed improvements of 0.5 dv or more, an amount recognized in the BART Guidelines as significant (*e.g.* at 70 FR 39120).

The lack of ammonia and ammonium measurements in the Class I areas of concern requires that EPA estimate background ammonia concentrations by some method, considering available data and approaches. As discussed in the BART proposal and its accompanying TSD, EPA understands that there is no single accepted method for estimating the background concentration of ammonia, and that any method will have advantages and disadvantages. The lack of consensus on a method was a factor in EPA's decision to rely on the 1 part per billion (ppb)

default value in IWAQM, as was the fact that IWAQM is the only available guidance on this issue. In summary, there is insufficient monitoring information available to use a different value, or to support any seasonally varying values and, as described below, these values are reasonable to use in this analysis.

On the first issue, field measurements cited by the commenters were not performed in the Four Corners area, nor at the Class I areas near FCPP, so they do not give appropriate ammonia background concentrations for modeling of FCPP. In addition, the studies provide only gaseous ammonia (NH_3) and not ammonium (NH_4) that has reacted with SO_2 or NO_X emissions. For purposes of assessing FCPP impacts relative to natural background, per the BART Guidelines, both ammonia and ammonium should be assumed to be available to interact with emissions from FCPP. The ammonia-only measurements cited by the commenters underestimate the available ammonia. Finally, as discussed in the TSD, field measurements in the Four Corners area showed ammonia measurements ranging from 1.0 ppb to 1.5 ppb, and sometimes as high as 3.5 ppb.[20] This provides some additional support for the 1 ppb used by EPA.

On the second issue, in using a 1 ppb background EPA did not rely on an assumption about the importance of background ammonia along the path of the plume, as claimed by the commenters. The 1 ppb background is a representative value for areas in the west under existing EPA guidance, in the IWAQM document. The commenters' objection is based on the rapidity of the nitrate-nitric acid equilibrium, which they state implies that ammonium nitrate can only be estimated using ammonia measurements right at the Class I area, and not the ammonia that occurs earlier along the plume's path to the area. EPA's TSD for the proposed rulemaking did state (TSD p.62) that the Federal Land Managers partly relied on this assumption as one of the rationales for the back-calculation method, discussed below; EPA also expressed support for the idea that the method can be viewed as a 24-hour temporal integration, not just a spatial integration over the plume path, and that this aspect can be viewed as desirable for the 24-hour average visibility estimate that CALPUFF provides (TSD pp.71–72). This plausibility argument applies despite the rapid nitrate-nitric acid equilibrium cited by the commenters, and in any case was not relied on by EPA in using the 1 ppb default ammonia background.

As the commenters stated under the third issue, EPA used a back-calculation ammonia estimation method as an alternative means of corroboration for the 1 ppb IWAQM method, which is more fully explained in the TSD for the proposed rulemaking. Essentially, it uses measured particulate ammonium sulfate and nitrate to estimate the amount of ammonia that must have been present to form those ammonia compounds. The commenters object that the method assumes that all the calculated ammonia is available to interact with the FCPP plume as background ammonia. However, this assumption is reasonable for the single-source CALPUFF modeling performed under the BART Guidelines. It estimates ammonia concentrations that would be monitored at the Class I area if only this single source existed; it includes ammonia that is currently in the form of ammonium because of interaction with other sources' emissions. It remains true that some portion of the calculated ammonia would in reality not be available for FCPP, because it arrives at the monitor from a different direction than FCPP's pollutant plume; on the other hand, the data would also include directions contributing below-average ammonia, reducing that effect.

In addition, the back-calculated ammonia is based on measurements only of particulate ammonium, the form associated with measured sulfate and nitrate; it does not include any gaseous ammonia that may also be present. In this sense, the back-calculated ammonia is a lower bound on the ammonia that may be available to interact with source emissions; that is, the method may underestimate ammonia concentrations. This possible underestimation tends to offset possible overestimation discussed above.

EPA does not claim that the back-calculation method is dispositive; it incorporates various assumptions and imperfections that make clear it is only an estimate. However, it is based on real measured data at Class I areas, and has some counterbalancing tendencies for over- and under-estimation. After weighing various lines of argument about the back-calculation method, EPA disagrees with the commenters who recommended that it be rejected altogether. The method provides a useful estimate of ammonia for BART modeling, by providing concentrations representative of the high values that would be observed at the Class I areas in the absence of other sources. The back-calculation method, therefore, is used to corroborate that it is appropriate to use the 1 ppb IWAQM default for background ammonia concentrations.

In the fourth issue raised by commenters, the commenters claim that the assumption of full availability to FCPP of the back-calculated ammonia invalidates EPA's comparison of monitored nitrate levels with those modeled using the back-calculated ammonia (TSD p.73). As just discussed for the third issue, EPA disagrees that the assumption is invalid for corroboration of single-source BART assessment modeling. For single-source BART modeling, on balance, it is reasonable to assume all the ammonia is available to the source, given the counterbalancing tendencies for over- and underestimation inherent in the back-calculation method discussed above. In any case, this method mainly provided corroboration for the results from using the 1 ppb ammonia default.

The fifth issue about ''physically impossible'' nitrate over-predictions does not account for the fact that any model evaluation is expected to have under- and over-predictions, depending on the meteorological conditions and the geographic location modeled, as well as on the location of the monitor used for comparison. The commenter's apparent requirement for no over-predictions whatsoever would require a model with the converse problem, a bias toward underprediction. While consistent over-prediction in a full model performance evaluation would indeed raise concerns over its validity, as EPA stated, our nitrate comparison was not intended as a model performance evaluation, but rather as a ''rough check'' for the back-calculation corroboratory method (TSD p.73). EPA found that the modeled and monitored values, for both the maximum values and the 98th percentiles, were generally in agreement.

Finally, contrary to the commenter's assertion, EPA did not receive a modeling protocol in advance of modeling by APS's contractor. EPA disagrees with commenters that EPA committed to use the same ammonia concentrations used by APS's contractor in our own modeling analysis for our BART determination.

Comment: Three of the owners of FCPP and a utility industry association asserted that CALPUFF version 5.8 used in EPA's BART analysis is outdated. Because of enhancements to the model's chemistry, the commenters asserted that CALPUFF version 6.4 represents the best application that is currently available. A number of the commenters

[20] 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.

mentioned a December 2010 meeting between the CALPUFF developer and the FLMs where the FLMs reportedly supported an expedited review and approval of CALPUFF version 6.4.

Another owner of FCPP stated that the version of CALPUFF used by EPA has a tendency to over-predict nitrate concentrations, which is compounded by EPA's use of what the commenter stated are overestimated ammonia background values. The commenter asserted that this combination of errors results in a significant over-prediction of visibility improvements for more stringent NO_X BART control options. Further, the commenter stated that this disproportionately affects the incremental visibility benefits predicted for SCR over Low NO_X Burners (LNB) compared to LNB over baseline.

In contrast, one federal agency was generally supportive of the modeling methods employed by EPA with the regulatory approved version 5.8 of the CALPUFF modeling system.

Response: EPA disagrees with the commenters that any new CALPUFF version should be used for the BART determination. EPA relied on version 5.8 of CALPUFF because it is the EPA-approved version in accordance with the Guideline on Air Quality Models (''GAQM'', 40 CFR 51, Appendix W, section 6.2.1.e); EPA updated the specific version to be used for regulatory purposes on June 29, 2007, including minor revisions as of that date; the approved CALPUFF modeling system includes CALPUFF version 5.8, level 070623, and CALMET version 5.8 level 070623. CALPUFF version 5.8 has been thoroughly tested and evaluated, and has been shown to perform consistent with the version from the time of the initial 2003 promulgation, in the analytical situations CALPUFF has been approved for. Any other version would be considered an ''alternative model'', subject to the provisions of GAQM section 3.2.2(b), requiring full model documentation, peer-review, and performance evaluation. No such information for the later CALPUFF versions that meet the requirements of section 3.2.2(b) has been submitted to or approved by EPA. Experience has shown that when the full evaluation procedure is not followed, errors that are not immediately apparent can be introduced along with new model features. For example, changes introduced to CALMET to improve simulation of over-water convective mixing heights caused their periodic collapse to zero, even over land, so that CALPUFF concentration estimates were no longer reliable.

In addition, the latest version of CALPUFF, 6.4, incorporates a detailed treatment of chemistry. EPA's promulgation of CALPUFF (68 FR 18440, April 15, 2003) as a ''preferred'' model approved it for use in analyses of Prevention of Significant Deterioration increment consumption and for complex wind situations, neither of which involve chemical transformations. For visibility impact analyses, which do involve chemical transformations, CALPUFF is considered a ''screening'' model, rather than a ''preferred'' model; this ''screening'' status is also described in the preamble to the BART Guidelines (at 70 FR 39123, July 6, 2005). The change to CALPUFF 6.4 is not a simple model update to address bug fixes, but a significant change in the model science that requires its own rulemaking with public notice and comment.

Furthermore, it should be noted that the U.S. Forest Service and EPA review of CALPUFF version 6.4 results for a limited set of BART applications showed that differences in its results from those of version 5.8 are driven by two input assumptions and not associated with the chemistry changes in 6.4. Use of the so-called ''full'' ammonia limiting method and finer horizontal grid resolution are the primary drivers in the predicted differences in modeled visibility impacts between the model versions. These input assumptions have been previously reviewed by EPA and the FLMs and have been rejected based on lack of documentation, inadequate peer review, and lack of technical justification and validation.

EPA intends to conduct a comprehensive evaluation of the latest CALPUFF version along with other ''chemistry'' air quality models in consultation with the Federal Land Managers, including a full statistical performance evaluation, verification of its scientific basis, determination of whether the underlying science has been incorporated into the modeling system correctly, and evaluation of the effect on the regulatory framework for its use, including in New Source Review permitting. CALPUFF version 5.8 has already gone through this comprehensive evaluation process and remains the EPA-approved version, and is thus the appropriate version for EPA's BART determination for FCPP.

Comment: Some commenters argued against the visibility metrics that EPA introduced in the BART proposal. One commenter noted that none of the metrics (percent improvement in dv impacts, cumulative changes in dv, and dv impacts scaled by the geographic area of the affected Class I area) is addressed in the BART rules, and posited that their introduction into the BART process is intended to inflate the estimated visibility benefits of the control options at FCPP. Regarding the percent improvement metric, the commenter stated that these values (unlike values of the haze index in dv) have no consistent relationship to the human perception of haze changes and no consistent relationship to changes in ambient visibility-impairing particle concentrations.

Similarly, one of the owners of FCPP stated that cumulative change in dv is not an appropriate metric to describe visibility improvement and should be withdrawn. This commenter made a number of points which are briefly described here. The peak impact from a source occurs at different times in different Class I areas because a facility's emissions cannot result in peak concentrations in all directions at once. Thus, this metric really does not represent a cumulative regional impact of the source (and hence the benefit of controls); rather it simply produces a mathematical summation of the peak impacts occurring at different times at various Class I areas. It is inappropriate to add improvements over all Class I areas. A 0.5 dv improvement in one Class I area and a 0.5 dv improvement in another area does not result in a 1 dv improvement—the improvement is a 0.5 dv improvement, which occurs in two different locations. Any one observer would experience only a 0.5 dv improvement; he or she can only experience the visibility improvement in the Class I area being visited.

Conversely, one environmental advocacy group commenter supported the use of a cumulative impact analysis. The commenter asserted that the cumulative impact of a source's emissions on visibility, as well as the cumulative benefit of emission reductions, is a necessary consideration as part of the fifth step in the BART analysis, particularly in cases such as FCPP where the source causes or contributes to visibility impairment at a significant number of Class I areas. The commenter stated that failing to account for a source's cumulative impairment and the cumulative pollution control benefit would result in a failure to acknowledge the regional approach to reducing haze.

Response: EPA believes that it is important to consider the visibility impact on multiple Class I areas. The goal of the visibility program is to remedy visibility impairment at all Class I areas. CAA 169A(a)(1). One approach to account for the benefits to

all affected Class I areas is the cumulative ''total dv'' metric. EPA relied on the modeled impacts and benefits at each Class I area individually, the number of Class I areas affected, and also considered, but did not rely on, the sum of visibility impacts and benefits across all 16 Class I areas.

Comment: Two commenters questioned EPA's use of 0.5 dv as the threshold of a humanly perceptible change in visibility (citing 75 FR 64228). One commenter added that the establishment of a specific deciview threshold as a ''bright line'' to define whether a certain control will be imposed as BART is contrary to the intent of the BART rules and the objectives of the Regional Haze program, which require EPA to consider the cost of each control option in relation to the associated visibility benefit.

One of the owners of FCPP expressed the belief that application of SCR at FCPP would result in no perceptible visibility improvement and therefore cannot be BART.

Response: EPA disagrees with the commenters that the visibility benefit from the proposed BART controls is too small to warrant requiring the controls; in addition, EPA is not using a perceptibility threshold in this BART determination. EPA agrees that thresholds should not be considered a ''bright line'' in making BART decisions. In the BART Guidelines, EPA described 1 dv as the threshold for an impact that ''causes'' visibility impairment, and 0.5 dv as a threshold for an impact that ''contributes'' to visibility impairment, for determining whether a source is subject to BART, though States were accorded discretion to use different thresholds (70 FR 39118, July 6, 2005; also 39120–39121). These thresholds do not apply to BART determinations for sources that have been found subject to BART; States or EPA could consider visibility impacts less than 0.5 dv to warrant BART controls. To the extent that the comment is questioning the BART eligibility of FCPP, EPA has already established that FCPP is BART eligible and the commenter did not provide evidence to the contrary.

Even if the commenters are correct that 0.5 dv change is not perceptible, EPA noted that ''[e]ven though the visibility improvement from an individual source may not be perceptible, it should still be considered in setting BART because the contribution to haze may be significant relative to other source contributions in the Class I area. Thus, we disagree that the degree of improvement should be contingent upon perceptibility. Failing to consider less-than-perceptible contributions to visibility impairment would ignore the CAA's intent to have BART requirements apply to sources that contribute to, as well as cause, such impairment.'' (70 FR 39129) That is, impacts smaller than 0.5 dv do contribute to impairment. Conversely, an improvement of 0.5 dv or even less contributes to improvement in visibility impairment. As stated in the proposal, the modeled improvements in visibility are large enough to warrant requiring the proposed BART controls. While the actual improvements may be larger, from 0.6 to 2.8 dv, even as small an improvement as 0.5 dv is a contribution toward improving visibility, especially when the benefits at multiple Class I areas are considered. In conjunction with improvements from other sources, this will help and is necessary for progress toward the CAA goal of remedying manmade visibility impairment.

Comment: One environmental advocacy group commenter stated that EPA underestimated visibility improvement from installing NO_X controls because it overestimated the production of sulfuric acid by the SCR and underestimated the amount of sulfuric acid removed downstream of the SCR. The commenter cited reports attached to the comments to argue that sulfuric acid does not limit SCR NO_X control efficiency. The reports also state that modeling shows that greater NO_X removal rates are not offset by sulfuric acid emissions but instead yield greater visibility improvements than those proposed by EPA. The commenter states that this would result in a significant visibility benefit from increasing the SCR NO_X efficiency from 80 percent to 90 percent and therefore concludes that a higher level of NO_X control than 80 percent should be determined BART.

Response: EPA disagrees that we overstated the production of sulfuric acid from the SCR catalyst and underestimated the amount of sulfuric acid removed downstream of the SCR. In the TSD for our proposed BART determination, we estimated sulfuric acid emissions using the Electric Power Research Institute (EPRI) methodology and provided detailed explanations for all of the assumptions we applied (see TSD p. 55–59, 64–65, and 68). While we fully acknowledge and understand that the generalized EPRI methodology does not precisely represent true sulfuric acid emissions for a given facility, this method is a commonly used calculation methodology for estimating sulfuric acid emissions under a future operating scenario involving SCR.

EPA assumed in our BART proposal that a 3+1 system (four layers of catalyst) would achieve 80 percent NO_X removal. Greater reduction efficiencies would likely require an additional layer of catalyst, which models indicate would increase sulfuric acid emissions. Based on the SO_2 to SO_3 conversion rate guarantee we received from Hitachi for its CX series catalyst (ultra-low conversion) of 0.167 percent per layer, the use of an additional catalyst layer would equal five layers of catalyst and a 0.835 percent conversion rate. EPA is not aware of SCR systems that use five layers of catalyst, and the addition of a fifth layer would also affect the cost and operation of the unit.

Although EPA agrees that the modeling referenced by the commenter indicates greater visibility improvement from an SCR system achieving 90 percent removal compared to 80 percent removal despite higher sulfuric acid emissions,[21] EPA does not agree that this requires EPA to determine that a greater level of control is required as BART. The level of control recommended by the commenter is equivalent to those required as the Best Available Control Technology (BACT) for new facilities. As discussed in responses to other comments, the Regional Haze Rule requires a case-by-case BART determination, which need not be equivalent to BACT for new facilities. As discussed in our proposed BART determination and in our Supplemental proposal, given the boiler size and configuration at FCPP that limit use of combustion controls, and other considerations related to ash content of coal, EPA is finalizing its determination that 80 percent control is appropriate as BART for FCPP.

F. Comments on BART Determinations

1. Comments on the Proposed BART Determination for NO_X

Comment: A number of commenters, including owners of FCPP, the Navajo Nation, and a utility industry association, assert that EPA's BART analysis was inconsistent with its own regulations in that it did not give proper weight to the ''presumptive BART'' limits for NO_X that it established for EGUs through notice-and-comment rulemaking (generally citing 70 FR 39104, July 6, 2005). The commenters noted that these presumptive BART limits are based on the use of

[21] EPA notes that the baghouses on Units 4 and 5 are assumed to provide a significant amount of control of sulfuric acid emissions, therefore, such slight increases in sulfuric acid emissions would not be expected on units that are not equipped with baghouses.

combustion controls, and that EPA had considered and rejected establishing presumptive BART limits based on SCR. A brief summary of these comments follows.

In establishing presumptive BART limits for NO_X emissions from EGUs, EPA concluded that combustion control-based presumptive limits ''are extremely likely to be appropriate for all greater than 750 MW power plants subject to BART'' (a category that includes FCPP), that they are ''highly cost-effective controls,'' and that they ''would result in significant improvements in visibility and help to ensure reasonable progress toward the national visibility goal (citing 70 FR 39131). Additionally, EPA has made clear that ''the presumptions represent a reasonable estimate of a stringent case BART * * *'' (citing 71 FR 60612, 60619, Oct. 13, 2006).

Commenters argue that EPA was not correct in stating in the proposed BART determination for FCPP that in setting presumptive BART limits, it ''did not consider the question of what more stringent control technologies might be appropriately determined to be BART'' (citing 75 FR 64226). Rather, EPA's 2005 rules were clear that the Agency had considered—and rejected—establishing presumptive BART limits based on SCR (citing 70 FR 39136). Thus, EPA established through rulemaking that SCR is not an appropriate basis for presumptive BART limits and that combustion controls should generally be deemed BART.

Commenters also argue that a BART analysis must begin with and take into account the presumptive BART limits and EPA's rationale for setting them. If a source is able to meet the limit through the application of combustion controls, there should be an exceedingly strong presumption that such controls constitute BART.

Commenters state that EPA's analytical approach disregarded the presumptive limits entirely. By using a top-down approach in which it started its analysis by evaluating SCR and then determined that SCR is BART for FCPP, EPA never undertook an assessment of combustion controls.

Commenters further argue that in its BART analysis, APS demonstrated that each unit at FCPP can meet the presumptive BART limits through the application of advanced combustion control technologies.

Under the BART rules, a deviation from presumptive BART, either upwards or downwards, is authorized if an alternative control level is justified based on ''careful consideration of the statutory factors'' (citing 70 FR 39131). Commenters argue that EPA did not carefully consider the BART factors and then conclude that an alternative to presumptive BART limits is appropriate. Instead, commenters state that EPA dismissed the presumptive BART limits before even considering the BART factors.

Response: EPA disagrees with the commenters' assertions that we did not give sufficient weight to presumptive BART NO_X limits, or that the BART determination for FCPP was performed in a manner inconsistent with the RHR.

As noted in other responses in this document, the presumptive NO_X limits established in the BART Guidelines are determined to be cost effective and appropriate for most units. The establishment of presumptive BART limits, and the corresponding technology upon which those limits are based, does not preclude States or EPA from setting limits that differ from those presumptions. Indeed, the five statutory factors enumerated in the BART Guidelines provide the mechanism for establishing different requirements. We note the RHR states:

> States, as a general matter, must require owners and operators of greater than 750 MW power plants to meet these BART emission limits. We are establishing these requirements based on the consideration of certain factors discussed below. Although we believe that these requirements are extremely likely to be appropriate for all greater than 750 MW power plants subject to BART, a State may establish different requirements if the State can demonstrate that an alternative determination is justified based on a consideration of the five statutory factors.[22]

The RHR also states:

> If, upon examination of an individual EGU, a State determines that a different emission limit is appropriate based upon its analysis of the five factors, then the State may apply a more or less stringent limit.[23]

Therefore, the presumptive emission limits in the BART Guidelines are rebuttable.[24] The presumptive emission limits apply to power plants with a total generating capacity of 750 MW or greater insofar as these sources are required to adopt emission limits at least as stringent as the presumptive limits, unless after considering the five statutory factors, the State determines that the presumptive emission limits are not appropriate. Moreover, the RHR and BART Guidelines do not exempt States from a five factor BART analysis, and that BART analysis may result in a determination of BART emission limits that are more or less stringent than the presumptive emission limits for subject to BART sources. The RHR states:

> For each source subject to BART, 40 CFR 51.308(e)(1)(ii)(A) requires that States identify the level of control representing BART after considering the factors set out in CAA section 169A(g), as follows:
>
> States must identify the best system of continuous emission control technology for each source subject to BART taking into account the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use at the source, the remaining useful life of the source, and the degree of visibility improvement that may be expected from available control technology.[25]

EPA's site-specific five-factor analysis performed for FCPP demonstrates that, in considering the expected remaining useful life of FCPP and the existing controls, SCR is cost effective, results in the most visibility improvement of all feasible control technologies, and does not cause energy or non-air quality environmental impacts that warrant its elimination as the top control option. As a result, regardless of the appropriateness of SCR as a control technology for most units on a national scale, or the extent to which EPA considered SCR in establishing the presumptive limits, the site-specific five-factor analysis performed for FCPP justifies a different NO_X BART limit than the presumptive NO_X BART limit.

EPA disagrees with commenters' assertions that we disregarded presumptive NO_X BART limits. Although we do not rely upon the numerical values of the presumptive NO_X limits listed in the BART Guidelines, the technological basis for presumptive NO_X BART limits, such as the use of combustion control technology, boiler type, and coal type, were considered in the site-specific five-factor analysis. Combustion control technology was specifically considered as a potential retrofit technology, and costs and visibility improvements associated with combustion controls were calculated and included in the TSD in order to provide a comparison to other NO_X control technologies.

In addition, EPA disagrees that the rule directs authorities to consider non-combustion control technology only when presumptive limits cannot be met using combustion control technology. While a BART determination deviating from presumptive BART must be supported by the results of the five-factor analysis, the rule does not restrict the ability of States (or in this case, EPA) to initiate a five-factor analysis.

[22] 70 FR 39131.

[23] 70 FR 39132.

[24] 71 FR 60619.

[25] 70 FR 39158.

Comment: Two of the owners of FCPP and the Navajo Nation asserted that advanced combustion controls constitute BART for FCPP because such controls will result in meaningful emission reductions and will contribute to reasonable progress toward visibility improvement.

One of these commenters noted that EPA has ''determined that combustion controls are not likely to be effective control technologies at FCPP'' (citing 75 FR 64226). The commenter asserted that EPA's determination is based on superficial analysis and is mistaken. This commenter cited its comments which contain a detailed analysis of the use of LNB and OFA on FCPP's units. According to the commenter, this analysis confirms that the use of advanced combustion controls on the five units at FCPP will reduce plant-wide NO_X emissions by 34 percent and, for those units that are subject to presumptive BART limits, the reductions more than satisfy the presumptive limits in the BART rules.

Two of the commenters added that considering that neither SCR nor advanced combustion controls will produce humanly perceptible visibility improvements in the nearby Class I areas, control technologies that result in limits that meet presumptive BART should be determined BART and that these reductions will contribute to reasonable progress toward the national visibility goal.

The Navajo Nation stated that a phased approach to emissions controls at FCPP, beginning with combustion controls, is fully consistent with both the CAA and the RHR, and is the approach that the EPA should take as a prudent trustee of the Navajo Nation.

This commenter added that the BART component of the CAA and RHR was meant to provide for a measured response to emissions from aging power plants; thus, requiring the most expensive controls is inconsistent with the law and regulations governing the BART process. The commenter also asserted that requiring a power plant over which EPA has exclusive jurisdiction to bear a greater regulatory burden than similarly situated plants regulated by the States is contrary to the purposes of the Act, the RHR, and to the economic interests of the Navajo Nation.

Response: EPA disagrees with the comment that advanced combustion controls on all five units at FCPP will reduce plant-wide NO_X emissions by 34 percent. APS has provided conflicting information regarding whether or not advanced combustion controls will be effective at significantly reducing NO_X emissions at FCPP. As outlined in the TSD for our 2010 BART proposal, we have concluded that combustion controls will not be effective at significantly reducing NO_X emissions at FCPP.

EPA disagrees that installation of SCR will not result in humanly perceptible impacts. As noted above, EPA's visibility modeling of the impacts of SCR installation at FCPP indicates visibility improvements at the sixteen nearby Class I areas ranging from 0.9 to 2.5 dv.

EPA agrees with certain aspects of comments from the Navajo Nation regarding a phased implementation strategy to attaining national visibility goals. In 40 CFR 51.308(f), States are required to revise their regional haze implementation plans every ten years, which is a process that involves evaluating their ability to attain reasonable progress goals and potentially updating their long-term strategy for regional haze. The periodic revision requirement described in 40 CFR 51.308(f), however, does not extend to the implementation plan for BART requirements. The phased approach described by the Navajo Nation has certain benefits, and a phased approach is incorporated into the alternative emission control strategy.

Comment: Two federal agencies and two groups of environmental advocacy groups assert that the NO_X emission limit for the units at FCPP should be 0.05 lb/MMBtu based on the capabilities of SCR. The federal agency commenters stated that, given that BART is meant to achieve the best possible emissions reductions, EPA should not base its emission limits on the ''minimum reduction expected from SCR, estimated by Hitachi Power Systems America'' (citing the TSD for our proposed rulemaking) because real-world application of SCR indicates that lower NO_X emission limits are routinely reached. Regarding the emission limits for Units 4 and 5, the commenters noted that of the 20 cell burners with SCR in 2010, 12 had lower NO_X limits than proposed by EPA for FCPP, with 3 EGUs at less than 0.06 lb/MMBtu. Based on this information, the original APS BART analysis of SCR at 0.06 lb/MMBtu (annual and 24-hour average), and the ''common knowledge'' that SCR can achieve at least 90 percent reduction, the commenters concluded that the installation of SCR at FCPP is capable of reducing annual NO_X emissions by 90 percent to 0.05 lb/MMBtu on an annual average basis.

One of the federal agency commenters specifically refuted EPA's rationale in the supplemental proposal for its 80 percent SCR efficiency estimate. The main points are summarized below.

EPA took into account the degradation of the SCR catalyst over its lifetime and calculated the emission limit to reflect the capability of the catalyst just prior to its replacement on a 3-year cycle. Commenters assert this issue is not a technical limitation on SCR, but is simply a cost item to be accounted for in the proper design and operation of the SCR.

EPA stated that pursuing NO_X control efficiencies of greater than 80 percent on Units 4 and 5 is limited by formation of H_2SO_4 from the SCR catalyst because the additional layers of catalyst needed to increase NO_X control efficiency would increase emissions of H_2SO_4, most affecting nearby Mesa Verde National Park. The commenter gave several reasons why this argument is incorrect.

EPA stated that the high ash content (approximately 25 percent) of the coal burned at FCPP may adversely affect the capability of SCR to reach the highest end of the control efficiency range without the use of additional layers of catalyst or more frequent catalyst replacement. According to the commenter, this is not consistent with previous EPA proposals for SCR emissions limits at facilities that use coal with similar ash content. Unless the FCCP ash contains some unusual catalyst poison, the 25 percent ash content is not a technical feasibility issue that would affect SCR effectiveness, but is a matter of proper SCR design, operation, and maintenance.

This federal agency commenter also asserted that NO_X BART for Units 1–3 should be 0.05 lb/MMBtu on an annual basis. The commenter noted that unsuccessful attempts to reduce NO_X emissions at FCPP with combustion controls occurred over a decade ago when this technology was not as fully developed as now, and pointed out that APS'S BART analysis concluded that such controls are technically feasible and would reduce NO_X emissions significantly.

The commenter evaluated Clean Air Markets Division (CAMD) data for 2000—2009 and found 33 dry-bottom, wall-fired boilers with NO_X emissions rates similar to FCPP Units 1–3 (0.6—0.8 lb/MMBtu) that had been reduced to 0.4 lb/MMBtu or less by application of modern combustion controls. The commenter asserted that because the typical approach is to first reduce NO_X emissions by combustion controls before adding SCR, these real-world CAMD data support the belief that using combustion controls and SCR could

reduce NO_X at FCPP Units 1–3 to 0.05 lb/MMBtu on an annual basis.

The commenter asserted that modern SCRs are routinely designed and operated to achieve 90 percent NO_X control and that based on this well-accepted industry standard, NO_X control of at least 90 percent is BART.

The commenter also contended that LNB and OFA are feasible for all five units at FCPP. The commenter rejected EPA's statement that it would be difficult to retrofit Units 4 and 5 with modern LNB technology (citing 76 FR 10534) and pointed out that the operator of FCPP has stated that the combination of LNB and OFA is technically feasible for these units. The commenter indicated that the use of LNB/OFA on Units 1–5 would reduce NO_X emissions by 27 to 46 percent, making SCR with a removal efficiency of 90 percent sufficient to satisfy a 0.05 lb/MMBtu NO_X limit.

The commenter stated that a 0.05 lb/MMBtu limit is consistent with EPA's determinations elsewhere, such as for the San Juan Generating Station (proposed limit of 0.05 lbs/MMBtu, 30-day rolling average) and for Desert Rock (final permit limit of 0.035 lbs/MMBtu, 365-day rolling average). According to the commenter, an EPA-issued permit containing a lower NO_X limit creates a presumption of technical feasibility for purposes of BART. Commenters also argued that emission limits should be based on a 30-boiler operating day rolling average.

Response: EPA disagrees with the commenter's assertion that emission limits associated with BART must meet the lowest emission rate achieved with that technology at any coal-fired power plant. The Regional Haze Regulations at 40 CFR § 51.308(e)(1)(ii)(A) state that:

> The determination of BART must be based on an analysis of the best system of continuous emission control technology available and associated emission reductions achievable for each BART-eligible source that is subject to BART * * *

Additionally, the BART Guidelines state that: ''[i]n assessing the capability of the control alternative, latitude exists to consider special circumstances pertinent to the specific source under review, or regarding the prior application of the control alternative'', (70 FR 39166) and that ''[t]o complete the BART process, you must establish enforceable emission limits that reflect the BART requirements * * *'' (70 FR 39172). The five-factor BART analysis described in the Guidelines is a case-by-case analysis that considers site specific factors in assessing the best technology for continuous emission controls. After a technology is determined as BART, the BART Guidelines require establishment of an emission limit that reflects the BART requirements, but does not specify that the emission limit must represent the maximum level of control achieved by the technology selected as BART. The BART Guidelines and the Regional Haze Rule do not preclude selection of the maximum level of control achieved by a given technology as BART, however, the emission limit set to reflect BART must be achievable by the specific source and should be determined based on consideration of site-specific factors. Therefore, limits set as Best Available Control Technology (BACT) during Prevention of Significant Determination (PSD) review (*e.g.,* Desert Rock) may provide relevant information, but should not be construed to automatically represent the most appropriate BART limits representative of a given technology for every facility.

While some commenters asserted that combustion controls would be feasible upstream of SCR to further reduce NO_X emissions to meet a limit of 0.05 lb/MMBtu, in its comment letter, the National Park Service (NPS) agreed with EPA that the addition of combustion controls may ''not (be) worth the small incremental reduction in NO_X emissions''. As discussed in the TSD for our proposed BART determination, because additional combustion controls at FCPP would not achieve significant reductions in NO_X and may cause operability issues for the boilers, EPA determined that SCR, without the addition of new combustion controls, is BART for FCPP.

Several environmental organizations argued that a 30-day rolling average emission limit of 0.05 lb/MMBtu should be determined BART for FCPP and provided supporting documentation.[26] EPA disagrees that an emission limit set in association with a BART determination must represent the lowest achieved emission rate from the best performing unit using that technology. EPA notes that, after further examination [27] of the commenters' supporting documentation, the maximum 30-day calendar average emission rates for the 17 top performing units exhibited significant variability (0.056—1.1 lb/MMBtu), even though the annual average emission rates listed are all below 0.07 lb/MMBtu.

In its comments, the National Park Service provided examples of 3 cell burner boilers currently equipped with SCR: Cardinal Units 1 and 2 and Belews Creek Unit 1. Based on NO_X data from the Clean Air Markets Division (CAMD), EPA notes that over 2009–2011, NO_X emissions from Cardinal Unit 1 showed an increasing trend. Cardinal Unit 2 shows a similar pattern as Unit 1, with an increasing trend in minimum and maximum 30-day calendar averages. Belews Creek 1 also showed a similar pattern of generally increasing minimum and maximum 30-day calendar average emission rates. Although commenters are correct in stating that the best performing units can achieve 30-day rolling emission rates of 0.05 lb/MMBtu or lower, CAMD data show significant variability in emission rates, both over time for a given unit, and between the best performing units. Some of this variability may be related to catalyst aging, or may be related to the participation of these units in trading programs (therefore these units operate without an absolute limit on individual boilers). Regardless of the cause of this variability, EPA notes that significant variability over a 30-day average, even among the best performing units, does exist, and EPA disagrees that an emission limit set in association with a BART determination must represent the lowest rate achieved on 30-day rolling average basis from the best performing unit using that technology.

EPA examined the most recent Clean Air Markets Division (CAMD) emission rate data for 12 cell burner boilers currently operating with SCR over 2009–June 2011.[28] In order to determine what might be an appropriate percent reduction to represent all cell burner boilers currently using SCR, we calculated the average percent reduction from the highest emission rate achieved over all 12 units. The percent reduction achieved from the monthly calendar average emission rate over 2009–June 2011 from the 12 units ranged from 48 to 90 percent, with an average value of 78 percent.

Commenters claim that emissions of sulfuric acid mist and the high ash content of coal used by FCPP, and considerations of catalyst life are not barriers to achieving higher NO_X reduction efficiencies than proposed by EPA. EPA disagrees with comments that our statement regarding the impact of additional layers of catalyst on increasing sulfuric acid emissions is unsupported. EPA understands from our

[26] See items (2 and 3) in collection of documents titled ''Public Comment_8 Environmental Groups (Barth)_Letter 5–2–11''. Document Number EPA–R09–OAR–2010–0182.

[27] See the Response to Comments, Section 8.1 in the docket for this final rulemaking.

[28] See the Response to Comments Section 8.1 in the docket for this final rulemaking.

correspondence with Hitachi Power Systems America that each layer of catalyst used results in an incremental increase in the conversion rate of SO_2 to SO_3. The EPRI method used for calculating sulfuric acid requires the input of a SCR catalyst oxidation rate. This oxidation rate varies depending on catalyst type and number of layers used. For the ultra low SO_2 to SO_3 oxidation catalysts offered by Hitachi, each layer contributed roughly 0.167 percent conversion, with three layers totaling 0.5 percent. The use of an additional layer, such as in a 3+1 system, would thus increase the conversion rate to nearly 0.7 percent when all four catalyst layers are in operation. Further NO_X reductions achieved from the addition of a 5th layer of catalyst would likely exacerbate pluggage and back-pressure concerns related to the ash content of the coal and may affect cost and operation of the unit. Commenters have not submitted information to refute this.

The ash content of coal has an important effect on the effectiveness of SCR because high ash content in coal can cause pluggage and catalyst erosion and thus reduce available catalyst area and activity for NO_X reduction. Commenters point to San Juan Generating Station (SJGS) and Desert Rock as facilities with lower SCR-based NO_X emission limits that use high ash content coal. EPA Region 6 recently finalized a FIP for SJGS with a limit of 0.05 lb/MMBtu, representing an 83 percent reduction in NO_X emissions. The emission limit EPA Region 6 set for SJGS is lower than the limit we set for FCPP because SJGS uses a different boiler type than FCPP and modern combustion controls have already been installed and have reduced NO_X emissions at SJGS by 29–33 percent.[29] EPA has determined that because Units 4 and 5 at FCPP are cell burner boilers, modern combustion controls would not significantly reduce NO_X emissions from FCPP. Even though the emission limit differs, the reduction efficiency from the installation and operation of SCR at FCPP and SJGS are generally consistent, particularly when considering the similarly high ash content of coal (greater than 20 percent) used at both facilities. In 2008, EPA Region 9 issued a pre-construction Prevention of Significant Deterioration (PSD) permit to allow construction of a new coal-fired power plant on the Navajo Nation, known as the Desert Rock Energy Facility (Desert Rock).[30] If constructed, Desert Rock would have used the same coal as FCPP from the BHP Navajo Mine and the final PSD permit set a NO_X limit of 0.05 lb/MMBtu (on a rolling 365-day average). Commenters argue that if Desert Rock was required to meet a limit of 0.05 lb/MMBtu using the same coal as FCPP, the ash content should not hinder FCPP from achieving similarly low NO_X emission rates. EPA notes that if constructed, Desert Rock would have been a new, state-of-the-art facility specifically designed with boiler characteristics, combustion controls, and post-combustion controls to meet the Best Available Control Technology (BACT) requirements for numerous criteria and non-criteria pollutants. FCPP is an existing, over 40-year-old power plant. The Regional Haze Rule requires a case-by-case BART (best available retrofit technology) determination, which need not be equivalent to BACT for new facilities.

Based on the significant 30-calendar day average variability exhibited by the top performing units cited by commenters, and the variability in 30-calendar day average and the 2009–June 2011 30-calendar day average percent NO_X reduction of 78 percent exhibited by 12 cell burner boilers equipped with SCR, EPA continues to affirm that a limit representing an 80 percent reduction in NO_X emissions reflects what is achievable using the technology determined as BART for FCPP.

Comment: One of the owners of FCPP stated a willingness to support a NO_X emission limit of 0.098 lb/MMBtu for Units 4 and 5 under the alternative proposal, but only in the context of an alternative emission reduction strategy that includes resolution of the related issues.

The Navajo Nation similarly endorsed the proposed 80 percent reduction in NO_X emissions from Units 4 and 5, with a limit of 0.098 lb/MMBtu, under the supplemental proposal, based on the site-specific parameters at FCPP.

Response: EPA agrees that the appropriate limit for Units 4 and 5 under the alternative strategy is 0.098 lb/MMMtu (based on a rolling average of 30 successive boiler operating days). The final rule reflects this limit.

Comment: One of the owners of FCPP opposed EPA's proposal to ''phase in'' NO_X controls at FCPP under a traditional BART FIP, commencing 3 years from the date the FIP becomes effective. The commenter asserted that this proposal does not afford adequate time to properly design, engineer, and construct the controls before the compliance deadline.

Response: EPA partially agrees with this comment. We revised the BART compliance date for one 750 MW unit to within 4 years from the effective date of this final rule. The remaining 750 MW unit and Units 1–3 must meet a compliance date of within 5 years of the effective date of the final rule. The revised compliance time within 4 and 5 years allows time for design, engineer, and construct controls.

Comment: One environmental advocacy group stated that the proposed plant-wide BART limit of 0.11 lb/MMBtu across all five FCPP units violates Executive Order 12898 on environmental justice. Specifically, the commenter asserted that given the significant differences in pollution control systems among FCPP's five units, allowing a plant-wide average could create pollution ''hotspots'' with respect to co-pollutants. As an example, the commenter noted that while Units 4 and 5 have baghouses, Units 1–3 use less efficient venturi scrubbers for control of sulfur dioxide, particulate matter, and mercury. The commenter asserted that the plant-wide average limit for NO_X would allow increased emissions from Units 1–3 in the event of a temporary outage or reduced output from one or both of the larger units. The commenter stated that while this may not increase the total NO_X emissions from the plant, it would increase the amount of mercury and other toxic co-pollutants emitted into the surrounding community, which is a low-income community of color.

Response: EPA disagrees with the commenter that a plant-wide BART limit of 0.11 lb/MMBtu across all five FCPP units violates Executive Order 12898 on environmental justice. This final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income population because it increases the level of environmental protection for all affected populations in the area including any minority or low-income population.

The commenter is correct that in the event of a temporary outage or reduced output from Unit 4 or 5 the operator could continue to operate FCPP units 1–3 under the original BART proposal provided that they maintain compliance with the plant-wide emission limit of 0.11 lb/MMBtu for NO_X. In order to maintain compliance with the plant-wide emission limit, Units 1–3 would have to operate at a lesser capacity than

[29] See page 4–3 of report titled ''PNM BART Report for SJGS_final to PNM_June 18, 2007.pdf'' in the docket for this final rulemaking. Pre-consent decree emission rates on Units 1–4 at SJGS ranged from 0.42–0.45 lb/MMBtu. Post-consent decree emission limits for those units were 0.30 lb/MMBtu.

[30] Desert Rock has not been constructed. EPA requested a voluntary remand of the Desert Rock PSD permit in 2009 to incorporate new applicable requirements. The developers of Desert Rock have not yet submitted a revised PSD application to EPA.

they would normally operate if Unit 4 and 5 were functioning because units 1–3 have higher NO_X emission rates than Units 4 and 5. The NO_X emission rates from Units 1–3 with SCR, based on 80 percent control of current emission rates would be 0.16, 0.13, and 0.12 lb/MMBtu respectively which are higher than the proposed plant-wide emission limit. Therefore, to maintain compliance with the plant-wide NO_X emission limit (which is based upon a 30-calendar day rolling average), Units 1–3 would have to operate at a reduced capacity in any 30-day period in which Units 4 and 5 are operating a reduced capacity, so as to maintain the balance among the five units. This reduced capacity would result in an overall lower rate of emission for mercury and other co-pollutants from Units 1–3. Therefore, there would be no increased emissions of mercury or other co-pollutants and no ''hot-spots'' or disproportionately high and adverse human health or environmental effects on minority or low-income population.

2. Comments on the Proposed BART Determination for PM

Comment: One of the owners of FCPP asserted that the existing controls at FCPP constitute BART for PM emissions. The commenter contended that the impact of PM controls on the visibility in the neighboring Class I areas would be ''vanishingly small'' while the cost would be ''exorbitant'' (resulting in cost effectiveness ranging from $51,500–$148,659 per ton reduced and from $1.4 billion–$3.7 billion per dv improvement).

The Navajo Nation stated that EPA acknowledged the high incremental cost of new PM controls on Units 1–3 (citing 75 FR 64230), yet justified the cost effectiveness of baghouses by comparison with similar retrofit projects in EPA Region 9. This commenter asserted that EPA failed to properly evaluate the costs associated with installation of baghouses using site-specific parameters, thereby deviating from the BART Guidelines. The commenter asserted that continued operation of venturi scrubbers to meet emission limits of 0.03 lb/MMBtu and an opacity limit of 20 percent satisfies BART for Units 1–3.

The Navajo Nation expressed support for the supplemental proposal to require a PM emission limit of 0.015 lb/MMBtu and 10 percent opacity limit on Units 4 and 5. The commenter presumed that FCPP can readily meet these standards prior to installation of SCR since the limits can be achieved with the existing baghouses.

Regarding the EPA's proposed 10 percent opacity standard for each unit, two of the owners of FCPP stated that the EPA has not specified any costs or predicted any improvement in visibility that would result from such limits. The commenters asserted that without such basis, the EPA cannot justify the proposed opacity limits.

Response: As stated in our proposed BART determination for PM, the existing venturi scrubbers on Units 1–3 at FCPP do not constitute BART. In our proposed BART determination for FCPP, EPA proposed a PM emission limit for Units 1–3 that can be achieved through the installation of any of four different PM control options. At the time of our BART proposal, the MATS Rule for electric utility steam generating units had not yet been proposed, nor had APS suggested its alternative emission control strategy to close Units 1–3 in lieu of complying with BART for NO_X. Because the final MATS rule has been issued [31] and sets filterable PM and mercury limits that would be applicable to the units at FCPP, and because EPA is finalizing this rule to allow APS to either comply with the alternative emission control strategy or BART for NO_X, EPA is determining that it is not necessary or appropriate at this time to finalize our proposal to set new PM limits for Units 1–3.

Regarding our proposed BART determination for PM for Units 4 and 5, we are finalizing the proposed 0.015 lb/MMBtu emission limit based upon the proper operation of the existing baghouses. However, we have determined based on the comments we received from the operator of FCPP that it is not necessary or appropriate to take final action on the proposed 10 percent opacity limit. We have determined that imposing a 10 percent opacity limit will not provide greater assurance that Units 4 and 5 at FCPP are meeting the PM emission limit of 0.015. We have determined previously that a 20 percent opacity limit is sufficient to ensure the PM emission limit is being continuously met. The 10 percent opacity limit was generally supported by the Navajo Nation and environmental groups. EPA has promulgated some recent rules for electric generating units that have retained a 20 percent opacity standard rather than reducing that limit to 10 percent. Specifically, EPA's revised the New Source Performance Standard for large electric generating units at 40 CFR Part 60, Subpart Da, to lower the PM emission limit for new units to 0.09 lb/MMBtu for gross energy output or 0.097 lb/MMBtu for net energy output. For existing units that reconstruct or modify, Subpart Da establishes an emissions limit of 0.015 lb/MMBtu. For both standards, EPA retained a 20 percent opacity standard as being sufficient to ensure compliance with either the 0.090 (0.097) lb/MMBtu or 0.015 lb/MMBtu PM emission limit. EPA's MATS rule, which was finalized just a few months ago, also retained a 20 percent opacity standard as being sufficient to ensure compliance with the PM emission limit that will be required for electric generating units subject to that rule.

The importance of the opacity limit is that a certain percentage opacity is an instantaneous demonstration that a unit is in compliance with its PM emission limit. If a unit does not install and operate a PM continuous emissions monitor, then EPA ensures compliance with the PM emission limit by requiring an episodic source test. For the periods between episodic source testing, EPA can reasonably assure continuous compliance with the PM emission limit by observing that the unit's stack emissions do not exceed a set opacity. EPA's recent rulemakings have determined that 20 percent opacity is sufficient to ensure compliance with a PM emission limit lower than the emission limit we have determined is BART for Units 4 and 5. Accordingly, EPA is determining the 20 percent opacity limit that we promulgated in our 2007 FIP for FCPP as being adequate to ensure continuous compliance with the PM BART limit or 0.015 lb/MMBtu. EPA concludes that this change is a logical outgrowth of the comments received on the proposal.

Comment: One commenter indicated that EPA has proposed a BART limit only for PM, which appears to be only filterable particulate matter. The commenter asserted that the BART guidelines specify that BART should be evaluated and defined for both PM_{10} and $PM_{2.5}$ (citing 40 CFR part 51, Appendix Y, section IV.A) and, consequently, that EPA must evaluate and define BART limits for both PM_{10} and $PM_{2.5}$. The commenter also asserted that as part of the $PM_{2.5}$ BART determination, EPA must impose emission limits on condensable particulate matter, which is typically in the size range of 2.5 micrometers or smaller. Thus, the commenter stated that in addition to a filterable PM BART limit, EPA should impose a BART limit on total $PM_{2.5}$.

One public interest advocacy group supported EPA's proposal and supplemental proposal to require a PM limit and a 10 percent opacity limit on Units 4 and 5. The commenter indicated

[31] See 77 FR 9304, February 16, 2012.

that these limits should become effective prior to SCR installation, regardless of whether the BART or alternative emission control plan is implemented.

Response: EPA disagrees with the commenters' recommendation that the condensable fraction must be included in the PM BART limits. EPA has previously outlined our rationale for why an H_2SO_4 limit is not appropriate at this time (it will be addressed through the pre-construction permitting process if needed) and EPA expects that H_2SO_4 will be the main component of condensable PM that would be expected from a coal-fired EGU with an SCR.

EPA agrees with commenters that PM limits on Units 4 and 5 should become effective prior to SCR installation, as Units 4 and 5 generally already meet the 0.015 lb/MMBtu limit.[32] EPA is finalizing a compliance date for PM emission limits on Units 4 and 5 to be within 6 months after restart following the next scheduled major outages in 2013 and 2014. As discussed previously, EPA has determined that finalizing the proposed opacity limit of 10 percent on Units 4 and 5 is not necessary or appropriate at this time.

3. Comments on BART for SO_2

Comment: Some commenters stated that SO_2 BART should be required for FCPP, while one commenter simply noted that FCPP is subject to BART for SO_2. One federal agency commenter stated that FCPP is subject to BART for SO_2. The commenter stated that Units 4 and 5 should be able to meet a limit of 0.12 lb/MMBtu on an annual average basis by upgrading the existing scrubbers.

One set of environmental advocacy groups discussed the Regional Haze rules, the TAR, and the SO_2 emissions from FCPP and concluded that EPA is under a legal obligation to conduct a BART analysis for SO_2 emissions from FCPP and, to the extent EPA has failed to make a finding that it is ''necessary or appropriate'' to regulate SO_2 emissions from the FCPP, such a failure is arbitrary, capricious, and not supported by the administrative record.

According to the commenter, EPA argues that FCPP's current SO_2 emissions limits are ''close to or equivalent'' to the limit that would be established under BART. The commenter asserted that this conclusion is arbitrary and capricious because EPA has failed to undertake any scientific or technical analysis to support its conclusion.

A public interest advocacy group stated that the SO_2 limits need to be tightened for FCPP to further reduce visibility impairment and to reduce the acidification of rainfall caused by the formation of H_2SO_4. The commenter stated that because the damaging effects of H_2SO_4 in precipitation on ancestral Puebloan sandstone dwellings and pictographs are not fully understood, it is disappointing for the FCPP proposals not to address SO_2.

Response: EPA finalized a FIP in May 2007 that required significant SO_2 emissions reductions from FCPP and established continuous SO_2 emissions limits for FCPP. See 72 FR 25698 (May 7, 2007). The 2007 FIP required FCPP to increase the removal efficiency of its SO_2 emissions controls from 72 percent to 88 percent, resulting in an SO_2 emissions reduction of approximately 22,000 tons per year. EPA had proposed this FIP in September 2006. The 2006 proposed FIP stated that ''EPA believes that the SO_2 controls proposed today for FCPP are close to or the equivalent of a regional haze BART determination of SO_2. This takes into consideration the early reductions this action will achieve and the modification to the existing SO_2 scrubbers.'' 72 FR 25700. In finalizing that rulemaking in the 2007 FIP, EPA stated that it was exercising its authority pursuant to Section 49.11 of the TAR to implement measures that are necessary or appropriate to protect air quality in Indian country. Id. EPA determined that the SO_2 emissions reductions would be federally enforceable as soon as the 2007 FIP was finalized, which would be potentially five years before EPA could achieve enforceable SO_2 emissions reductions through making a BART determination. See id. EPA also considered the Navajo Nation's request for EPA to establish enforceable SO_2 emissions reductions immediately that, in the opinion of the Navajo Nation, ''appear[] to be equivalent to BART.'' Id. Therefore, EPA's determination on this issue in finalizing the 2007 FIP was ''that it is neither necessary nor appropriate at this time to undertake a BART determination for SO_2 from FCPP given the timing of the substantial SO_2 reductions resulting from this FIP.'' Id. In addition, we stated that ''given that the SO_2 controls for FCPP immediately achieve significant reductions in SO_2 comparable to what could ultimately be achieved through a formal BART determination, EPA believes that it will not be necessary or appropriate to develop a regional haze plan to address SO_2 for the Navajo Nation in the near term.'' Id. 25700–701. Both APS, as operator of FCPP, and Sierra Club sought judicial review of our 2007 FIP.

The comments on this action essentially repackage the comments we received and provided a response for on the 2007 FIP. The comments have not presented any new facts or legal considerations that have arisen or changed since we responded to comments requesting a BART determination for SO_2 in 2007.

4. Other Comments on BART

Comment: One group of environmental advocacy groups stated that as an alternative to a condensable $PM_{2.5}$ limit, EPA could set limits on the pollutants which form condensable $PM_{2.5}$, such as sulfuric acid mist (H_2SO_4) and ammonia, as EPA proposed as part of the San Juan Generating Station (SJGS) BART rulemaking (citing 76 FR 503–4, January 5, 2011). If EPA adopts this approach, the commenter urged EPA to set an emission limit for H_2SO_4 no higher than the limit of 1.06×10^{-4} lb/MMBtu for each unit as proposed for SJGS based on the use of low reactivity catalyst and the most current information from the Electric Power Research Institute. If CEMS are unavailable for this pollutant, the commenter urged EPA to require stack test monitoring for H_2SO_4 on a more frequent basis than annual monitoring.

The commenter also requested that EPA set emission limits for ammonia at a rate no higher than the 2.0 parts per million as proposed at SJGS, to be monitored with CEMs.

Response: EPA disagrees with the comment that Region 9 should set the same emission limits for ammonia and sulfuric acid as Region 6 in its proposed BART determination for SJGS.

In its January 5, 2011 proposed rulemaking for SJGS, Region 6 proposed an ammonia slip limit of 2.0 ppmvd on an hourly average and requested comment on a range from 2.0 ppmvd to 6.0 ppmvd. In its final BART rulemaking (76 FR 52388, August 22, 2011), Region 6 determined that an emission limit and monitoring were not warranted for ammonia and did not finalize its BART determination for SJSG with the proposed 2.0 ppmvd ammonia limit.

In its proposal for SJGS, Region 6 proposed an emission limit for sulfuric acid of 1.06×10^{-4} lb/MMBtu on an hourly average, and requested comment on a range from 1.06×10^{-4} to 7.87×10^{-4} lb/MMBtu. In its final rulemaking, Region 6 finalized an emission limit for sulfuric acid of 2.6×10^{-4} lb/MMBtu to minimize its contribution to visibility impairment. Region 6 calculated this emission limit using an estimation

[32] See document titled: ''TSD ref. [2–3, 95] FCPP_BART_Scenarios_Emissions_EPA_Proposal.xlsx'' in the docket for this proposed rulemaking at EPA–R09–OAR–2010–0683–0017.

methodology from EPRI, assuming the use of an ultra-low activity catalyst (0.5 percent total conversion of SO_2 to SO_3), zero ammonia slip, no sorbent injection, and EPRI-recommended values for removal by existing downstream control equipment.

Actual measurements of baseline sulfuric acid emissions have not yet been determined at FCPP and the calculation of projected sulfuric acid emissions after installation and operation of SCR using the EPRI methodology is dependent on future decisions made by the facility on the type of SCR catalyst and number of layers used, as well as numerous assumptions about loss to downstream components, such as air preheaters and baghouses, the true values of which are currently not yet defined or known for FCPP. Furthermore, EPA Region 9 is the permitting authority for preconstruction permits on the Navajo Nation, and an increase in sulfuric acid emissions from the installation of SCR may trigger major modification PSD permit requirements at a low threshold of 7 tpy (see 40 CFR 52.21) or Tribal minor new source review (NSR) permit requirements at a threshold of 2 tpy (see 40 CFR Part 49 Subpart C). Preconstruction permitting review may also be triggered from significant emissions increases of $PM_{2.5}$ from SCR installation at FCPP. If one of these pollutant triggers PSD, the permitting authority must provide an Additional Impact Analysis under the PSD program. The PSD program also requires the permitting authority to determine BACT for pollutants that triggered PSD. A similar control technology review may also be required at the discretion of the permitting authority under the Tribal Minor NSR program. For these reasons, Region 9 has determined that for FCPP, emission limits and monitoring requirements for sulfuric acid are more appropriately reviewed in the preconstruction permitting process.

Comment: Citing the BART Guidelines at 40 CFR part 51, Appendix Y, section V, one environmental advocacy group stated that BART emission limits and compliance schedules must be based on ''boiler operating day.''

The commenter asserted that the ''very high'' proposed BART emission limits suggest that EPA set these limits to encompass spikes that occur during startups and shutdowns. The commenter asserted that setting and enforcing limits based on boiler operating day would necessarily exclude spikes that occur before and after outages, such as startups, shutdowns, and malfunctions. According to the commenter, such periods should be subject to separate limits set at the pre-SCR uncontrolled level to encourage good work practice standards during these periods while allowing the SCR and other emission control technologies to be operated at an efficient and continuous capacity in compliance with BART.

Response: EPA agrees that the NO_X limit under the alternative emission control strategy should be set for 30 successive boiler operating days and that a ''boiler operating day'' should be defined as any day in which the boiler fires fossil fuel. Because the NO_X emission limit under the alternative emission control strategy already includes periods of startup and shutdown, separate limits are not required. The final rule reflects this approach.

For the original proposed BART determination, EPA does not find it necessary to define boiler operating day because the BART limit is a heat input-weighted plant-wide limit. Only operating hours for any of the five units would be included. When a unit is not operating, those hours are not included in the plant-wide 30-day average. Additionally, the heat input-weighted plant-wide limit also includes periods of startup and shutdown; therefore, separate limits are not required.

Comment: One environmental advocacy group stated that EPA should require FCPP to install all control equipment within 3 years of the date of a final FIP, as EPA did at SJGS. The commenter stated that there is ample data to support the contention that all this emission control technology can be installed and operational within 3 years or less.

Response: EPA disagrees with the comment that Region 9 should set a 3-year compliance timeframe because Region 6 proposed a 3-year compliance timeframe for SJGS. In its proposed rulemaking for SJGS,[33] Region 6 proposed a 3-year timeframe for SJGS to comply with the proposed limits but requested comment on a compliance range of 3–5 years. In its final rulemaking,[34] Region 6 finalized a compliance timeframe of 5 years and determined that because of site congestion at SJGS, a longer timeframe than average (37–43 months) to install SCR on the 4 units at SJGS would be required. The final BART determination for FCPP requires retrofit of five existing units at FCPP. In the final rule for FCPP, Region 9 is requiring installation and operation of SCR controls for one 750 MW unit within 4 years of the effective date, and the remaining 750 MW unit and Units 1–3 within 5 years of the effective date. Based on all of the factors that will be involved in the design, purchase and operation of the SCR controls, Region 9 considers this schedule to be appropriate and expeditious.

[33] See 76 FR 491, January 5, 2011.

[34] See 76 FR 52388, August 22, 2011.

G. Comments on APS's Alternative and EPA's Supplemental Proposal

Comment: One of the owners of FCPP pointed out that the November 2010 APS proposal included two critical components: (1) A proposal to close Units 1–3 and install SCRs on Units 4 and 5; and (2) EPA's contemporaneous agreement that these activities resolve any liability FCPP may have under regional haze BART, Reasonably Attributable Visibility Impairment Best Available Retrofit Technology (RAVI BART), NSR, and New Source Performance Standard (NSPS). The commenter asserted that EPA's supplemental proposal addresses only half of APS'S proposal—the half that achieves better than BART emission reductions, plant-wide reductions of all other emissions, and greater visibility improvement at nearby Class I areas—but ignores the other half of the APS proposal—the half that provides APS and the FCPP co-owners with needed regulatory certainty. Unless there is a contemporaneous resolution of these key issues with EPA, the commenter cannot and does not support EPA's supplemental proposal.

Response: EPA understands that the owners of FCPP were seeking to resolve any potential regulatory noncompliance issues simultaneously. However, EPA must use different mechanisms for promulgating rules and resolving enforcement issues. The comment requests resolution of potential past non-compliance with NSR and NSPS requirements. Potential past non-compliance can be resolved through entering into a Consent Decree containing a judicially approved release from liability. Such a Consent Decree under the CAA must be approved by the United States Department of Justice and must also be lodged in a United States District Court where the public is allowed to comment on it. Consent Decrees must be entered by the United States District Court for a release of liability of potential past non-compliance to be effective. Accordingly, this rulemaking action cannot effectuate any release of liability for potential past non-compliance with NSR or NSPS.

EPA is aware that several environmental groups have petitioned the Department of Interior to make a

finding that impairment at Class I areas is reasonably attributable to FCPP.[35] The NPS, on behalf of Department of Interior, has declined to make such a finding based on EPA's work in this rulemaking.[36] The environmental groups also filed a Complaint in the United States District Court for the District of Columbia [37] contending that the Department of Interior was unreasonably delaying making a finding of reasonable attribution from FCPP. On June 30, 2011, the Court dismissed the Complaint [38] holding that the NPS's letters refusing to make the finding of reasonable attribution constituted denying the Petitioners' request for a RAVI finding. Therefore, there are no pending petitions with the Department of Interior requesting a finding that visibility impairment at any Class I areas is reasonably attributable to FCPP. In any event, a BART determination under RAVI would likely be the same as under this BART determination.

Comment: One of the owners of FCPP stated that it is imperative to note that its support of the supplemental proposal (if other potential liabilities are resolved as discussed above) is based solely on the rationale that this achieves a result better than the proposed BART FIP, and that this ''better than BART'' outcome is a result of the closure of Units 1, 2, and 3. The commenter stressed that in no case—either in the original BART FIP proposal or in the supplemental proposal—does the commenter support any determination that SCR constitutes BART for FCPP. A second FCPP owner stated that its acceptance of the supplemental proposal upon resolution of the other potential issues would be a voluntary action based on its own business interests; the commenter does not support any BART determination that calls for installation of SCR at FCPP.

Response: EPA disagrees with the commenters that SCR is not BART. Based on our five-factor analysis, as described in the TSD for our proposed BART determination, SCR is cost effective and results in the greatest anticipated improvement in visibility. One of the owners of FCPP notes that the ''better-than-BART'' outcome is a result of the closure of Units 1, 2, and 3. However, the closure of Units 1–3 alone does not result in greater emission reductions than EPA's proposed BART determination, and represents only a roughly 30 percent reduction from baseline emissions. The closure of Units 1–3, in combination with SCR on Units 4 and 5, results in the ''better-than-BART'' outcome.

The voluntary nature of the alternative emission control strategy does not negate EPA's BART determination because (1) EPA must first determine what BART is in order to fulfill the requirements of the alternative program to BART as prescribed in the Regional Haze Rule, and (2) EPA cannot require the full or partial closure of a facility as a BART alternative, therefore the alternative emission control strategy remains an optional business choice of the owners of FCPP to implement in lieu of BART, if they see fit.

Comment: One environmental advocacy group and one federal agency asserted that the supplemental proposal is not better than BART for NO_X. Generally, commenters argue that based on the extended compliance timeframe for the alternative emission control strategy, the use of an artificially inflated baseline, the potential increase in output from Units 4 and 5, and assuming that SCR can achieve 0.05 lb/MMBtu of NO_X on an annual basis, the BART alternative fails to achieve greater cumulative NO_X reductions than would installation of BART (SCR) on all five units.

Response: EPA disagrees with the comment that the alternative emission control strategy is not better than BART, but agrees that a reexamination of baseline emissions and projected capacity factors in the future is warranted. As reported in the TSD for our proposed BART determination, facility-wide NO_X emissions over 2001–2009 ranged from 40,331 to 47,300 tpy. While the baseline emissions provided by APS and used by EPA in our Supplemental Proposal was within the range of annual NO_X emissions, in response to these comments, we conducted an additional analysis to compare the alternative emission control strategy against our final BART determination for NO_X using the 2001–2010 average as the baseline emission rate and an assumed capacity factor of 81 percent [39] for Units 4 and 5 under the alternative emission control strategy.[40] This analysis shows that in 2014 and 2015, the alternative emission control strategy results in lower NO_X emissions than BART due to the closure of Units 1–3 at the end of 2013. In 2016, 2017, and 2018, BART results in lower emissions than the alternative, and in 2019 and beyond, the alternative emission control strategy (5,556 tpy), with phased-in controls on Units 4 and 5 by the end of 2018, results in lower emissions than BART (8,479 tpy). In total, the BART Alternative results lower emissions from FCPP over more calendar years (2014–2015, and 2019 and beyond) than does BART (2016–2018). Even if APS operated Units 4 and 5 at 100 percent capacity, EPA calculates that emissions under the alternative emission control scenario in 2019 and beyond to be 6,859 tpy, which is still lower than under BART (8,479 tpy). On a cumulative basis, i.e., the sum total of NO_X emissions over 2011 to 2064, the BART Alternative also results in lower emissions than BART, both at an 81 percent capacity factor and at 100 percent capacity.

Commenters argue that if the BART emission limit were lower, the alternative would not be better than BART. For example, if EPA required an emission limit representing a 90 percent reduction in NO_X emissions, annual NO_X emissions would be lower than 5,000 tpy. However, as discussed in responses to similar comments, EPA has determined that an 80 percent reduction in NO_X emissions is BART for FCPP. It is inappropriate to compare the alternative emission control strategy against a target for BART that commenters would like to see based on maximum emission reductions achieved without consideration of site-specific characteristics of FCPP that EPA has determined are not appropriate for FCPP.

Commenters further argue that by offering FCPP a BART compliance deadline of July 2018, EPA is illegally extending a mandatory deadline under the CAA, and that installation of SCR at Units 4 and 5 can easily be accomplished within 2 years. EPA disagrees and notes that the compliance timeframe for EPA's BART determination requiring SCR

[35] See National Parks Conservation Association, *et al.,* Petition to United States Department of Interior, United States Department of Agriculture, and United States Forest Service, February 16, 2010, in the docket for this rulemaking.

[36] See letter from Will Shafroth, Department of Interior to Stephanie Kodish, NPCA, March 8, 2011 in the docket for this proposed rulemaking.

[37] See National Parks Conservation Association, *et al.*, Petition to United States District Court for the District of Columbia, January 20, 2011, in the docket for this final rulemaking.

[38] See *National Parks Conservation Association, et al., Plaintiffs,* v. *United States Department of Interior and United States Department of Agriculture, Defendants.* Civil Action No. 11–130 (GK). United States District Court for the District of Columbia, June 30, 2011, 794 F. Supp. 2d 39; 2011 U.S. Dist. LEXIS 70170; 74 ERC (BNA) 1015. In the docket for this final rulemaking.

[39] In testimony to the ACC, Mark Schiavoni of APS testified that he anticipates capacity factors over 2015–2030 to range from 75–81 percent for Units 4 and 5. See document titled ''Schiavoni Testimony_TRANSCRIPT.pdf'' in the docket for this final rulemaking.

[40] See document titled ''BART vs Alternative.xlsx'' in the docket for this final rulemaking.

installation on all 5 units is within 5 years of the effective date of the final rule, consistent with the maximum time allowed under the CAA § 169A(g)(4) in the definition of ''as expeditiously as practicable''. The commenter is confusing requirements under BART and requirements under the alternative to BART. EPA is not extending the BART compliance deadline beyond a 5-year period. Rather, EPA is allowing additional time to implement the alternative emission control strategy, as allowed under the provisions of the RHR for the implementation of ''other alternative measure rather than to require sources subject to BART to install, operate, and maintain BART'' (See 40 CFR 51.308(e)(2)). In our Supplemental Proposal, EPA cited the requirement (under 40 CFR 51.308(e)(2)(iii)) that ''all necessary emission reductions take place during the period of the first long-term strategy for regional haze''.

EPA disagrees with commenters that reductions under the alternative to BART violates 40 CFR 51.308(e)(2)(iii). The requirement simply states the reductions take place during the period of the first long term strategy and does not specifically prescribe that those reductions must take place at the beginning, middle, or end of the period of the first long-term strategy.

H. Other Comments

Comment: Forty-five private citizens and several private citizens who submitted written comments at a public hearing explicitly stated that they support EPA's efforts to clean up FCPP. Many of these commenters asked for the strictest regulations. Another private citizen implied that EPA should act to clean up emissions from FCPP and noted that cleaner air will result in a cleaner Colorado snow pack, which will result in cleaner water in the Colorado River.

Twelve private citizens and a few private citizens who submitted written comments at a public hearing stated that FCPP should be de-commissioned. Several of these commenters asserted that the plant should only be shut down if it cannot cease emitting pollutants, while others stated the plant should be shut down immediately.

Nine private citizens and some of the private citizens who submitted written comments at a public hearing stated that renewable energy sources can be used in place of coal-fired power plants.

Response: EPA acknowledges the comments supportive of our proposals but disagrees with commenters that suggest that FCPP should be de-commissioned or shut down immediately.

In addition to other CAA programs, EPA assesses air quality with respect to NAAQS. The Four Corners area is designated attainment for each of the NAAQS.[41] This means that the air quality in the Four Corners area is meeting the national health-based standards set by EPA.

For this action, EPA finds that under 40 CFR 49.11, it is necessary or appropriate to achieve emissions reductions of NO_X from FCPP required by the CAA's Regional Haze program. NO_X is a significant contributor to visibility impairment in the numerous mandatory Class I Federal areas surrounding FCPP. The emission reductions finalized will help achieve the goals of the Regional Haze Rule. The Regional Haze Rule however does not require nor does it authorize EPA to de-commission or shut down facilities to achieve the goals of the rule.

EPA agrees with commenters who stated that renewable energy sources can be used in place of coal-fired power plants. However, the Regional Haze Rule does not require that coal-fired facilities use or switch to renewable energy sources to meet the goals of the rule.

Comment: The Navajo Nation pointed out that as a federal agency, EPA has a trust responsibility to the Navajo Nation that requires it to give special consideration to the Nation's best interests in any action.[42] Because of the significant economic interest of the Navajo Nation in FCPP the commenter asserted that the BART proposal clearly implicates the Nation's tribal trust interests. The commenter further contended that since EPA is adopting a FIP for BART in lieu of a TIP by the Navajo Nation, the EPA is essentially ''standing in the shoes'' of the Nation for purposes of making the BART determination and should, therefore, defer to tribal views when making environmental policy decisions and give the same weight to the BART factors that the Navajo Nation would in determining BART for FCPP; that is, to the extent that the Nation recommends a particular control technology as BART for power plants located on the Nation's lands, EPA should give substantial weight to that recommendation as part of its decision-making process. (The commenter asserted that advanced combustion controls, rather than SCR, properly represent BART for FCPP.) Thus, the commenter stated that as the Nation's trustee and ''stand-in'' for the BART determination for FCPP, the EPA should not select a more stringent BART than the commenter stated is required by the Regional Haze Rule to achieve ''reasonable progress'' where doing so would likely have substantial adverse impacts on the Navajo Nation.

The commenter also stated that EPA has a duty to undertake government-to-government consultations with the Navajo Nation, and that EPA must coordinate with the Navajo Nation in its relationship with, and reliance on, other federal agencies. The commenter pointed out that EPA relies on data provided by the NPS, another federal trustee of the Nation, but has not coordinated consultation between NPS and the Navajo Nation on this rulemaking. The commenter indicated that the May 2011 EPA Tribal Policy recognizes that such coordination is required under Executive Order 13175 and asserted that EPA should coordinate consultation with the U.S. Forest Service (who provided data used in the proposed rulemaking) as well as various Department of the Interior (DOI) agencies that have an interest in this rulemaking, including NPS, the Bureau of Indian Affairs, the U.S. Fish and Wildlife Service, the Office of Surface Mining Reclamation and Enforcement, and potentially the Bureaus of Land Management and Reclamation. The commenter added that consultation with Department of Energy (DOE) may be important in regard to including FCPP in a study that DOE is proposing to carry out for NGS, which also is located on the Navajo reservation and uses Navajo coal.

Response: It is EPA's policy (EPA Policy on Consultation and Coordination with Indian Tribes, May 4, 2011, (EPA Tribal Consultation Policy))[43] to consult on a government-to-government basis with federally recognized tribal governments when EPA actions and decisions may affect tribal interests. Consultation is a process of meaningful communication and coordination between EPA and tribal officials prior to EPA taking actions or implementing decisions that may affect tribes. One of the primary goals of the EPA Tribal Policy is to fully implement both Executive Order 13175 and the 1984 Indian Policy, with the ultimate

[41] Please see *http://www.epa.gov/region09/air/maps/maps_top.html* for EPA Region IX air quality designations.

[42] To support this assertion, the commenter cited Executive Order 13175 (65 FR 67249, November 6, 2000; *EPA Policy on Consultation and Coordination With Indian Tribes,* section IV ''Guiding Principles,'' May 4, 2011 (EPA Tribal Policy); and the 1984 EPA Indian Policy.

[43] See ''EPA Policy on Consultation and Coordination with Indian Tribes'', May 4, 2011, in the docket for this final rulemaking.

goal of assuring tribal concerns and interests are considered whenever EPA's actions may affect tribes by strengthening the consultation, coordination, and partnership between tribal governments and EPA.

For this action, EPA consulted with Navajo Nation in accordance with the Executive Order and EPA's Indian Policies on numerous occasions. A record of all consultations with tribes is included in the Docket for this final rulemaking.[44] As stated in the 2011 EPA Tribal Consultation Policy, as a process, consultation includes several methods of interaction that may occur at different levels.[45] EPA consulted with the Navajo Nation at various times throughout the process at various levels of government, including in-person meetings with the President of the Navajo Nation on May 19, 2011, and June 13, 2012.

EPA acknowledges the significant interest of the Navajo Nation in FCPP. Based on the results from the original analysis for the proposed BART determination, EPA concluded that the installation and operation of SCR on all five units at FCPP would not adversely affect the competitiveness of FCPP's cost to generate electricity compared to the cost to purchase electricity on the open market. Thus, EPA infers that a BART determination requiring SCR on all five units, in itself, should not force the closure of FCPP. EPA notes that we do not expect adverse impacts to the Navajo Nation if FCPP continues operating all units and complies with BART. However, potential adverse impacts to the Navajo Nation may result if the owners of FCPP choose to implement the optional BART Alternative. At the request of the Navajo Nation during consultation, EPA commissioned a study to examine potential adverse impacts to Navajo Nation from the BART Alternative. The results of this analysis were discussed with President Shelly during a consultation meeting on July 13, 2012 and will be provided to President Shelly by letter as a follow-up to our consultation.

EPA agrees that we are acting to implement the BART requirements for a facility located on the Navajo Reservation in circumstances in which the Tribe has not applied, or been approved, to administer the applicable CAA program. EPA is mindful of the Navajo Nation's views and recommendations, particularly where there is a potential substantial adverse economic impact to the Navajo Nation. We disagree however that the Agency must ''defer to tribal views when making environmental policy decisions''. EPA is carrying out the requirements of the CAA and the Regional Haze Rule pursuant to our authority to implement these requirements in the absence of an EPA-approved program. EPA notes that the CAA and the TAR provide mechanisms for eligible Indian tribes to seek approval of tribal programs should they wish to administer CAA requirements.

For this action EPA carefully considered the unique location of FCPP with respect to proximate Class I areas as well as its economic importance to Navajo Nation. We conducted a detailed analysis of available emission control technologies against the five-factors specified in the BART Guidelines. EPA also conducted extensive air modeling (included in the Supplemental Proposal). Additionally, we have considered the numerous comments we received on our proposals. In making our final decision we have had to balance the findings of our analysis along with the interests of various stakeholders, our unique government-to-government relationship with tribes, and our responsibility to carry out the requirements of the CAA and Regional Haze Rule to achieve reasonable progress towards visibility improvements.

This final FIP strikes a reasonable balance between reducing emissions to improve visibility while allowing for the facility to implement those reductions in a manner that is consistent with its continued operation and economic viability.

EPA has received information and comments from numerous federal agencies for this rulemaking and considered these in our final decision (all information and comments are included in the docket). EPA plans to coordinate with the Department of Interior or other federal agencies, as appropriate, in any future tribal consultations related to BART for FCPP or the Navajo Generating Station, the other coal-fired power plant located in Navajo Nation.

EPA acknowledges that the Department of Interior has contracted with the National Renewable Energy Lab (NREL) of the Department of Energy to examine renewable energy options for the Navajo Generating Station, which is also located on the Navajo Nation and uses coal from the Kayenta Mine, located on Navajo and Hopi land. Information on the NREL study is available from DOI[46] and will be included in the docket for EPA's upcoming proposed rulemaking for NGS.

Comment: One public interest advocacy group, the Navajo Nation, and one environmental advocacy group supported establishment of a 20 percent opacity limit for material handling. The public interest advocacy group stated that the FCPP site is subject to numerous dust-storm events originating in northwestern Arizona, and the additional fugitive dust that could be picked up by these strong winds at the FCPP property added to the incoming dust from the west makes breathing and outdoor activity miserable on from 4 to 12 days per year for residents of Montezuma County, CO and San Juan County, NM.

One of the owners of FCPP noted that in addition to the proposed BART requirements, EPA proposed separate fugitive dust control requirements and a 20 percent opacity limitation for certain material handling operations, which are unrelated to the CAA visibility program. The commenter laid out the history of EPA's past attempt to apply fugitive dust controls to FCPP. The commenter argued that the proposed requirements are arbitrary and should not be finalized because the facts upon which EPA relies are inadequate to support the conclusion that fugitive dust control requirements are ''necessary or appropriate'' to protect air quality at FCPP.

Response: EPA acknowledges support for establishing a 20 percent opacity limit for material handling and a Dust Control Plan at FCPP. EPA has finalized both these requirements. EPA notes that the Dust Control Plan shall include a description of the dust suppression methods for controlling dust from site activities including coal handling and storage facilities, ash handling, storage, and landfills, and road sweeping activities. The 20 percent opacity standard will apply to any crusher, grinding mill, screening operation, belt conveyor, or truck loading or unloading operation.

EPA agrees with the commenter that the fugitive dust and 20 percent opacity limit are unrelated to the CAA visibility program. EPA also agrees with the history laid out by the commenter on fugitive dust controls at FCPP. EPA included these dust control requirements in the previous FIP finalized in 2007 because EPA considered them necessary or appropriate under the TAR to assure that dust from this facility does not

[44] See document ''Timeline of all Tribal Consultations on BART.docx'' in the docket for this final rulemaking.

[45] See ''EPA Policy on Consultation and Coordination with Indian Tribes'', May 4, 2011, in the docket for this final rulemaking.

[46] *http://www.doi.gov/navajo-gss/index.cfm.*

contribute to possible violations of the NAAQS for PM_{10}. The commenter is correct that EPA withdrew the 2007 FIP requirements on dust when APS appealed the rule. EPA had not adequately documented in the record for the 2007 FIP our basis for establishing the 20 percent opacity regulation. For the 2007 FIP, EPA chose not to defend our position based on the record for that rulemaking and instead chose to address the issue in a subsequent FIP action, such as this one.

EPA disagrees with the commenter that the fugitive dust and opacity requirements are arbitrary or that our argument is inadequate to support our conclusion that fugitive dust control requirements are necessary or appropriate to protect air quality at FCPP.[47]

EPA's basis for finding that it is necessary or appropriate for FCPP to comply with a requirement to limit its material handling emissions to 20 percent or less is being set forth in this rulemaking. FCPP receives approximately 10 million tons of coal per year for combusting in Units 1–5. This massive quantity of coal moves by conveyor belt across FCPP's property line through numerous transfer points before the coal is loaded into the storage silos that feed the individual combustion units. Each of these transfer points along with the conveyor belts has the potential for PM emissions. The PM can be minimized through the use of collection devices or dust suppression techniques such as covered conveyors or spraying devices at the transfer points. EPA first promulgated dust control requirements for new coal handling equipment on January 15, 1976 (41 FR 2232). This rule affected equipment constructed or modified after the 1970s that affected facilities built or modified after October 24, 1974. The purpose of these New Source Performance Standards (NSPS) was:

> NSPS implement CAA section 111(b) and are issued for categories of sources which have been identified as causing, or contributing significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. The primary purpose of the NSPS are to help States attain and maintain ambient air quality by ensuring that the best demonstrated emission control technologies are installed as the industrial infrastructure is modernized.

See 74 FR 51951 (October 8, 2009).

EPA's basis for finding that it is necessary or appropriate for FCPP to comply with a requirement to limit its material handling emissions to 20 percent or less is being set forth in this rulemaking. EPA has promulgated a 20 percent opacity limit for all new coal handling operations built after the mid 1970s in the New Source Performance Standards. This NSPS standard applied to any coal handling equipment processing more than 200 tons per day of coal. Because FCPP receives approximately 10 million tons of coal per year for combusting in Units 1–5, it may be processing more than 27,000 tons per day. This is more than 100 times the smallest size coal handling operation subject to the NSPS, and which EPA considered necessary for protecting public health and welfare. As mentioned before, FCPP's massive quantity of coal moves by conveyor belt across FCPP's property line, passing through numerous transfer points before the coal is loaded into the storage silos that feed the individual pulverizers and combustion units. Each of these transfer points along with the conveyor belts has the potential for PM emissions. The PM can be minimized by collection devices or dust suppression techniques such as covered conveyors or spraying devices at the transfer points.

FCPP and the BHP Navajo Mine that provides FCPP's coal are within close proximity to Morgan Lake which is a recreational lake with public access just beyond the FCPP's property line. Excess dust can blow over the FCPP property line to Morgan Lake and adjacent properties. EPA and Navajo Nation EPA receive numerous complaints from Navajo Tribal members concerning excess dust emissions generated from the ash landfill FCPP maintains, as well as from the other material handling and storage operations.

EPA concludes that it is necessary or appropriate to set enforceable fugitive dust/PM suppression measures to protect ambient air quality because (1) there is a large potential for dust emissions from the facility coal and ash operations to be emitted and blow across the property line, (2) EPA and Navajo Nation EPA have received numerous complaints concerning excess dust from the ash landfill and other operations, and (3) these activities are occurring in close proximity to a public access area.

EPA disagrees with the commenter that the 20 percent opacity limit is arbitrary and capricious. While EPA acknowledges that New Mexico does not have a general opacity limit that applies to dust, the other three Four Corners States do. In Arizona and Colorado a general 20 percent opacity limit applies at all facilities including ''grandfathered'' coal-fired EGUs. In Utah the general opacity limit for facilities built before the CAA in 1971 is a 40 percent opacity limit. However, all of Utah's large coal-fired EGUs were constructed after 1971 and are subject to a 20 percent general opacity limit, i.e., the NSPS. Therefore, if FCPP had been built a few years later or a few miles in a different direction, it would be subject to the NSPS or a SIP provision limiting its coal material handling and storage operations to 20 percent opacity.

Because FCPP is located on the Navajo Nation where generally applicable limits that often are included in SIPs do not exist and because it was constructed nearly 40 years ago, and because dust control measures at coal-fired power plants are important for maintaining the PM_{10} 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 and storage emission sources. EPA recently imposed similar dust control requirements at the Navajo Generating Station, which is also on the Navajo Nation. 75 FR 10174.

Comment: One environmental advocacy group stated that the EPA must consult in accordance with sections 7(a)(1) and 7(a)(2) of the Endangered Species Act (ESA) with regards to the proposed FIP because of the impacts of FCPP on threatened and endangered fish, wildlife, and plants and their designated critical habitats, which the commenter discussed at some length. The commenter added that EPA has discretion under the TAR to limit emissions of mercury, selenium, and other pollutants that may adversely affect the razorback sucker and Colorado pikeminnow, and these species' critical habitats. According to the commenter, this discretion is part of what triggers the Agency's obligation to consult pursuant to sections 7(a)(1) and 7(a)(2) of the ESA.

Response: EPA disagrees with the commenter that determining BART and promulgating this FIP for FCPP necessitates ESA Section 7 consultation. EPA understands that the U.S. Fish and Wildlife Service (FWS) is primarily concerned about the effects of mercury and selenium on endangered fish species in the San Juan River. EPA notes that under the BART Alternative, mercury and selenium emissions will be reduced from FCPP due to the closure of Units 1–3. Additionally, EPA's national MATS rule set new emission limits for mercury that would apply to Units 1–3 at FCPP if those units continue operation. EPA further notes that the goal of the Regional Haze Rule is to reduce emissions of visibility-

[47] For example, see document titled ''Four Corners Power Plant Complaint to MSHA'' in the docket for this final rulemaking.

impairing pollutants in order to restore visibility to natural conditions at the mandatory Federal Class I areas, and mercury and selenium do not affect visibility. Therefore, EPA does not have authority to regulate emissions of mercury or selenium under BART.

Comment: The coal supplier for FCCP questioned the legality of EPA's approach to the Regional Haze program at FCPP. According to the commenter, EPA's BART and better-than-BART proposals are not authorized because BART is not ''reasonably separable'' from the remainder of a regional haze implementation plan for the Navajo Nation under the TAR. The commenter concluded that the minimum amount of reasonable progress that BART needs to achieve in a given Class I area cannot be determined until the amount of reasonable progress achieved by other CAA and state programs is subtracted from that area's reasonable progress goal. The commenter asserted that the NO_X emission reductions that would be achieved under the supplemental proposal are in excess of the amount required to achieve the reasonable progress goals in the area.

The commenter added that EPA must consider the reasonable progress already achieved by past FCPP emission reductions. The commenter concluded that any necessary reasonable progress remaining to be achieved by NO_X BART at FCPP cannot be determined until the reasonable progress achieved by prior emissions reductions at FCPP is considered.

The commenter stated that EPA's BART determination did not properly weigh the statutory factors. Specifically, the commenter indicated that individual Class I area visibility improvements from SCR have not been compared with respect to the statutory factors to visibility improvements from LNB, and the actual amounts of those improvements have not been measured against the amounts of improvements needed to meet reasonable progress goals.

Response: EPA disagrees with the commenter who questioned the legality of our approach and that stated that EPA's BART and ''better-than-BART'' proposals are not authorized because BART is not ''reasonably separable'' from the remainder of a regional haze implementation plan for the Navajo Nation under the TAR. We also disagree that our approach to the Regional Haze program impermissibly isolates BART from the context of the overall reasonable progress goal in violation of the CAA, and that our proposed BART for FCPP should be withdrawn.

EPA's authority to promulgate a source-specific FIP in Indian County is based on CAA sections 301(a) and (d)(4) and section 49.11 of the TAR provides EPA with broad discretion to promulgate regulations directly for sources located in Indian country, including on Indian reservations if we determine such Federal regulations are ''necessary or appropriate'' and the Tribe has not promulgated a TIP. Specifically, in 40 CFR 49.11, EPA interpreted CAA section 301(d)(4) to authorize EPA to promulgate ''such Federal implementation plan provisions as are necessary or appropriate to protect air quality''. As such, because the Navajo Nation has not adopted a TIP for Regional Haze, the TAR provides discretion to EPA to determine which requirements of the Regional Haze Rule are necessary or appropriate to protect air quality, and to promulgate just those implementation plan provisions accordingly. Because two stationary sources on the Navajo Nation meet the BART eligibility criteria, EPA has determined that it is necessary or appropriate at this time to evaluate source-specific FIPs to implement the BART requirement of the RHR for each BART-eligible facility located on the Navajo Nation. The basis for our determination is discussed in several prior responses (See, *e.g.,* Sections 2.1, 4.1.2, and 8.1). The Courts have agreed with EPA that it may implement requirements that are necessary or appropriate without providing for all aspects of the CAA programs at a single time. See Arizona Public Service v. EPA, 562 F.3d 1116 (10th Cir. 2009).

EPA disagrees with the comment that BART must be established in relation to reasonable progress goals. State or Tribal Implementation Plans for Regional Haze must establish goals that provide for reasonable progress towards achieving natural visibility conditions for each mandatory Class I Federal area located within its borders (40 CFR 51.308(d)(1). FCPP and NGS are both located within the Navajo Nation Indian Reservation, and for the reasons outlined above, EPA is conducting BART determinations for each facility. There are no mandatory Class I Federal areas as designated by Congress located within the Navajo Nation.[48] EPA further notes that the five-factor analysis outlined in the BART Guidelines, which were promulgated as a notice and comment rulemaking, does not require consideration of reasonable progress goals in determining BART for a given facility.

EPA also disagrees that the minimum amount of reasonable progress that BART needs to achieve in a given Class I area cannot be determined until the amount of reasonable progress achieved by other CAA and state programs is subtracted from that area's reasonable progress goal. Neither the CAA nor Regional Haze regulations set any quantitative presumptive targets for the amount of reasonable progress that must be achieved. Rather, the regulations allow for flexibility in determining the amount of reasonable progress towards the ultimate goal of returning to natural background conditions.

EPA disagrees with the commenter that EPA must consider the reasonable progress already achieved by past FCPP emission reductions and that previously uncontrolled SO_2, NO_X, and PM emission rates prior to previous FIPs for FCPP should serve as the baseline for measuring visibility improvements. In its own five-factor BART analysis, APS used actual NO_X emissions from 2001–2003 as baseline emissions for determining visibility improvement from NO_X controls. NO_X emissions from 2001–2003 were generally consistent with and representative of NO_X emissions over the past ten years. EPA agrees with APS in its use of actual emissions over a recent time frame, rather than attempting to rely on previously uncontrolled emissions emission rates from FCPP as a baseline.

Additionally, nothing in the BART regulations or guidance requires that EPA consider past emission reductions in determining BART under the RHR. However, as part of the required five-factor analysis for BART EPA did evaluate and consider the current pollution control equipment in use at FCPP.

EPA disagrees with the comment that EPA's BART determination did not properly weigh the statutory factors. As discussed elsewhere in this document, the BART Guidelines allow the reviewing authority (State, Tribe, or EPA) the discretion to determine how to weigh and in what order to evaluate the statutory factors (cost of compliance, the energy and non air quality environmental impacts of compliance, any existing pollution control technology in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology), as long as the reviewing authority justifies its selection of the ''best'' level of control and explains the CAA factors

[48] EPA notes that Navajo Nation has established its own parks and monuments, including Monument Valley, Canyon de Chelly, and the Four Corners Monument, however, these parks are not mandatory Class I Federal Areas as set by Congress.

that led the reviewing authority to choose that option over other control levels (see 70 FR 39170, July 6, 2005). EPA provided a detailed justification for our BART evaluation process and five-factor analysis in the TSD for our proposed BART determination.

EPA also disagrees with the comment that individual Class I area visibility improvements from SCR have not been compared with respect to the statutory factors to visibility improvements from LNB. In the preamble to our October 19, 2010, proposed BART determination and in the accompanying TSD, EPA compared the anticipated visibility improvement from SCR with the anticipated improvement from combustion controls (LNB or LNB+OFA) (See 75 FR 64230, Table 3, and TSD Tables 36–39), and noted that EPA modeled the visibility improvement from SCR to far exceed the modeled improvement from combustion controls.

IV: Administrative Requirements

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action will finalize a source-specific FIP for a single generating source. This type of action is exempt from review under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This 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 final 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 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 action on small entities, I certify that this final action will not have a significant economic impact on a substantial number of small entities. The Four Corners Power Plant is not a small entity and the FIP for Four Corners Power Plant being finalized today does not impose any compliance requirements on small entities. *See Mid-Tex Electric Cooperative, Inc.* v. *FERC,* 773 F.2d 327 (D.C. Cir. 1985).

D. Unfunded Mandates Reform Act (UMRA)

This rule 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 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 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 final action will reduce the emissions of two pollutants from a single source, the Four Corners Power Plant.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or in the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This final action requires emission reductions of NO_X at a specific stationary source located in Indian country. Thus, Executive Order 13132 does not apply to this action.

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

Subject to the Executive Order 13175 (65 FR 67249, November 9, 2000) EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the 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.

EPA has concluded that this action will have tribal implications. However, it will neither impose substantial direct compliance costs on tribal governments, nor preempt Tribal law. This final rule requires FCPP, a major stationary source located on the Navajo Nation, to reduce emissions of NO_X under the BART requirement of the Regional Haze Rule. The owners of FCPP submitted a BART Alternative to EPA for consideration that would provide compliance flexibility to the owners and result in greater reasonable progress than BART toward the national visibility goal. This BART Alternative involves closure of Units 1–3 at FCPP and installation of add-on pollution controls to Units 4 and 5. EPA issued a Supplemental Proposal to allow the owners of FCPP the option to implement BART or the BART Alternative. Because the BART Alternative involves the optional closure of Units 1–3 and an associated

decline in the amount of coal mined and combusted, taxes and royalties paid to the Navajo Nation by the owners of FCPP and BHP Billiton, operator of the coal mine that supplies FCPP, are expected to decline. The closure of Units 1–3 is not expected to result in layoffs, but is expected to result in a reduction in workforce at the mine and power plant over time through attrition.

EPA consulted with tribal officials early in the process of developing this regulation to permit them to have meaningful and timely input into its development. EPA proposed to determine that it was necessary or appropriate to implement the BART requirement of the Regional Haze Rule for the Navajo Nation to protect air quality and improve visibility at the sixteen mandatory Class I Federal areas surrounding FCPP and the eleven Class I areas surrounding NGS. EPA first put forth an Advanced Notice of Proposed Rulemaking (ANPR) on August 28, 2009 to accept comment on preliminary information provided by FCPP and NGS and to begin the consultation process with affected tribes and the Federal Land Managers. EPA has consulted on numerous occasions with officials of the Navajo Nation in the process of developing this FIP, including meetings with the President Ben Shelly of the Navajo Nation and his staff on May 19, 2011, after the close of the public comment period for our proposed BART determination and Supplemental Proposal, and on June 13, 2012, prior to our final action. The agendas for these two consultation meetings are provided in the docket for this final rulemaking.[49] A timeline of correspondence and consultation with tribes on both power plants is included in the docket for this final rulemaking.

Several tribes, including the Navajo Nation, submitted comments on the ANPR, which we considered in developing our proposal and the accompanying Technical Support Document. The main concern expressed by the Navajo Nation was that requiring the top NO_X control option, selective catalytic reduction (SCR) as BART would cause FCPP to close. In developing our proposed BART determination, EPA conducted an analysis to examine whether requiring SCR on Units 1–5 at FCPP would cause electricity generation costs to exceed the cost to purchase power on the wholesale market. Based on our analysis, we determined that electricity generation costs resulting from installation of SCR would not make FCPP uneconomical compared to the wholesale power market; therefore, we concluded that our proposed BART determination was unlikely to cause FCPP to close.

The Navajo Nation provided comments on our proposed rule and Supplemental Proposal, in consultation and by letter, which EPA considered in developing this final rule. The Navajo Nation also expressed concern about the potential adverse impacts of the BART Alternative to the Navajo Nation and requested that EPA conduct an analysis to estimate potential adverse impacts to the Navajo Nation. Pursuant to EPA's customary practice of engaging in extensive and meaningful consultation with tribes and tribal authorities with regard to relevant Agency actions, EPA commissioned an analysis of the optional BART Alternative to estimate potential adverse impacts to the Navajo Nation if the owners of FCPP chose to retire Units 1–3. EPA communicated these potential impacts to the Navajo Nation in our consultation meeting with President Shelly on June 13, 2012. The report will be provided to President Shelly by letter as a follow-up to our consultation with the Navajo Nation.

The Navajo Nation also expressed support for phased-implementation of controls to provide compliance flexibility to FCPP. The final rule allows the owners of FCPP to choose between BART or the BART Alternative and provides timeframes for phased-implementation of control options.

EPA summarized and responded to comments from the Navajo Nation and the Salt River Pima Maricopa Indian Community received on the ANPR in the Technical Support Document for our proposed rulemaking. Following our meeting with President Shelly on May 19, 2011, EPA sent a follow up letter summarizing and responding to the concerns expressed by the Navajo Nation.[50] In coordination with this final rulemaking, EPA will also be sending a letter to President Shelly that summarizes and responds to the comments raised in his letter to EPA dated June 2, 2011.

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

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

This rule is not subject to Executive Order 13045 because it requires emissions reductions of NO_X from a single stationary source. Because this action only applies to a single source and is not a 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 NO_X, 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

[49] See document number 0222 in docket EPA–R09–OAR–2011–0683 titled ''Agenda May 19, 2011 Meeting; Gov to Gov Consultation with Navajo Nation'', and document titled: ''2012_0613 Consultation with Navajo Nation agenda and attendees.pdf'' in the docket for this final rulemaking.

[50] See document 0231 in docket EPA–R09–OAR–2011–0683 titled ''EPA response to Navajo Nation dated 09/06/2011''.

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 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.

Particulate Matter Emissions—EPA Methods 1 though 5;

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

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

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 804 exempts from section 801 the following types of rules (1) rules of particular applicability; (2) rules relating to agency management or personnel; and (3) rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. 5 U.S.C 804(3). EPA is not required to submit a rule report regarding today's action under section 801 because this action is a rule of particular applicability. This rule finalizes a source-specific FIP for a single generating source.

L. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by October 23, 2012. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See CAA section 307(b)(2).)

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: August 6, 2012.

Lisa P. Jackson,

Administrator.

Title 40, chapter I, of the Code of Federal Regulations is 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 49.5512 is amended by adding paragraphs (i) and (j) to read as follows:

§ 49.5512 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 of paragraphs (a) through (h) of this section. All definitions and testing and monitoring methods of this section apply to the limits in this paragraph (i) except as indicated in paragraphs (i)(1) through (4) of this section. The interim NO_X emission limit in paragraph (i)(2)(ii) of this section shall be effective 180 days after re-start of the unit after installation of add-on post-combustion NO_X controls for that unit and until the plant-wide limit goes into effect. The plant-wide NO_X limit shall be effective no later than 5 years after October 23, 2012. The owner or operator may elect to meet the plant-wide limit early to remove the individual unit limits. Particulate limits for Units 4 and 5 shall be effective 60 days after restart following the scheduled major outage for Units 4 and 5 in 2013 and 2014.

(1) Particulate Matter from Units 4 and 5 shall be limited to 0.015 lb/MMBtu for each unit as measured by the average of three 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 120 minute test runs may be substituted and used to demonstrate compliance with the particulate limits in paragraph (d)(2) of this section.

(2) Plant-wide nitrogen oxide emission limits.

(i) The plant-wide nitrogen oxide limit, expressed as nitrogen dioxide (NO_2), shall be 0.11 lb/MMBtu as averaged over a rolling 30-calendar day period. NO_X emissions for each calendar day shall be determined by summing the hourly emissions measured as pounds of NO_2 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 rolling 30-calendar day average shall be determined by adding together that day's and the preceding 29 days' pounds of NO_2 and dividing that total pounds of NO_2 by the sum of the heat input during the same 30-day period. The results shall be the rolling 30-calendar day-average pound per million Btu emissions of NO_X.

(ii) The interim NO_X limit for the first 750 MW boiler retrofitted with add-on post-combustion NO_X control shall be 0.11 lb/MMBtu, based on a rolling

average of 30 successive boiler operating days.

(iii) Schedule for add-on post-combustion NO_X controls installation

(A) Within 4 years of the effective date of this rule, FCPP shall have installed add-on post-combustion NO_X controls on at least 750 MW (net) of generation to meet the interim emission limit in paragraph (i)(2)(ii)(A) of this section.

(B) Within 5 years of the effective date of this rule, FCPP shall have installed add-on post-combustion NO_X controls on all 2060 MW (net) of generation to meet the plant-wide emission limit for NO_X in paragraph (i)(2)(i) of this section.

(iv) 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_X pounds per hour measurement and the heat input measurement. These shall have relative accuracies of less than 20 percent. This testing shall be evaluated each time the 40 CFR part 75 monitors undergo relative accuracy testing.

(v) If a valid NO_X pounds per hour or heat input is not available for any hour for a unit, that heat input and NO_X pounds per hour shall not be used in the calculation of the 30 day plant-wide rolling average.

(vi) Upon the effective date of the plant-wide NO_X average, the owner or operator shall have installed CEMS and COMS software that complies with the requirements of this section.

(3) In lieu of meeting the NO_X requirements of paragraph (i)(2) of this section, FCPP may choose to permanently shut down Units 1, 2, and 3 by January 1, 2014 and meet the requirements of this paragraph to control NO_X emissions from Units 4 and 5. By July 31, 2018, Units 4 and 5 shall be retrofitted with add-on post-combustion NO_X controls to reduce NO_X emissions. Units 4 and 5 shall each meet a 0.098 lb/MMBtu emission limit for NO_X expressed as NO_2 based on a rolling average of 30 successive boiler operating days. A ''boiler operating day'' is defined as any 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time at the steam generating unit. Emissions from each unit shall be measured with the 40 CFR part 75 continuous NO_X monitor system and expressed in the units of lb/MMBtu and recorded each hour. A valid hour of NO_X data shall be determined per 40 CFR part 75. For each boiler operating day, every valid hour of NO_X lb/MMBtu measurement shall be averaged to determine a daily average. Each daily average shall be averaged with the preceding 29 valid daily averages to determine the 30 boiler operating day rolling average. The NO_X monitoring system shall meet the data requirements of 40 CFR 60.49Da(e)(2) (at least 90 percent valid hours for all operating hours over any 30 successive boiler operating days). Emission testing using 40 CFR part 60 Appendix A Method 7E may be used to supplement any missing data due to continuous monitor problems. The 40 CFR part 75 requirements for bias adjusting and data substitution do not apply for adjusting the data for this emission limit.

(4) By January 1, 2013, the owner or operator shall submit a letter to the Regional Administrator updating EPA of the status of lease negotiations and regulatory approvals required to comply with paragraph (i)(3) of this section. By July 1, 2013, the owner or operator shall notify the Regional Administrator by letter whether it will comply with paragraph (i)(2) of this section or whether it will comply with paragraph (i)(3) of this section and shall submit a plan and time table for compliance with either paragraph (i)(2) or (3) of this section. The owner or operator shall amend and submit this amended plan to the Regional Administrator as changes occur.

(5) The owner or operator shall follow the requirements of 40 CFR part 71 for submitting an application for permit revision to update its Part 71 operating permit after it achieves compliance with paragraph (i)(2) or (3) 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, 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 landfills, and road sweeping activities. Within 18 months of promulgation of this paragraph 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.

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