6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 49

[EPA-R09-OAR-2013-0009; FRL-9914-62-Region 9]

Approval of Air Quality Implementation Plans; Navajo Nation; Regional Haze Requirements for Navajo Generating Station

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 Navajo Generating Station (NGS), a coal-fired power plant located on the Navajo Nation near Page, Arizona, to achieve reductions in oxides of nitrogen (NO_X) required under the Best Available Retrofit Technology (BART) provisions of the Clean Air Act (CAA) and the Regional Haze Rule (RHR). On February 5, 2013, EPA issued a proposed BART determination for NGS and an alternative to BART. In a supplemental proposal on October 22, 2013, EPA proposed to approve a new alternative plan, based on an agreement developed by a group of stakeholders known as the Technical Work Group (TWG). EPA is finalizing the alternative to BART described in our supplemental proposal. This rule is consistent with the TWG Agreement, including a lifetime cap in total emissions of NO_X from NGS over 2009-2044 (2009-2044 NO_X Cap). Our final action will achieve greater emissions

reductions than BART and is expected to significantly reduce the impact of NGS on visibility at 11 mandatory Class I Federal areas. The operator of NGS must implement one of several alternative operating scenarios to achieve the necessary emission reductions to comply with the 2009-2044 NO_X Cap.

DATES: Effective date: This rule is effective on **[*insert date 60 days from date of publication in the Federal Register*]**.

FOR FURTHER INFORMATION CONTACT: Anita Lee, EPA Region 9, (415) 972-3958, lee.anita@epa.gov.

SUPPLEMENTARY INFORMATION: EPA has established a docket for this action under Docket ID No. EPA-R09-OAR-2013-0009. 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 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, voluminous or oversized documents, etc.), 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. Executive Summary

EPA is taking final action pursuant to the CAA and the RHR to require Units 1, 2, and 3 at NGS to reduce emissions of NO_X in order to reduce the impact NGS has on visibility at 11 mandatory Class I Federal areas. We are finalizing an alternative to BART based on agreed-upon recommendations developed by a group of diverse stakeholders known as the Technical Work Group (TWG). Our final action limits emissions of NO_X from NGS by establishing a long-term facility-wide cap on total NO_X emissions from 2009 to 2044 and requires the implementation of one of several alternative operating scenarios to ensure that the 2009-2044 cap is met. Generally, the alternative operating scenarios require the closure of one unit at NGS (or the curtailment of electricity generation by a similar amount) in 2019, and

compliance with a NO_X emission limit that is achievable with the installation of selective catalytic reduction (SCR) on two units in 2030.

As part of our final action, EPA is also setting a source-specific BART Benchmark against which to compare the TWG Alternative to ensure that it will achieve greater reasonable progress than BART. The BART Benchmark is consistent with the BART determination we proposed on February 5, 2013, requiring all three units at NGS to meet an emission limit achievable with SCR within five years of a final rule. EPA is not finalizing our proposed BART determination for NGS in the regulatory requirements of this Final Rule.

EPA's action to finalize an alternative to BART consistent with the TWG Agreement will achieve greater NO_X emission reductions at lower cost than BART in exchange for flexibility in the timeframe for achieving NO_X reductions. When fully implemented, this Final Rule requires over an 80 percent reduction in NO_X emissions from NGS and is expected to significantly reduce the impact of NGS on visibility at 11 mandatory Class I Federal areas.

II. Background for the Final Rule

A. History of NGS

NGS is a coal-fired power plant located on the Navajo Nation Indian Reservation near Page, Arizona. The facility

consists of three 750 megawatt (MW) coal-fired electric utility steam generating units with a total capacity of 2250 MW constructed from 1974 to 1976. The three units at NGS are co-owned by six entities: the United States Bureau of Reclamation (Reclamation) (24.3 percent); Salt River Project (21.7 percent), which also serves as the facility operator; Los Angeles Department of Water and Power (21.2 percent); Arizona Public Service (14 percent); NV Energy (11.3 percent); and Tucson Electric Power (7.5 percent).

Federal participation in NGS was authorized in the Colorado River Basin Project Act of 1968 as a preferred alternative to building hydroelectric dams in the Grand Canyon for the purpose of providing power to the Central Arizona Project (CAP).[1] The CAP is a 336-mile water distribution system that delivers about 1.5 million acre-feet (AF) per year of Colorado River water from Lake Havasu in western Arizona to non-Indian agricultural (NIA) water users in central Arizona, Indian tribes located in Arizona, and municipal water users in Maricopa, Pinal, and Pima Counties in Arizona. The CAP water is used to meet the terms of a number of Indian water-rights settlements in central Arizona and to reduce groundwater usage in the region. A portion of Reclamation's share of electricity from NGS powers the pumps

[1] For more detail and for citations or references to the information provided in this Background section, please see the Proposed Rule at 78 FR 8274 (February 5, 2013).

that move CAP water to its destinations along the distribution system.

Several tribes located in Arizona, including the Gila River Indian Community, the Ak-Chin Indian Community, the Tohono O'odham Nation, the San Carlos Apache Tribe, the White Mountain Apache Indian Tribe, the Fort McDowell Yavapai Nation, the Salt River Pima-Maricopa Indian Community, the Navajo Nation, the Yavapai-Apache Nation, the Hopi Tribe, the Pascua Yaqui Tribe, the Yavapai-Prescott Tribe, and the Tonto Apache Nation, have CAP water allocations or contracts. In exchange for allocations of CAP water at reduced cost and access to funds for the development of water infrastructure, the tribes with water settlement agreements have released their claims to other water in Arizona. Excess NGS power owned by Reclamation that is not used by CAP is sold and profits are deposited into the Lower Colorado River Basin Development Fund (Development Fund) to support the tribal water settlement agreements. The U.S. Department of the Interior (DOI or Interior), through Reclamation, plays an important role in the implementation of these settlement agreements and the management of the Development Fund.

The coal used by NGS is supplied by the Kayenta Mine, operated by Peabody Energy and located on reservation lands of both the Navajo Nation and the Hopi Tribe. Taxes and royalties

from NGS and the Kayenta Mine are paid to the Navajo Nation and Hopi Tribe, contributing to the annual revenues for both governments. EPA understands that the process is underway to renew site leases for NGS and the Kayenta Mine, as well as associated rights of way agreements and contracts with the Navajo Nation and Hopi Tribe.

Given the extent of federal and tribal interests in NGS, on January 4, 2013, EPA, DOI, and the Department of Energy (DOE) signed a joint federal agency statement (Joint Statement) committing to collaborate on several short- and long-term goals, including analyzing and pursuing strategies for providing clean, affordable, and reliable power, affordable and sustainable water, and sustainable economic development to key stakeholders who currently depend on NGS.[2] The Joint Statement also recognizes the trust responsibility of the Federal government to Indian tribes.

B. Summary of Statutory and Regulatory Framework for Addressing Visibility and Sources Located in Indian Country

In our Proposed Rules, we provided a detailed discussion of the statutory and regulatory framework for addressing visibility impairment in the mandatory Class I Federal Areas, addressing sources located in Indian country under the statute and the

[2] See document title "2013_0104 Joint Federal Agency Statement on NGS" within document number 0005 in the docket for this proposed rulemaking at EPA-R09-OAR-2013-0009, which can be found at www.regulations.gov.

Tribal Authority Rule (TAR), and developing BART determinations pursuant to the CAA and the BART Guidelines set forth in Appendix Y to 40 CFR Part 51.[3] Here, we provide a brief summary of the statutory and regulatory framework.

Title I, part C, subpart II of the CAA Amendments of 1977 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 man-made air pollution."[4] EPA promulgated regional haze regulations implementing the program on April 22, 1999.[5] Consistent with the statutory requirement in 42 U.S.C. 7491(b)(2)(a), EPA's 1999 regional haze regulations include a provision that States must require certain major stationary sources to procure, install, and operate BART. This provision covers sources in listed industrial categories with the potential to emit 250 or more tons per year of an air pollutant that were "in existence on August 7, 1977, but which ha[ve] not been in operation for more than fifteen years as of such date." These sources are

[3] See 78 FR 8274 (February 5, 2013) and 78 FR 62509 (October 22, 2013).
[4] See 42 U.S.C. 7419A(a)(1).
[5] See 64 FR 35765 (April 22, 1999).

considered to be "BART-eligible."[6] NGS meets these criteria and is a BART-eligible source.[7]

BART-eligible sources that are reasonably anticipated to cause or contribute to visibility impairment are "subject" to the BART requirements.[8] Generally speaking, a BART-eligible source with a predicted visibility impact of 0.5 deciviews (dv) or more in a Class I area is considered to "contribute" to visibility impairment.[9] NGS contributes to visibility impairment at 11 surrounding Class I areas in excess of this threshold, and is thus subject to BART.

In determining BART, States are required to take into account five factors identified in the CAA and EPA's regulations.[10] 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

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[6] See 40 CFR 51.308(e)(1).
[7] See 74 FR 44314 (August 28, 2009); 78 FR 8279 (February 5, 2013); see also 56 FR 50172 (October 3, 1991) addressing BART for SO_2 based on Reasonably Attributable Visibility Impairment.
[8] See 70 FR 39104 at 39161 (July 6, 2005).
[9] *Id.*
[10] 42 U.S.C. 7491(g)(2) and 40 CFR 51.308(e)(1)(A)(ii)(A).

technology.[11] EPA's guidelines for evaluating BART provide more detail and 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.[12] 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).[13] EPA has previously promulgated FIPs under the TAR to regulate air pollutants emitted from NGS.[14]

Under the CAA, compliance with emission limits determined to be BART must be achieved as expeditiously as practicable but not later than 5 years after the effective date of the final BART determination (See CAA 169A(b)(2)(A) and (g)(4)). As discussed in greater detail in our Proposed Rule, EPA recognizes that the circumstances related to NGS create unusual and

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[11] 40 CFR 51.308(e)(1)(ii)(A).
[12] *See* 40 CFR part 49; *see* also 59 FR 43956 (August 25, 1994) (proposed rule); 63 FR 7254 (February 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).
[13] See 40 CFR 49.11(a).
[14] See 56 FR 50172 (October 3, 1991). In 1999, EPA proposed a FIP for NGS to fill the regulatory gap that existed because Arizona State permits and 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 (September 8, 1999). EPA then re-proposed the FIP with some additional conditions in September 2006. 71 FR 53631 (September 12, 2006). EPA finalized that NGS FIP on March 5, 2010. 75 FR 10174.

significant challenges for a 5-year compliance schedule.[15] Based on those challenges and our discretion under the TAR for implementing CAA requirements in Indian country, we considered other options that are consistent with the CAA and RHR, and that provide for a more flexible, extended compliance schedule.

EPA's BART regulations allow an alternative in lieu of BART, provided the alternative results in greater reasonable progress than would have been achieved through installation of BART.[16] Generally, an alternative is considered to be approvable provided it results in greater emissions reductions and the geographic distribution in emissions from the alternative is not substantially different than the distribution of the emissions under BART.[17] For a state that is subject to the submittal deadlines in the RHR, the regulations provide that alternatives to BART must ensure that all necessary emission reductions occur

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[15] Because of its complicated history and its location on the Navajo Nation, NGS faces numerous unique complexities and the unusual requirement to comply with NEPA for lease and other rights-of-way approvals, which apply only to NGS and Four Corners Power Plant, the other coal-fired power plant located on the Navajo Nation. EPA also understands the importance of the continued operation of NGS and the Kayenta Mine to the Navajo Nation and Hopi Tribe as a source of direct revenues through lease payments and coal royalties, as well as the importance of Reclamation's share of NGS to supply water to many tribes located in Arizona in accordance with several water settlement acts. EPA also recognizes that Reclamation may have fewer options compared to the other owners for financing pollution control or other large capital improvement projects at NGS. SRP expressed concern that the owners of NGS may choose to retire the facility if faced with the financial risk of making a large capital investment within 5 years without also having certainty that the lease and contract re-negotiations would conclude in a timely and favorable manner.

[16] 40 CFR 51.308(e)(2).

[17] 40 CFR 51.308(e)(3).

within the period of the first long-term strategy for regional haze (i.e., by 2018) for states that were required to submit regional haze SIPs in December 2007.[18] Thus, if states had submitted timely regional haze SIPs in 2007 with BART compliance deadlines in 2012, the RHR provided more than 5 additional years for the implementation of alternatives to BART.

C. Summary of Proposed Rule and Supplemental Proposal

EPA published an advanced notice of proposed rulemaking (ANPR) concerning BART for NGS and the Four Corners Power Plant in August 2009.[19] On February 5, 2013, EPA's proposed BART determination for NGS was published in the *Federal Register* and 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 our BART determination at NGS.[20] The proposal analyzed the five BART factors and proposed to find that BART for NGS was installation of emissions controls to meet a NO_X emission limit of 0.055 lb/MMBtu based on a rolling average of 30 boiler operating days (30-BOD average).[21] However, in recognition of the important role that NGS and the Kayenta Mine play in providing employment and revenue to the Navajo Nation

[18] 40 CFR 51.308(e)(2)(iii).
[19] See 74 FR 44314 (August 28, 2009).
[20] See 78 FR 8274 (February 5, 2013).
[21] *Id.* at 8288.

and Hopi Tribe, and the role of Reclamation's share of electricity generated by NGS in fulfilling water settlement agreements with numerous tribes located in Arizona, we proposed that the potential economic impacts to tribes argue for thoughtful consideration of how flexibility in the compliance timeframe could be provided consistent with the air quality goals of the CAA.[22] Therefore, as discussed in our Proposed Rule, EPA proposed to exercise our authority and discretion under section 301(d)(4) of the CAA and 40 CFR Part 49.11(a) to propose an appropriate timeframe for alternative measures to BART under the RHR for NGS. We provided a thorough discussion of the legal rationale for setting the compliance schedule for alternative measures in our Proposed Rule.[23]

Our Proposed Rule included a framework for evaluating alternatives to BART.[24] As part of the framework, EPA proposed a NO_X emission credit for the previous early and voluntary installation of low-NO_X burners with separated over-fire air (LNB/SOFA) over the 2009-2011 timeframe (LNB/SOFA credit). We proposed that the LNB/SOFA credit supported setting a compliance timeframe based on the flexibility under section 301(d)(4) of the CAA and 40 CFR 49.11(a).[25] EPA proposed to find that an

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[22] *Id. at 8284.*
[23] *Id.* at 8289.
[24] *Id.* at 8290-92.
[25] 78 FR 62509 at 62511 (October 22, 2013).

alternative is "better than BART" if the total emissions over 2009-2044 from the alternative measure, minus the LNB/SOFA credit, are less than the total emissions under our proposed BART determination for the same period (i.e., the BART Benchmark). Consistent with this framework, EPA proposed an alternative to BART, requiring compliance with an emission limit of 0.055 lb/MMBtu on one unit per year in 2021, 2022, and 2023 (Alternative 1). We calculated that total emissions under Alternative 1 over 2009-2044, minus the LNB/SOFA credit, would be less than emissions based on the BART Benchmark. Thus, we proposed to find that Alternative 1 was "better than BART". EPA recognized that there may be interest in additional flexibility beyond the 2021-2023 timeframe. EPA evaluated two additional compliance schedules but did not propose to approve them as "better than BART" alternatives because total emissions over 2009-2044 under these compliance schedules exceeded the BART Benchmark. However, we noted that potential technologies or other options for achieving additional emission reductions could bridge the NO_X emission reduction deficit for alternatives to BART with compliance schedules that do not, by themselves, meet the BART Benchmark.[26] We invited stakeholders to submit

[26] 78 FR 8274 at 8291 (February 5, 2013).

additional BART alternatives, consistent with our proposed framework, for EPA's consideration.

On July 26, 2013, a stakeholder group, known as the Technical Work Group on NGS (TWG), submitted an agreement that had been established among the seven diverse entities in the TWG. We refer to the July 26, 2013, document as the "TWG Agreement." The TWG is composed of representatives from Central Arizona Water Conservation District (CAWCD), the Environmental Defense Fund (EDF), the Gila River Indian Community (Gila River or the Community), the Navajo Nation (Navajo), Salt River Project (SRP) on behalf of itself and the other non-federal owners, DOI, and Western Resource Advocates (WRA). Although EPA attended the opening session of a "kick-off" meeting for the TWG on March 21, 2013, at which we described our Proposed Rule, EPA did not otherwise participate in the TWG and was not involved in any of the discussions leading to submittal of the TWG Agreement.

Appendix B to the TWG Agreement contained TWG's recommendation for an alternative to BART. In general, the alternative plan in the TWG Agreement included closure of one unit at NGS, or curtailment of net generating capacity by an equivalent amount, in 2019 and compliance with a NO_X emission limit of 0.07 lb/MMBtu on two units at NGS beginning in 2030. The TWG Agreement also included a provision requiring the

operator of NGS to cease conventional coal-fired generation at NGS by the end of 2044.

EPA independently evaluated Appendix B to the TWG Agreement to determine whether it complied with the framework we put forth in our Proposed Rule, as well as the statutory and regulatory requirements in the CAA and the RHR. On October 22, 2013, EPA published a Supplemental Proposal describing the TWG Agreement and requesting comment.[27] Our Supplemental Proposal contained a detailed evaluation of Appendix B to the TWG Agreement along with a discussion of our legal rationale for proposing to approve requirements consistent with the TWG Agreement as meeting the requirements for an alternative to BART. Throughout this document, we refer to the regulations we proposed in our Supplemental Proposal that are consistent with Appendix B of the TWG Agreement as the "TWG Alternative." Thus, in this document, the term TWG Alternative refers to EPA's independent regulatory requirements for NGS consistent with the TWG Agreement, rather than to Appendix B of the TWG Agreement.

In our Supplemental Proposal, we proposed to revise the numerical value of the BART Benchmark from our Proposed Rule. We also proposed a 2009-2044 NO_X Cap based on the revised numerical value of the BART Benchmark. In our Proposed Rule, we calculated

[27] See 78 FR 62509 (October 22, 2013).

the BART Benchmark to be 358,974 tons of NO_X. As discussed in our Supplemental Proposal, we proposed three changes to the BART Benchmark: (1) correction of a transcription error; (2) correction of the date that EPA anticipated would be 5 years following the effective date of the final rule (i.e., July 1, 2019 instead of January 1, 2018); and (3) application of the LNB/SOFA credit to the BART Benchmark, rather than alternatives to BART, to represent emissions under BART if LNB/SOFA had been installed concurrently with selective catalytic reduction (SCR) to reduce NO_X emissions.[28] Based on these changes, EPA proposed a 2009-2044 NO_X Cap of 494,899 tons. Although EPA revised our accounting method for the LNB/SOFA credit in our Supplemental Proposal, EPA provided a demonstration that the method EPA used in our Proposed Rule to compare our proposed BART determination against BART alternatives was equivalent to the method in the Supplemental Proposal.[29] The application of the LNB/SOFA credit to the BART Benchmark in the Supplemental Proposal represented what total emissions over 2009-2044 would have been under our proposed BART determination if the operator of NGS had elected to install LNB/SOFA concurrently with SCR, i.e., within 5 years of a final rule, rather than in 2009-2011. Calculation of the BART Benchmark and 2009-2044 NO_X Cap in this manner is easier to

[28] *Id*. Tables 1 and 3 at 62515-62516.
[29] Id. Table 2 and footnote 32 at 62515.

apply and enforce in the context of a cap in NO_X emissions because the LNB/SOFA credit is built into the BART Benchmark rather than subtracted each year from actual cumulative emissions.[30]

In addition to the enforceable 2009-2044 NO_X Cap, our Supplemental Proposal defines the operating scenarios that would be required depending on the final outcome of NGS ownership after the expiration of the current lease term at the end of 2019. In the TWG Agreement, the owners of NGS committed to maintain emissions from NGS below the 2009-2044 NO_X Cap regardless of post-2019 ownership of NGS and the applicable operating scenario. As a result, the operating scenarios in the TWG Alternative include specific actions for achieving emission reductions in 2019 and in 2030. The TWG Alternative also provides for an operating scenario that is less well-defined in terms of specific actions but establishes a second NO_X emissions cap over the period of 2009-2029 (2009-2029 NO_X Cap) that is

[30] In contrast, in our Proposed Rule, we calculated the BART Benchmark and emissions under BART alternatives using the actual early installation dates for LNB/SOFA and then applied the LNB/SOFA credit to BART alternatives for comparison against the BART Benchmark. Although this method would have resulted in a lower numerical value for the 2009-2044 NO_X Cap, the LNB/SOFA credit (representing the early emission reductions achieved over 2009-2018) would have instead been subtracted from the calculations of cumulative emissions under the BART alternative. Although this is functionally equivalent to the method used in the Supplemental Proposal, this method would make annual comparisons of actual cumulative emissions under the BART alternative against the BART Benchmark more complicated because it would have required adjustments every year to total emissions to subtract out the LNB/SOFA credit. By accounting for the LNB/SOFA credit in the BART Benchmark, the actual annual emissions from NGS can be directly compared to the BART Benchmark without any further adjustments.

equivalent to emission reductions that would be achieved by a more well-defined operating scenario. The 2009-2029 NO_X Cap would apply in addition to the 2009-2044 NO_X Cap. The Supplemental Proposal included requirements for annual emission reporting to EPA that would also be made publicly available as part of the compliance demonstration for the TWG Alternative.

D. Summary of Legal Rationale for Compliance Flexibility

In our February 5, 2013, proposal for NGS, EPA proposed an alternative to BART that we referred to as Alternative 1. EPA proposed to find that consideration of a compliance schedule beyond 2018 for Alternative 1 at NGS was appropriate for a number of reasons, including the importance of NGS to numerous Indian tribes located in Arizona and the federal government's reliance on NGS to meet the requirements of water settlements with several tribes. Providing this timeframe for compliance would not, in itself, avoid or mitigate increases in water rates for tribes located in Arizona; however, it would provide time for the collaborating federal agencies to explore options to avoid or minimize potential impacts to tribes, including seeking funding to cover expenses for the federal portion of pollution control at NGS.

In developing this framework, EPA proposed to exercise its authority and discretion under section 301(d)(4) of the CAA, 42 U.S.C. 7601(d)(4) and the TAR, 40 CFR 49.11(a), and proposed an

appropriate timeframe for an alternative measure under the RHR for NGS. EPA considered this timeframe to be consistent with the general programmatic requirements. Under the RHR, States and regulated sources had almost 20 years from the issuance of the rule in 1999 to design and implement alternative measures to BART. For numerous reasons, including the myriad stakeholder interests and complex governmental interests unique to NGS, we are only now addressing the BART requirements for NGS.

Our proposal to require emission reductions beyond 2018 was supported by CAA section 301(d)(4) and the TAR codified at 40 CFR 49.11(a). The TAR reflects EPA's commitment to promulgate "such Federal implementation plan *provisions as are necessary or appropriate* to protect air quality" in Indian country where a tribe either does not submit a Tribal Implementation Plan (TIP) or does not receive approval of a submitted TIP (*emphasis added*).

The use of the term "provisions as are necessary or appropriate" indicates EPA's determination that it may only be necessary or appropriate to promulgate a FIP of limited scope. The United States Court of Appeals for the Tenth Circuit has previously endorsed the application of this approach in a challenge to the FIP for the Four Corners Power Plant, stating: "[40 CFR 49.11(a)] provides the EPA discretion to determine what rulemaking is necessary or appropriate to protect air quality

and requires the EPA to promulgate such rulemaking."[31] The court went on to observe: "Nothing in section 49.11(a) requires EPA . . . to submit a plan meeting the completeness criteria of [40 CFR part 51] Appendix V."[32] While the decision in the Tenth Circuit focused on 40 CFR part 51, Appendix V, EPA believes the same considerations apply to the promulgation of a FIP intended to address the objectives set forth in 40 CFR 51.308(e)(2). In particular, EPA has discretion to determine if and when a FIP addressing the objectives set forth in 40 CFR 51.308(e)(2) should be promulgated, which necessarily includes discretion to determine the timing for complying with the requirements of any such FIP.

III. Summary of Final FIP Provisions

EPA is finalizing our finding that it is necessary or appropriate to promulgate a source-specific FIP requiring NGS to achieve NO_X emission reductions required by the BART provisions of the CAA and RHR. EPA is determining that our proposed NO_X emission limit of 0.055 lb/MMBtu, based on our analysis of the relevant factors, establishes the appropriate BART Benchmark for determining "better than BART." Further, we are finalizing our assessment that the TWG Alternative, which establishes an enforceable 2009-2044 cap on NO_X emissions from NGS over the life

[31] See *Ariz. Public Serv. Co. v. EPA*, 562 F.3d 1116 (10th Cir. 2009).
[32] *Id.*

of the facility is "better than BART." Finally, we are finalizing the TWG Alternative as the FIP requirements for NGS.

EPA is promulgating four possible operating scenarios under the TWG Alternative (see Table 1). The operator of NGS must implement one of the four enforceable operating scenarios in order to comply with the 2009-2044 NO_X Cap. The applicable operating scenario will depend on the outcome of ownership changes related to LADWP, NV Energy, and Navajo Nation, as well as whether the operator of NGS can increase capacity (by no more than 189 MW) to accommodate ownership changes, without triggering New Source Review permitting requirements, as described in Table 1. Once the ownership outcomes are finalized, the operator of NGS must implement the applicable Alternative as shown in Table 1. For example, if LADWP and NV Energy both retire their ownership shares of NGS and the Navajo Nation does not elect to purchase an ownership share of NGS, TWG Alternative A1 applies and the operator of NGS must implement Alternative A1 and may not elect to implement Alternatives A2, A3, or B. By December 1, 2019, the operator of NGS must notify EPA of the applicable Alternative (i.e., TWG Alternative A1, A2, A3, or B).

In addition to the enforceable 2009-2044 NO_X Cap, Alternatives A1, A2, and A3 each has enforceable emission reduction measures in 2019 and 2030 (see Table 1). Under Alternative B, in addition to the enforceable 2009-2044 NO_X Cap,

the operator of NGS must also ensure that cumulative NO_X emissions over 2009-2029 comply with the 2009-2029 NO_X Cap. The 2009-2029 NO_X Cap is calculated based on emissions that would have been emitted over that period under Alternative A1. Under all Alternatives, if, based on required annual reports submitted by the operator of NGS to EPA, cumulative emissions of NO_X from NGS exceed the 2009-2044 NO_X Cap at any time prior to December 31, 2044, the operator of NGS must permanently cease operation of NGS. In addition, under Alternative B, if cumulative emissions of NO_X exceed the 2009-2029 NO_X Cap prior to 2029, the operator of NGS must temporarily cease operation of all units at NGS.[33] Under all Alternatives, the operator must permanently cease operation of all units at NGS by December 22, 2044.

Under all TWG Alternatives, the operator of NGS must report to EPA annual emissions and heat input data and must make this information publicly available on its website. In addition, under TWG Alternative B, the operator must also submit to EPA annual Emission Reduction Plans projecting year-by-year emissions covering the 2020-2029 and 2030-2044 periods so that there is a plan for operation of NGS that ensures that cumulative emissions of NO_X do not exceed the 2009-2029 NO_X Cap

[33] The combination of the 2009-2044 and 2009-2029 NO_X Caps under TWG Alternative B means that if NGS exceeds the 2009-2029 NO_X Cap prior to 2029 it must cease operation, but the operator may re-start operation after 2030 as long as cumulative emissions have not yet exceeded the 2009-2044 NO_X Cap.

and the 2009-2044 NO_X Cap. Although year-by-year emissions projected in the annual Emission Reduction Plans are not enforceable (i.e., emissions in a given year are not required to match projections for that year in an Emission Reduction Plan), the requirement to submit Emission Reduction Plans is enforceable, and provides the operator with a framework for planning for future emissions reductions. The requirement also provides EPA and the public the opportunity to monitor and evaluate progress of emission reductions under TWG Alternative B.

Table 1: Summary of the Major Regulatory Provisions of the TWG Alternative

Applicability ***(Step 1)***	• If LADWP and NV Energy both exit NGS without selling their ownership interests (i.e., retire shares), or both exit by selling to an existing NGS participant; or one retires shares and the other sells to an existing NGS participant; and			• If LADWP or NV Energy sells to a 3rd party, or does not exit NGS;
(Step 2)	• If Navajo Nation does not purchase ownership share by 12/31/19;	• If Navajo Nation purchases up to 170 MW by 12/31/19; and	• If Navajo Nation purchases up to 170 MW by 12/31/19; and	• n/a
(Step 3)	• n/a	• If Participants increase capacity without triggering permit requirements;	• If Participants cannot increase capacity without triggering permitting);	• n/a
Applicable Alternative	**Then TWG Alternative A1 applies**	**Then TWG Alternative A2 applies**	**Then TWG Alternative A3 applies**	**Then TWG Alternative B applies**
Applicable Requirements	• Comply with 2009-2044 NO_X Cap of 494,899 tons • Permanently cease operation of all units if cumulative emissions before 2044 exceed 2009-2044 NO_X Cap • Permanently cease conventional coal-fired electricity generation by December 22, 2044			
Additional Emission Cap	• n/a			• Comply with 2009-2029 NO_X Cap of 416,865 tons
Specific Requirements*	• By 12/31/19 permanently close 1 unit	• By 12/31/19 permanently close 1 unit	• By 12/31/19 reduce net generating capacity by no less than 561 MW	• Temporarily cease operation if cumulative emissions before 2029 exceed 2009-2029 NO_X Cap

	• By 12/31/30 meet NO_X limit of 0.07 lb/MMBtu on 2 units	• By 12/31/19 operator may increase capacity by no more than 189 MW • By 12/31/30 meet 0.07 lb/MMBtu on 2 units	• By 12/31/30 meet NO_X limit of 0.07 lb/MMBtu on 2 units	
Reporting	• By December 1, 2019, notify EPA of applicable Alternative (A1, A2, A3, or B) • Submit annual report summarizing heat input and annual and cumulative emissions of NO_X • Make annual report publicly available on website • Submit application to revise Part 71 Operating Permit by December 31, 2020			
Additional Reporting	• n/a			• By 12/31/19 and annually thereafter submit Emission Reduction Plans to project year-by-year emissions to assure compliance with NO_X Caps

* All units must comply with the existing NO_X emission limit of 0.24 lb/MMBtu established in a 2008 permitting action. See discussion in Proposed Rule at 78 FR at 8284 (February 5, 2013). This limit applies to each unit unless otherwise stated.

In our final rule, EPA has included several revisions to the proposed regulatory text (40 CFR 49.5513(j)) put forth in the Supplemental Proposal. The substantive revisions include:

1. Revision to §49.5513(j)(3) to clarify that EPA is finalizing a "better than BART" Alternative;
2. Additions to §49.5513(j)(3) to specify that the operator must temporarily cease operation of NGS if cumulative emissions of NO_X exceed the 2009-2029 NO_X Cap of 416, 865 tons at any time prior to December 31, 2029 (under Alternative B), and must permanently cease operation of NGS if cumulative emissions of NO_X exceed the 2009-2044 NO_X Cap of 494,899 tons at any time prior to December 31, 2044 (under all Alternatives);
3. Additions to §49.5513(j)(3)(i)(A)(2), (B)(3), and (C)(2), to specify that the NO_X emission limit of 0.07 lb/MMBtu is to be calculated based on a rolling average basis of 30 boiler operating days;
4. Correction to §49.5513(j)(3)(ii)(D), to specify that Alternative B shall also apply if either of the Departing Participants (i.e., LADWP or NV Energy) remains as a participant in NGS;
5. Addition of §49.5513(j)(3)(iii), consistent with the TWG Agreement, to require the owners of NGS to cease its

operation of conventional coal-fired generation at NGS no later than December 22, 2044;[34]

6. Addition to §49.5513(j)(4)(ii), to change the annual reporting date to begin in 2015 instead of the specific date of January 31, 2015, and specify that the report must be submitted to EPA and also made publicly-available within 30 days of the submittal deadline associated with the annual emission inventory required by the Part 71 Operating Permit for NGS;
7. Addition to §49.5513(j)(4)(iii), to clarify that the Part 71 Operating Permit for NGS shall incorporate practically enforceable limits for NO_X of 0.24 lb/MMBtu, on a 30-day rolling average basis, for each Unit equipped with LNB/SOFA, and 0.07 lb/MMBtu, on a rolling average basis of 30 boiler operating days, for each Unit equipped with SCR, as federally enforceable permit conditions; and
8. Addition of §49.5513(j)(4)(iv)(C), to specify that the requirement to submit annual Emission Reduction Plans

[34] See page 14 of the TWG Agreement (section IV.F). This section of the TWG Agreement also states that "[a]t its election, consistent with the Lease Amendment, the Navajo Nation may continue plant operations at NGS after December 22, 2044 consistent with EPA approval." EPA is not including this provision into the regulatory requirements at §49.5513(j)(3)(iii), however, EPA expects that NGS would be substantially modified if the Navajo Nation elects to continue operation of the facility after NGS ceases conventional coal-fired generation in 2044, and that NGS must then meet all applicable regulatory and permitting requirements in existence at that time.

beginning no later than December 31, 2019, must be incorporated into the Part 71 Operating Permit for NGS as a federally enforceable permit condition.

9. Revision to §49.5513(j)(7) to require the owner or operator of NGS to maintain records that document compliance with the NO_X Cap (e.g., daily emissions and heat input data) for the life of the facility, rather than at least five years.
10. Deletion of §49.5513(j)(7)(vi) that required record-keeping of all major maintenance activities conducted on emission units, air pollution control equipment, and CEMS because record-keeping of maintenance activities are not needed to ensure compliance with the 2009-2029 and 2009-2044 NO_X Caps.
11. Revision to §49.5513(j)(11) to state that the affirmative defense provisions of paragraphs §49.5513 (c)(2) and §49.5513(i) do not apply to paragraph §49.5513(j).[35]

Revision (1) above is necessary to clarify that EPA is finalizing a "better than BART" alternative in lieu of BART. The BART Benchmark used to assess the "better than BART" alternative is based on our proposed BART determination for NGS,

[35] We note that in our Supplemental Proposal, we reported the affirmative defense provisions as paragraphs (c)(1) and (g)(3) in error. The correct citations are to paragraph (c)(2) and paragraph (i) of 40 CFR 49.5513.

and the "better than BART" alternative is consistent with our Supplemental Proposal of the TWG Alternative. Revision (3) above is necessary because EPA inadvertently did not specify the averaging period associated with the emission limits for NO_X in our Supplemental Proposal. Revisions (2) and (4) through (10) above are in response to comments submitted to EPA on our Supplemental Proposal. Revision (11) above amends a proposed provision in our Supplemental Proposal that limited the applicability of the existing affirmative defense provisions for startups, shutdowns, and malfunctions (from the previous FIP for NGS codified at 40 CFR 49.5513(c)(2) and 40 CFR 49.5513(i)) to malfunctions.[36] In this Final Action, we are revising (j)(11) to make clear that the existing affirmative defense provisions do not apply to the emission limits established in the TWG Alternative.

Following the close of the public comment period, the United States Court of Appeals for the D.C. Circuit issued a decision concerning various aspects of the NESHAP for Portland cement plants issued by EPA in 2013, including the affirmative defense provision of that rule.[37] The court found that EPA lacked authority to establish an affirmative defense for private civil

[36] See final action for the previous FIP for NGS at 75 FR 10179 (March 5, 2010).
[37] NRDC v. EPA, 2014 U.S. App. LEXIS 7281 (D.C. Cir.), in the docket for this rulemaking.

suits and held that under the CAA, the authority to determine civil penalty amounts lies exclusively with the courts, not EPA. The court did not address whether such an affirmative defense provision could be properly included in a SIP. However, the court's holding makes it clear that the CAA does not authorize promulgation of such a provision by EPA. In particular, the court's decision turned on an analysis of CAA sections 113 (Federal enforcement) and 304 (Citizen suits). These provisions apply with equal force to a civil action brought to enforce the provisions of a FIP. The logic of the court's decision thus applies to the promulgation of a FIP and precludes EPA from including an affirmative defense provision in a FIP. Therefore, we are not including an affirmative defense provision in the final FIP.

We note that, if a source is unable to comply with emission standards as a result of a malfunction, EPA may use case-by-case enforcement discretion, as appropriate. Further, as the D.C. Circuit recognized, in an EPA or citizen enforcement action the court has the discretion to consider any defense raised and determine whether penalties are appropriate.[38]

IV. Summary of Major Issues Raised by Commenters

[38] *Id.* at 24 (arguments that violations were caused by unavoidable technology failure can be made to the courts in future civil cases when the issue arises).

The public comment period for our Proposed Rule opened on February 5, 2013. On two occasions, we extended the comment period on our Proposed Rule at the request of stakeholders, with a final closing date of January 6, 2014. Although we posted the pre-publication version of our Supplemental Proposal to the docket and to our website on September 25, 2013, the public comment period for the Supplemental Proposal officially began when it was published in the *Federal Register* on October 22, 2013.[39] We accepted public comments on our Supplemental Proposal, concurrently with our Proposed Rule, until January 6, 2014. Our Supplemental Proposal also included notice of five public hearings, one on the Navajo Nation, one on the Hopi reservation and three in the State of Arizona. The public hearings occurred during the week of November 12, 2013. In all, 194 oral testimonies were presented at the public hearings.

We received over 77,000 written comments. Of these, over 76,800 comments came from private individuals who submitted substantially similar comments by email or postcard. We received an additional 300 unique written comments (not including duplicates, requests for extension of the public comment period, or requests for additional hearings) from a variety of

[39] See document number 0182 (Pre-publication version of Supplemental Proposal for NGS Signed on September 25, 2013), posted to docket on September 25, 2013 and publication of Supplemental Proposal in *Federal Register* at 78 FR 62509 (October 22, 2013).

individuals and entities, including tribal governments, environmental or public interest advocacy groups, water interest groups, groups representing industry or commerce, the operator and participants in NGS and the Kayenta Mine, elected officials, and state and local governments.

In this document, EPA is providing an abbreviated summary of the major comments and EPA's responses to those comments, grouped together by subject matter. The complete response to comments document (RTC) includes the full summary of all substantive comments and EPA's full responses to those comments. The RTC is included in the docket for this rulemaking.[40] We are not responding to comments unrelated to our Proposed Rule or Supplemental Proposal for NGS in this document or in the RTC.

A. General Comments from Public Hearings

Comment: *Contribution of NGS to the local and state economy and support for TWG Alternative*

Many commenters at the public hearings preferred the TWG Alternative because they believe that EPA's proposed BART determination would force NGS and the Kayenta Mine to close, causing economic harm to an area where the majority of residents are low-income and where opportunities for employment are limited. Many commenters stressed that NGS employs over 500

[40] See document titled "EPA Responses to Comments on Final Rule for NGS" in the docket for this rule.

people and the Kayenta Mine has over 400 employees, and the loss of these jobs would only exacerbate the unemployment rate in the area, which currently ranges from 47 percent to 60 percent.

A number of commenters noted that NGS supplies more than 90 percent of the energy used by Central Arizona Water Conservation District (CAWCD), which operates the Central Arizona Project (CAP), which transfers water from the Colorado River throughout Arizona. A few commenters urged EPA to uphold its federal trust obligations and ensure that tribal communities continue to have access to affordable water, and advised EPA to make a decision consistent with the legal rights that the Gila River Indian Community and other stakeholders negotiated and that Congress granted under the Arizona Water Settlements Act of 2004.

A few commenters support the TWG Alternative because they believe it is a fair compromise created by a diverse group of stakeholders that provides a path for future operation at NGS by allowing for potential ownership changes and by providing an extension to install SCR technology, while still ensuring that the total emission reductions of NO_X will be greater than those achieved under EPA's proposed BART determination.

Response:

EPA recognizes the contribution of NGS and the Kayenta Mine to the economy of the Navajo Nation, the Hopi Tribe, the city of

Page, and the state of Arizona. In our Proposed Rule, EPA discussed the history of NGS and the relationship between NGS, the Central Arizona Project, and numerous tribes located in Arizona.[41] EPA notes that NGS is a facility that is subject to the BART requirement of the RHR, and emissions from NGS affect visibility at 11 national parks and wilderness areas in the Southwest. The analyses in our Proposed Rule and Supplemental Proposal determined that additional controls at NGS are cost-effective, will significantly reduce the contribution of NGS to visibility impairment at numerous Class I areas, and should not cause NGS to retire. However, for a number of reasons, including the importance of NGS to numerous Indian tribes located in Arizona and the federal government's reliance on NGS to meet the requirements of water settlements with several tribes, EPA also outlined a framework for considering "better than BART" alternatives that ensures emission reductions while providing additional flexibility to the operator of NGS.[42]

EPA agrees with comments that the TWG Agreement represents a compromise between diverse stakeholders, although we recognize that the members of the TWG did not invite all affected stakeholders to participate in their discussions. The TWG Alternative provides certainty for future operation of NGS,

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[41] See 78 FR 8274, at 8275 (February 5, 2013).
[42] *Id.* and 78 FR 62509 (October 22, 2013).

flexibility in the compliance timeframe, and more emission reductions of NO_X than would have been achieved under EPA's proposed BART determination. Based on our analysis in our Supplemental Proposal and consideration of all comments received, EPA is taking action to finalize requirements consistent with the TWG Agreement we put forth in our Supplemental Proposal, i.e., the TWG Alternative.

Comment: *Impact of air pollutants from NGS on public health and welfare and support for proposed BART determination*

Several commenters favor EPA's proposed BART determination for NGS because they believe that emissions from NGS cause health problems in the area, including respiratory illness and heart disease. One commenter cited a Clean Air Task Force study which states that NGS is responsible for approximately $127 million in health costs every year. Many of these commenters urged EPA to conduct health studies to determine the actual impact to health in these communities.

Some commenters favor stringent controls because they believe that emissions from NGS adversely affect native plant species and harm traditional dry land farming. Others assert that emissions from NGS can be linked to high levels of mercury found in fish species located in nearby lakes. Many commenters expressed concerns over the well-being of the Navajo Aquifer. A number of commenters favor stringent controls because they

believe that emissions produced from NGS contribute to climate change.

In contrast, a few commenters questioned the extent to which emissions from NGS impact public health and the environment, asserting that the haze is a result of emissions from natural sources (e.g., volcanoes, wind/dust storms, and forest fires) and pollution produced from nearby cities (i.e., Phoenix, Los Angeles, and Las Vegas). Another commenter asserted that EPA's website states that vehicles are the largest producers of NO_X emissions in the country and concludes that EPA is ignoring mobile sources and unfairly targeting stationary sources.

Some commenters preferred EPA's proposed BART determination over the TWG Alternative because they believe that the alternative is based on a false premise. They asserted that the closure of a single unit is not equivalent to cleaning up all three units because the reduction in capacity will ultimately require new electricity generation elsewhere because the demand for power does not change.

Response:

Protection of human health and the environment is EPA's mission and forms the basis for many Agency actions, including establishing the National Ambient Air Quality Standards (NAAQS), and promulgation of regulations such as the New Source

Performance Standards (NSPS) and the National Emission Standards for Hazardous Air Pollutants (NESHAP). In addition to Clean Air Act requirements to protect human health, in the 1977 Clean Air Act Amendments, Congress declared 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 (See CAA §169A).

EPA agrees that visibility-impairing pollutants are among the same pollutants that affect human and ecosystem health; however, health studies are beyond the scope of this BART analysis. Similarly, hazardous air pollutants (HAPs), such as mercury, are not visibility-impairing pollutants and therefore are beyond the scope of this BART analysis.[43]

EPA agrees that climate change is an important issue.[44] However, the RHR addresses pollutants that impair visibility and is not intended to address pollutants that contribute to climate change. EPA has developed various programs and activities to address emissions of greenhouse gases.[45] On June 2, 2014, EPA signed a proposal to cut greenhouse gas emissions from coal-

[43] Emissions of HAPs from various source categories are addressed generally through the NESHAP. EPA addressed mercury emissions from power plants specifically in the final Mercury and Air Toxics Standard (MATS). 77 FR 9304 (February 16, 2012).
[44] http://www.epa.gov/climatechange/basics/.
[45] http://www.epa.gov/climatechange/EPAactivities.html.

fired power plants by up to 30 percent by 2030.[46] Although regulation of greenhouse gases is conducted under separate statutory requirements from regional haze, EPA is mindful that this BART determination for NGS is not the only regulatory program that affects this facility and the region.

EPA agrees with comments that mining and combustion of coal affect the environment. EPA notes that Reclamation has started its process to develop an Environmental Impact Statement (EIS) required under the National Environmental Protection Act (NEPA) for activities resulting from the continued operation of NGS and the Kayenta Mine.[47] The on-going NEPA process provides numerous opportunities and the appropriate forum to raise concerns related to the impacts of mining and use of water from the Navajo Aquifer. We further note that representatives of DOI attended all the public hearings on NGS held by EPA and are aware of the issues raised by commenters during the BART process regarding mining and the Navajo Aquifer.

EPA disagrees with the assertion that EPA is unfairly targeting stationary sources of emissions and ignoring the significant contribution of motor vehicle emissions. Consistent with title II of the CAA, the EPA Office of Transportation and Air Quality protects public health and air quality by, among

[46] See http://www2.epa.gov/carbon-pollution-standards.
[47] For more information, please see www.ngskmc-eis.net.

other things, regulating air pollution from motor vehicles, engines, and the fuels to operate them.[48] New cars and sport utility vehicles sold today have emission levels of hydrocarbons, NO_X, and carbon monoxide that are 98 – 99 percent lower than new vehicles sold in the 1960s on a per mile basis.[49] Similarly, standards established for heavy-duty highway and non-road sources require emission rate reductions on the order of 90 percent or more for particulate matter and NO_X. In 2014, EPA finalized new vehicle emission standards and reduced the fuel sulfur content of gasoline to achieve additional reductions in tailpipe and evaporative emissions from passenger cars, light-duty vehicles, medium-duty passenger cars, and some heavy-duty vehicles starting in 2017.[50]

EPA agrees that forest fires and volcanic eruptions, when they occur, can impact visibility to a greater extent than anthropogenic sources of emissions. However, Congress directed EPA to develop rules to address on-going emissions from stationary sources subject to BART to remedy the existing impairment of visibility in Class I areas and restore visibility to natural conditions.

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[48] http://www.epa.gov/otaq/.
[49] See, e.g., 76 FR 74854, at 74900 (December 1, 2011).
[50] See Fact Sheet for Tier 3 Standards available at http://www.epa.gov/otaq/documents/tier3/420f14010.pdf

EPA disagrees with assertions that the TWG Alternative is based on a false premise because the closure or curtailment of one unit would just result in electricity being produced elsewhere. Closure of one unit at NGS or the curtailment of an equivalent amount of electricity generation is possible based on LADWP and NV Energy's intended divestiture from NGS. Consistent with state law in California and Nevada, additional electricity needed to replace lost generation from NGS, associated with LADWP and NV Energy's divestiture, would come from energy sources that emit less air pollution than a conventional coal-fired power plant operating with SCR on all units.[51]

Comments regarding specific aspects of the TWG Alternative are discussed in Section 9.0 of the RTC.

Comment: *Environmental and Social Justice*

Several commenters consider the presence of NGS and several other power plants in and around the Navajo Nation to represent an environmental and economic justice issue. One commenter noted that a Navajo water hauler in Kaibeto, a Navajo community near Page, pays 10 to 20 times more for water, or $13,000 per acre foot, than municipal CAP water users in Glendale or a farmer in Tempe, who pay $551 and $41 per acre feet, respectively.

[51] See RTC and references therein.

Several commenters opined that the leaders of the Navajo Nation and EPA have not protected the interests of the local population. A few expressed concerns over how the alternatives were written, noting that many tribal residents do not understand the technical language used in the documents and therefore cannot adequately comment on the validity of the alternatives proposed. Some commenters argued that pollution can be controlled using existing technology and EPA should apply the same standard to NGS as other coal-burning power plants (e.g., Four Corners Power Plant). A few commenters argued that extending the compliance timeframe for NGS demonstrates that the federal government considers itself exempt from federal law. Several argued that tribal communities do not have the funds to develop proposals and/or conduct environmental assessments and urged that EPA uphold federal trust responsibilities and create an equal playing field.

Response:

EPA defines Environmental Justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across the country. It will be achieved when everyone enjoys the same degree of protection from

environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work."[52]

EPA takes fair treatment and meaningful involvement seriously and provided numerous opportunities for tribal governments, environmental and tribal non-governmental organizations, and other interested stakeholders to provide input in the development of our Proposed Rule, Supplemental Proposal, and Final Rule for NGS. EPA began our public involvement process for a BART determination for NGS in 2009, when we published an Advanced Notice of Proposed Rulemaking (ANPR). Although we initially provided a 30-day public comment period, at the request of tribal governments and other interested stakeholders, we extended the comment period for tribes another 30 days to October 28, 2009 and, to allow additional time for government-to-government consultation on NGS, agreed to accept comments from tribes until March 1, 2010.

EPA received over 6,000 comments on the ANPR.[53] During 2009 through 2012, EPA met with various stakeholders, including tribal governments and tribal environmental groups, to discuss NGS and hear concerns related to a BART determination for this

[52] http://www.epa.gov/environmentaljustice/.
[53] See page 25 of the TSD to the February 5, 2013 Proposed Rule.

facility.[54] We initially provided a 90-day comment period for the Proposed Rule on February 5, 2013, and at the request of various stakeholders, we provided several extensions of the public comment period, which closed on January 6, 2014. During the 11-month comment period, EPA continued to meet with stakeholders, at their request, to discuss our proposed BART determination for NGS and our framework for "better than BART" alternatives.[55]

On July 26, 2013, the TWG submitted Appendix B to the TWG Agreement to EPA for consideration. EPA posted the TWG Agreement to our docket on the same day to provide the public an opportunity to review it.[56] On September 25, 2013, EPA posted our Supplemental Proposal, along with supporting documents, to the docket to allow for pre-publication review by interested parties.[57] The Supplemental Proposal was published in the Federal Register on October 22, 2013. The comment period for the Supplemental Proposal closed on the same day as the BART proposal, on January 6, 2014. The Supplemental Proposal also included notice of five open house and public hearing events EPA scheduled throughout Arizona in November 2013. The open houses allowed members of the public an opportunity to talk with

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[54] See, for example document number 0232 in the ANPR docket at EPA-R09-OAR-2009-0598, and document numbers 0008 and 0009 in the docket for this rule.
[55] See, for example, document number 0150, 0152, 0166, 0173, 0302, and 0303 in the docket for this rule.
[56] See document number 0122 in docket for this rule.
[57] See document numbers 0182, 0183, and 0184 in the docket for this rule.

representatives from EPA and ask questions. EPA held events at the LeChee Chapter House, located on the Navajo Nation, as well as in Page, Arizona, and provided oral interpretation services between English and Diné (the Navajo language). EPA also held an event at the Hopi Day School, located in Kykotsmovi, the seat of the Hopi tribal government.[58] Finally, we also held events in Phoenix and in Tucson, Arizona, to allow stakeholders in central and southern Arizona, representing CAP water interests and several tribes receiving CAP water, the opportunity to provide comment and talk with representatives from EPA. Although EPA understands that the TSD and Federal Register notices include technical information that may be difficult to understand, EPA provided Fact Sheets and handouts, written in plain language, at the open house and public hearing events.[59] EPA representatives were also present at the events to discuss and explain our Proposals. EPA recognizes that many tribal communities do not have the funds to develop alternative proposals or hire experts on their behalf; however, this does not diminish such communities' ability to participate in the rulemaking process in a meaningful way as EPA takes seriously its responsibility to explain its proposal to all interested parties and assesses all

[58] EPA engaged with the government of the Hopi Tribe to search for an oral interpreter between English and the Hopi language, but the Hopi Tribe was unable to locate anyone to provide those services.
[59] See document 0219 in the docket for this rule.

comments, regardless of the form of the comment or whether or not the commenter has a technical background.

As stated in our Proposed Rule and Supplemental Proposal, EPA has determined that these proposed rules, if finalized, will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because they increase the level of environmental protection for all affected populations (i.e., require emission reductions from NGS).[60] EPA recognizes that some commenters may view the timeframe for compliance under EPA's framework for BART Alternatives as an environmental justice issue. We note that the LNB/SOFA credit, an important component of the extended timeframe, was based on real, actual emission reductions beginning in 2009 that were voluntary and not required by any rule or regulation. We also note that the TWG Alternative, which calls for closure of one unit in 2019 (or equivalent curtailment) will result not only in greater reductions of NO_X than would have been achieved under BART, but also reductions of several other pollutants, including SO_2, PM, CO_2, and mercury. Thus, although the TWG Alternative includes a compliance timeframe for achieving additional reductions in 2030, over 2009-2044, the TWG Alternative will result in reductions of

[60] See discussions under Executive Order 12898 in 78 FR at 8793 (February 5, 2013) and 78 FR at 62520 (October 22, 2013).

additional pollutants that affect visibility or human health, and will provide an enforceable mechanism to ensure that NGS ceases conventional coal-fired electricity generation at NGS by the end of 2044.

EPA recognizes that numerous commenters expressed frustration regarding social inequities related to costs and benefits of coal mining and combustion and water availability and cost. We recommend participating in the EIS process for NGS and Kayenta Mine to raise any concerns related to costs, benefits, and the environmental and social justice of coal mining and coal combustion at the Kayenta Mine and NGS.

B. Comments on Factor 1 – Cost of Controls

Comment: *EPA underestimated SCR costs*

Several commenters asserted that EPA underestimated the cost of compliance by improperly reworking cost estimates developed for SRP by Sargent and Lundy (S&L) in 2010 and disregarding real costs that would be incurred. One commenter quoted the BART Guidelines and the final RHR to assert that although the use of the Control Cost Manual is encouraged, it is not mandated, and that EPA has discretion to use additional sources of cost information. The commenter believes, therefore, that the SRP estimates for the excluded cost items are appropriate to use because they are more precise than the

generic statements that EPA relied upon in the Control Cost Manual.

Response:

EPA disagrees with the comment that we improperly reworked and underestimated the SCR cost estimates. We note, however, that even if we had relied only on the cost estimate provided by SRP, EPA still would have concluded that SCR is cost-effective at NGS.

EPA used a hybrid approach for our cost analysis that relied primarily on the cost estimates provided by SRP, but also followed the BART Guidelines to determine whether S&L included cost estimates for services or equipment associated with SCR that were not allowed under the EPA Control Cost Manual. The BART guidelines state "[i]n order to maintain and improve consistency, cost estimates should be based on the OAQPS Control Cost Manual, where possible".[61] The capital cost estimate EPA presented in the proposed rulemaking for SCR plus LNB/SOFA ($541 million total for Units 1-3) is only 8 percent lower than the SRP cost estimate ($589 million). SRP's cost estimate would not have changed our conclusion that SCR is cost-effective at NGS.

As discussed in the TSD to the proposed rulemaking, EPA made four adjustments to SRP's cost estimates for SCR, namely,

[61] The OAQPS Control Cost Manual is now referred to as the EPA Control Cost Manual.

to exclude "Owners Construction Management, O&M Support and Contract Service," "Owners Legal Support and Insurance," and "Allowance for Funds Used During Construction," and to use an interest rate of 7 percent.[62] Our detailed, line-by-line analysis was included in the docket for this proposed rulemaking and provided an explanation for why we retained, modified, or rejected each line item.[63] Please see the RTC for additional discussion of these four adjustments to the S&L cost analysis.

In our proposed rule, we presented total capital and total annual cost estimates from EPA and SRP, as well as average and incremental cost-effectiveness values based on EPA and SRP assumptions for total annual cost and total annual NO_X reductions. Based on SRP's analysis, average cost-effectiveness of SCR+LNB/SOFA at NGS was less than $3,000 per ton and incremental cost-effectiveness of SCR+LNB/SOFA (compared to SNCR+LNB/SOFA) was approximately $5,300 per ton.[64] EPA stated that the cost-effectiveness values calculated by both EPA and SRP for SCR+LNB/SOFA are lower than or within the range of other BART evaluations where EPA or a state has determined that SCR is BART (ranging from approximately $2,000 to $6,000 per ton). EPA has accordingly determined that SCR is cost-effective at

[62] See Table 12 of the TSD to the February 5, 2013 Proposed Rulemaking, available as document number 0014 in the docket for this rule.
[63] See MS Excel document titled "EPA cost analysis for NGS" within document number 0004 in the docket for this rule.
[64] See Table 3 of our Proposed Rule, 78 FR at 8281 (February 5, 2013).

NGS.[65] Therefore, even if EPA accepted the S&L cost estimates submitted by SRP, as commenters suggest, EPA would still have determined that SCR is cost-effective for NGS.

Comment: *EPA overestimated SCR costs*

One commenter asserted that EPA overestimated the cost of installing SCR at NGS. Although the commenter supported EPA's adjustments to the S&L cost estimates, the commenter asserted that further revisions are appropriate. The commenter stated that EPA overestimated the following costs: outage costs associated with installation and "preinstallation" work; catalyst costs; and auxiliary power. In addition, the commenter asserted that EPA overestimated annual costs by assuming 20 years as the basis for amortizing costs and using an inflated interest rate of 7 percent.

Although the commenter concurs with EPA's conclusion that SCR plus LNB/SOFA is cost-effective at $2,240 per ton of NO_X removed, the commenter re-calculated cost-effectiveness to be $1,412 per ton for Unit 1, $1,331 per ton for Unit 2, and $1,497 per ton for Unit 3.

Response:

EPA disagrees with the commenter that any revisions to EPA's estimate of SCR costs are necessary. Even if some of the

[65] See our Proposed Rule at 78 FR at 8281 (February 5, 2013).

costs projected by S&L and used by EPA may be overestimated (e.g., the commenter points primarily to capital recovery, catalyst replacement costs, and costs for lost power generation), EPA disagrees that we must correct every issue of concern raised by the commenters in order to support our determination of the BART Benchmark. EPA made four specific corrections to the estimates provided by S&L and SRP to make the cost calculation methodology consistent with methodologies used for BART cost calculations nationally.[66] As noted in other responses even if we consider the average and incremental cost effectiveness of SCR using SRP and S&L's full cost projections, EPA would still determine that SCR at NGS is cost-effective. The cost-effectiveness values cited by the commenter, below $1,500 per ton, certainly suggest that SCR could be even more cost-effective than the values we relied upon in our proposal, but this would not change our overall determination that SCR is cost-effective for NGS.

Comment: *Updated SCR cost estimate from SRP*

SRP contracted with S&L in 2013 to review and update the SCR cost estimates that were prepared in 2010. S&L escalated costs for inflation, and incorporated other minor adjustments to

[66] See, e.g., Final Regional Haze Plan for Arizona (Phase 1) at 77 FR 72512 at 72531 (December 5, 2012); Final Regional Haze Plan for North Dakota at 77 FR 20894 at 20916-17 (April 16, 2012); Final Regional Haze Plan for New Mexico at 76 FR 52388 at 52399-52400 (August 22, 2011); Final Regional Haze Plan for Wyoming at 79 FR 5032 at 5082 (January 30, 2014).

reflect a lower NO_X design target. SRP's revised capital cost estimates for SCR installation on all three units total $650 million (in 2013 dollars) compared to SRP's 2010 cost estimate of $544 million.

Response:

EPA reviewed the updated 2013 cost estimates developed by S&L and provided by SRP.[67] In its 2013 cost report, S&L explains that it escalated labor and material costs, and updated cost estimates based on a revised design target of 0.03 lb/MMBtu (so that the SCR system is deployed as a 3+1 system rather than a 2+2 catalyst layer system), and other design features, including a low-load temperature control system to operate SCR at lower loads. S&L escalated several costs at rates above 6.7 or 8 percent (e.g., freight, scaffolding). S&L did not make any revisions to the components of variable annual costs, including maintenance labor, auxiliary power, steam, and catalyst replacement. To be consistent with the cost estimates in our Proposed Rule, EPA accepted most of the line item costs as adjusted by S&L and made the same four adjustments to the 2013 cost estimates as we had applied to the 2010 cost estimates. These changes result in an 8 percent difference in total capital costs of SCR between EPA's 2013 estimate and SRP's 2013 estimate

[67] See RTC and references therein.

and a 21 percent difference in the total annual costs of SCR between the 2013 estimates from EPA and SRP (see Table 2).

Table 2: Cost Estimates for SCR in 2010 and 2013 Dollars

	Total Capital Cost in 2010$	Total Capital Cost in 2013$	Total Annual Cost in 2010$	Total Annual Cost in 2013$
EPA Estimate	$496 million	$598 million	$59 million	$69 million
SRP Estimate	$544 million	$650 million	$75 million	$88 million

In our proposed BART determination, EPA also presented the average and incremental cost-effectiveness of controls, based on the combination of combustion controls (LNB/SOFA) and post-combustion controls (i.e., SNCR or SCR). Therefore, cost-effectiveness values presented in our Proposed Rule were based on total annual cost of SCR in combination with annual cost of LNB/SOFA (SCR+LNB/SOFA), SNCR in combination with LNB/SOFA (SNCR+LNB/SOFA) or LNB/SOFA alone.[68] Based on the updated 2013 cost estimates for SCR, Table 3 shows the average and incremental cost-effectiveness of controls, in both 2010 and 2013 dollars, based on EPA and SRP assumptions for total annual cost and annual NO_X reductions achieved by SCR. See RTC for further detail on cost-effectiveness of SNCR+LNB/SOFA and LNB/SOFA.

Table 3: Cost Effectiveness of Controls in 2010 and 2013 dollars

	2010 $	2013 $

[68] 78 FR at 8281, February 5, 2013.

		EPA	SRP	EPA	SRP
SCR+ LNB/SOFA	Total Annual Cost*	$67.5 million	$80.2 million	$74.4 million	$92.6 million
	Annual NO_x reduced (tpy)	28,573	26,180	28,573	26,180
	NO_x Limit (lb/MMBtu)	0.055	0.080	0.055	0.080
	Average Cost Effectiveness ($/ton)	$2,369	$3,069	$2,605	$3,537
	Incremental Cost Effectiveness (vs. LNB/SOFA) ($/ton)	$3,522	$4,889	$3,899	$5,695
	Incremental Cost Effectiveness (vs. SNCR+LNB/SOFA) ($/ton)	$3,239	$5,357	$3,798	$6,647

* EPA's cost effectiveness calculations represent SCR in combination with LNB/SOFA, rather than SCR alone.

Based on the revised 2013 cost estimates for SCR+LNB/SOFA, the revised average cost-effectiveness of SCR+LNB/SOFA is roughly 10 percent higher (based on EPA's estimates) than the average cost-effectiveness values reported in our Proposed Rule, and roughly 15 percent higher based on SRP's estimates.[69] The 2013 values for average cost-effectiveness of SCR+LNB/SOFA based on EPA and SRP estimates are still comparable to the range of values determined cost-effective for SCR in other BART determinations. For these reasons, EPA continues to consider SCR+LNB/SOFA as cost-effective at NGS.

Comment: *Cost-Effectiveness of Presumptive BART*

One commenter stated that in establishing presumptive limits in the BART Guidelines, EPA recognized that SCR is not

[69] For informational purposes, EPA included the incremental cost-effectiveness values of SCR+LNB/SOFA (estimated in 2010 and 2013) compared to LNB/SOFA and SNCR+LNB/SOFA, but we note that a comparison of the percent change in incremental cost-effectiveness between 2010 and 2013 is not informative because SRP did not provide updated cost estimates (in 2013 dollars) for the other control technologies.

cost-effective and that combustion controls such as LNB/SOFA represent the most cost-effective control options for most boiler types. The commenter pointed out that in establishing presumptive limits, EPA considered controls that cost less than $1,500 per ton to be cost-effective, and that the cost-effectiveness for SCR at NGS, which ranges from $3,000 to $6,000 per ton based on 2010 estimates, is well above this threshold. The commenter concluded that EPA should have rejected SCR and proposed LNB/SOFA as BART for NGS.

Response:

EPA disagrees with the assertion that the BART Guidelines established a threshold for cost-effectiveness against which all future BART determinations must compare. 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. If EPA had intended the cost-effectiveness values estimated in 2005 to represent a threshold for BART, it is reasonable to assume that the BART Guidelines would have included those cost-effectiveness values as thresholds in Appendix Y, and would have required future cost estimates to be presented in 2005 dollars for appropriate comparison to the thresholds. 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 a threshold for rejecting controls for an individual unit or facility that exceed the average cost-effectiveness of combustion controls. In addition, as discussed in the RTC, a value of $1,500 per ton is not an appropriate or relevant value for determining cost-effectiveness.

Comment: *Indirect costs should also be considered under Factor 1*

The Gila River Indian Community asserted that EPA conducted the analysis of cost-effectiveness incorrectly by not including the indirect costs of the requirements and only considering the direct cost of the requirements. The commenter stated that EPA did not give sufficient consideration to the high costs to tribes associated with indirect impacts of its proposed BART determination.

Response:

EPA disagrees with the assertion that our cost-effectiveness analysis was incorrect because it did not include indirect costs in the assessment of the costs of compliance. The BART Guidelines, which States and EPA must follow in BART determinations for fossil-fuel fired power plants greater than 750 MW,[70] focus on the direct costs of the pollution control

[70] 40 CFR 51.308(e)(1)(ii)(B).

equipment and other capital and annual costs associated with the control technology alternatives. The BART Guidelines do not require consideration of the cost of potential indirect effects of BART control options when assessing the costs of compliance. Therefore, EPA disagrees that our analysis for Factor 1 was incorrect or incomplete because it did not include indirect costs to tribes. EPA further notes that under Factor 2, the energy and non-air quality environmental impacts analysis, the BART Guidelines specifically require the energy impact analysis to consider direct energy impacts (e.g., parasitic load from certain control technologies) and to generally exclude indirect energy impacts of controls (e.g., energy to produce raw materials for construction of control equipment) unless the indirect impact is unusual or significant.

However, because of the unique relationship between NGS, tribes, and tribal water settlement agreements, and to inform our government-to-government consultation with tribes, EPA did consider potential indirect effects of control options to tribes under Factor 2. EPA quantified the impact to electricity rates and CAP water rates, and also assessed whether installation of SCR would result in electricity generation costs at NGS that exceed the cost to purchase power on the wholesale market. Therefore, although EPA appropriately did not consider indirect costs in our analysis of Factor 1, EPA did include consideration

of indirect impacts to tribes and other entities in our analysis of Factor 2.

C. Comments on Factor 2 - Energy and Non-Air Quality Environmental Impacts, including Economic Impacts

Comment: *EPA's Affordability Analysis relied on invalid assumptions*

One commenter submitted a report, prepared by Management Information Services, Inc. (MISI report), asserting that EPA made several assumptions that underestimated the cost of continuing to operate NGS with additional controls, including the assumption that no new capital would be deployed at NGS over the next 25 years, the assumption that the increase in the annual NGS lease cost would be $15 million per year (which is lower than actual increase in lease cost of $43 million per year that was released after publication of our Proposed Rule), and the use of EPA's capital cost estimates for SCR instead of the cost estimated by S&L.

Other commenters asserted that EPA underestimated the cost of closing NGS and purchasing power on the wholesale market, by not accounting for costs associated with stranded investments and decommissioning NGS.

Response:

EPA recognizes the economic importance of NGS to the State of Arizona, the Navajo Nation, and the Hopi Tribe. The purpose

of the Affordability Analysis in our docket was to determine whether the control options for BART would have a detrimental impact on the competitiveness of NGS in the western power market, affecting whether the NGS owners would continue to operate NGS or replace NGS generation with less expensive market power. The Affordability Analysis indicated that, even if SCR installation was required on all three units at NGS, power produced at NGS would remain less expensive than the cost to replace power through wholesale purchases. Because utilities will generally provide power to their customers in a least-cost manner and because NGS, with the installation and operation of SCR, remained the less expensive option, EPA determined that the operation and installation of SCR, in and of itself, was not likely to force NGS to close.

In response to multiple comments expressing concern related to simplifying assumptions or outdated data, EPA updated the Affordability Analysis with the most current power market price curves from the U.S. Energy Information Administration (EIA) and recent forward power market prices in March 2014 and other more current modeling variables. These revisions are discussed in more detail in the RTC as well as in additional supporting documents.[71] The updated model results, comparing the net present

[71] See RTC and references therein.

value (NPV) of electricity generation costs with air pollution controls installed compared to the costs to purchase an equivalent amount of power on the wholesale market, are summarized in the RTC. Overall, the combined changes do not change the conclusions from the original Affordability Analysis that installing and operating SCR at NGS would be less costly than closing NGS and purchasing replacement power from the wholesale market.

Comment: *EPA's failure to appropriately consider the impacts to non-Indian agricultural (NIA) water users renders its Factor 2 analysis arbitrary, capricious, and an abuse of discretion*

One commenter stated that, as a result of errors and omissions, EPA's Factor 2 analysis is arbitrary, capricious, and an abuse of discretion. The commenter asserted that there are several problems with the EPA analysis related to NIA users of CAP water, including erroneous assumptions, insufficient support for conclusions, failure to consider decreased farming profitability and increased unemployment, failure to acknowledge the inability of NIA water users to pass along cost increases as compared to municipal users, and other factors.

Response:

EPA recognizes that CAP water is an important resource for NIA and other users of water in Arizona. As a result, as one of a number of discretionary analyses EPA conducted on the indirect

impacts on major stakeholders, EPA calculated water rate increases to NIA users of CAP water and municipal and industrial users of CAP water.

EPA disagrees that our discussion of impacts to NIA users of CAP water renders our Factor 2 analysis arbitrary, capricious, and an abuse of discretion. Neither the CAA nor the BART Guidelines require consideration of indirect costs or indirect impacts of controls in a BART analysis. EPA, nevertheless, included an evaluation of impacts to some of the major stakeholders in NGS in our BART analysis under Factor 2, including NIA users, as consistent with the statement in the BART Guidelines that "the energy impacts analysis *may* consider . . . whether a given alternative would result in significant economic disruption or unemployment" (emphasis added).[72]

EPA recognizes that the information we had available to us about NIA users of CAP water was limited, and we acknowledged in the TSD to our Proposed Rule that we had several questions about CAP and groundwater availability to NIA water users. EPA appreciates the clarifications and additional information provided by NIA users of CAP water during the comment period for our proposals. The additional information provided during the comment period about NIA users of CAP water does not change our

[72] See BART Guidelines at 70 FR at 39169 (July 6, 2005).

conclusion under Factor 2, that the potential economic impacts to tribes argue for flexibility in the compliance timeframe for NGS, because this compliance flexibility also benefits other stakeholders, including the NIA users of CAP water.

Comment: *EPA must evaluate cumulative economic impact of other rulemakings*

One commenter asserted that the BART proposal must take into account the context in which the regional haze rules are being implemented and conduct a cumulative impact analysis of all EPA rulemakings. The commenter noted that the two remaining copper smelters in Arizona are already subject to BART for SO_2 and they also have to make significant capital investments to comply with other regulatory programs and initiatives such as the revised SO_2 NAAQS.

Response:

EPA disagrees with the assertion that we must consider the total cost impact of all EPA regulatory requirements in a BART analysis. EPA recognizes that other facilities, whose water and electricity rates may be affected by our BART determination for NGS, may also be subject to BART for their own emissions of visibility-impairing pollutants. As a general matter, EPA is mindful that facilities may be affected by multiple regulatory and program activities. We note that BART is a case-by-case determination that is based on a source-specific analysis of

five factors, which include considerations of the unique circumstances of each affected facility, as required under the CAA.

Comment: *Impact to the Development Fund*

One commenter stated that the increased cost of electricity generation associated with SCR would reduce the competitiveness of the price of NGS power on the wholesale market and therefore reduce the revenue that flows into the Development Fund.

Response:

As discussed in our Proposal Rule and TSD, EPA recognizes that any electricity owned by Reclamation based on its 24.3 percent participation in NGS that is not used by CAP is sold and revenues are deposited into the Development Fund.[73] This fund is authorized to pay the delivery portion of the cost of CAP water for certain Indian tribes and to pay the cost of constructing delivery systems to bring CAP water to certain Indian tribes.[74] EPA considers the potential economic impacts to tribes, including potential impacts to the Development Fund, as part of BART factor 2 to support the appropriateness of flexibility in the compliance timeframe for NGS.

[73] See Proposed Rule at 78 FR at 8282 (February 5, 2013) and TSD at pages 71-72.
[74] See Proposed Rule at 78 FR at 8283 (February 5, 2013).

Comment: *No basis for public health claim*

One commenter asserted that EPA has no basis for claiming that the NO_X reductions from NGS would lead to a public health benefit. The commenter noted that EPA establishes NAAQS at levels that are protective of public health and welfare with an adequate margin of safety that accounts for sensitive populations such as children and the elderly, and that EPA has never found that any of the areas around NGS fail to attain the NAAQS. The commenter asserted that EPA must conduct a health risk evaluation that follows the four basic steps of the risk assessment process: hazard identification, dose-response, exposure assessment, and risk characterization.

Response:

EPA agrees that the purpose of this rule is to reduce visibility impairment caused by emissions of NO_X from NGS. EPA has not conducted a health risk evaluation for this rulemaking that attempts to characterize or quantify a public health benefit. Because NO_X is itself a criteria pollutant that affects public health and is also a precursor to ozone and fine particulate matter, which are also criteria pollutants that affect public health, we consider it reasonable to state that other benefits could exist. We also note that EPA does not agree that there are no health benefits from reductions in ozone and fine particulate matter below the level of the NAAQS. On the

contrary, EPA's practice of quantifying these benefits in regulatory impact assessments has been strongly supported by peer-reviewed science.[75]

D. Comments on Factor 3 – Existing Controls at NGS

Comment: *EPA failed to consider existing controls*

Based on EPA's statement in the Proposed Rule that the early installation of LNB/SOFA would not influence EPA's BART determination and EPA's use of a baseline scenario in the visibility modeling that did not include LNB/SOFA, the operator of the Kayenta Mine concluded that EPA failed to consider existing controls.

Response:

EPA disagrees with the assertion that we failed to consider existing controls. As described in our Proposed Rule and consistent with the BART Guidelines (directing BART determinations to conduct the five-factor analysis generally using a 2001-2003 baseline) EPA evaluated LNB/SOFA as a separate control technology in our BART analysis, as well as a technology that can be used in combination with post-combustion control

[75] See EPA, 2010, "Summary of Expert Opinions on the Existence of a Threshold in the Concentration-Response Function for PM2.5-related Mortality Technical Support Document." Available from http://www.epa.gov/ttn/ecas/regdata/Benefits/thresholdstsd.pdf.

technologies (i.e., SNCR and SCR).[76] We also discussed the voluntary installation of LNB/SOFA in 2009-2011 under Factor 3: Existing Controls at NGS.[77]

As discussed in section 8.5 of the RTC, EPA properly considered baseline emissions over the period 2001-2003 in our analysis of cost-effectiveness and anticipated visibility benefits of controls. Therefore, although we did not "consider existing controls" in the exact manner preferred by the commenter, we appropriately considered the existence of LNB/SOFA in Factor 3 of our BART analysis. In addition, the "better than BART" framework that we used to assess and finalize BART alternatives explicitly accounts for the existing LNB/SOFA.

Comment: *EPA should determine existing controls to be BART*

Several commenters noted that NGS spent millions of dollars on LNB/SOFA to reduce NO_x emissions to levels below the presumptive NO_X emission levels in the BART Guidelines.

One commenter stated that installing LNB/SOFA prior to a requirement to do so under the RHR or any other CAA requirement has resulted in greater total NO_X emission reductions in the first regional haze planning period than would be required by the most stringent EPA BART determination.

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[76] See Proposed Rule at 78 FR at 8280, 8284 and 8285 (February 5, 2013).
[77] *Id.* at 8284.

Response:

EPA recognizes that the early and voluntary installation of LNB/SOFA on one unit per year in 2009-2011 at NGS resulted in significant emission reductions from NGS. EPA agrees that the early installation of LNB/SOFA on one unit per year was voluntary and resulted in significant NO_X reductions in the first planning period for Regional Haze. However, based on our five-factor analysis, we have determined that SCR+LNB/SOFA is also cost-effective and would result in significant additional visibility improvement at a number of Class I areas. We therefore disagree that LNB/SOFA should be determined BART for NGS.

E. Comments on Factor 5 – Anticipated Visibility Benefits

Comment: *General Comments on Visibility*

Numerous commenters questioned the extent to which NGS impacts visibility at Class I areas or disputed EPA's analysis that installation of SCR at NGS would improve visibility. Many commenters asserted that the haze is produced from emissions from other sources.

Some commenters stated that the wind near and around the Grand Canyon blows predominantly west to east; thus, emissions from the NGS are pushed away from several Class I areas, not towards them.

Response:

We are aware of the studies cited by commenters purporting to show that controls on NGS would yield little visibility improvement, and we address them in section 7.0 of the RTC. We are also aware of work performed by the Western Regional Air Partnership (WRAP) suggesting that the relative contribution of nitrate from point sources to visibility impacts is relatively small.[78] The CAA and RHR require that BART be installed on certain old, large stationary sources as part of the overall approach to improving visibility at Class I areas. No control at an individual source will be sufficient to meet the goal of remedying existing impairment of visibility in mandatory class I Federal areas which result from manmade air pollution, as set out in section 169A of the CAA.

On the issue of wind direction, we note that the CALPUFF modeling uses three years of hourly meteorological input, which is based on meteorological modeling as well as observational data from stations throughout a large area. The input includes wind speed and direction, and would include the particular wind direction patterns noted by the commenter. The more sophisticated meteorological treatment in CALPUFF enables it to track the pollutant plume from NGS, including its twists and turns over multiple days. We consider this approach to

[78] See, e.*g.* WRAP PM Source Apportionment Technology (PSAT) results, available on WRAP Technical Support System, Source Apportionment web page at http://vista.cira.colostate.edu/TSS/Results/SA.aspx.

adequately account for variability in winds noted by the commenter.

Comment: *EPA underestimated visibility benefits of SCR*

One commenter stated that the visibility benefits of SCR are greater than those modeled by EPA because EPA underestimated SCR performance and because EPA overestimated the potential increase in sulfate emissions that may come with the addition of SCR controls by assuming an SO_2 to SO_3 conversion rate that is too high and using an erroneous value for the coal sulfur content. The commenter stated that its own modeling shows greater visibility improvement than demonstrated by EPA.

Response:

We disagree that EPA underestimated the visibility benefits of SCR and we note that the commenter's assertion that the visibility benefits are even better would not change our proposed determination under Factor 5 that the anticipated visibility benefits of SCR+LNB/SOFA are significant and support our proposed BART limit for NO_X, achievable with SCR+LNB/SOFA. Please see the RTC for a detailed discussion of EPA's responses to the commenter's specific assertions.

Comment: *EPA overestimated visibility impact of NGS by using background ammonia concentrations that were too high*

Several commenters argued that EPA's assumed ammonia background concentration of 1 part per billion (ppb), the

default value recommended by the Interagency Workgroup on Air Quality Modeling (IWAQM), is unrealistically high compared to measured values in the area, resulting in artificially high model projections of visibility impacts, particularly in the winter.[79] The commenter noted that the use of a constant value of 1.0 ppb for background ammonia concentration fails to account for known variations in monthly or seasonal ammonia concentration.

One commenter cited an analysis conducted on behalf of SRP by AECOM and Dr. Ivar Tombach. The commenter stated that the Tombach study compared modeled predictions of ammonium nitrates using both EPA's and AECOM's ammonia background concentrations to measured ammonia values, demonstrating that the EPA's assumptions over-predict actual measured values by a factor of 10 or more in some cases.

One commenter noted that when the IWAQM guidance was issued 14 years ago, CALPUFF did not have the capability of accommodating monthly ammonia background concentrations as it has since been updated to do. The commenter asserted that EPA's reliance on a constant value is an outdated approach.

Response:

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[79] *Interagency Workgroup On Air Quality Modeling (IWAQM) Phase 2 Summary Report And Recommendations For Modeling Long Range Transport Impacts* (EPA-454/R-98-019), EPA OAQPS, December 1998, http://www.epa.gov/scram001/7thconf/calpuff/phase2.pdf.

EPA has already considered and addressed the same arguments and data provided by commenters related to background ammonia concentrations in other rulemakings, including our final rule for Four Corners Power Plant.[80] As summarized briefly below, EPA disagrees that our use of the IWAQM default background ammonia concentration for arid areas of 1 ppb was inappropriate. Please see the RTC for the full response to this comment.

We have carefully reviewed the comments and concluded that, on balance, the evidence does not support using lower values for background ammonia concentrations, as argued by the commenters, in estimating the visibility impacts from NGS. Much of the existing measured data cited by the commenters is from other states and may not be representative for evaluating visibility impacts from NGS.[81] Further, existing data sometimes represent ammonia alone rather than total ammonia and ammonium. Because ammonium represents part of the pool of ammonia that could be available to interact with the SO_2 and NO_X emitted from stationary sources, it should be accounted for in the value for background ammonia concentrations used in the model. In several of the research papers cited by commenters, the amount of

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[80] See RTC and references therein.

[81] See e.g., SRP comments Appendix G, "Measurements of Ambient Background Ammonia on the Colorado Plateau and Visibility Modeling Implications", Prepared by Salt River Project, Contributors: Ivar Tombach and Robert Paine, September 2010. Referred to here as "SRP monitoring report", or Tombach & Paine 2010.

measured ammonium is comparable to and at times much greater than the amount of ammonia.[82] Measurements made by SRP closer to NGS over December 2009 to April 2010, which included ammonia and ammonium, showed that depending on time and location, typical ammonia concentrations ranged from 0.2 ppb to 0.8 ppb and the concentration of total ammonia and ammonium ranged from 0.6 to 1.2 ppb, which is considerably higher than the 0.2 ppb winter values used in SRP's modeling.[83] Although some of the ammonium may not be available to interact with pollutants from NGS, the sum of ammonia and ammonium provides an upper bound estimate of background ammonia concentrations, and represents a conservative estimate for modeling.

We further note that there are measurements of gaseous ammonia alone that show concentrations close to or greater than the concentration of 1 ppb, even in winter when ammonia concentrations are expected to be lowest. Winter measurements, representing 3-week averages, ranged from 1.1 ppb to 1.8 ppb at a monitor at the Farmington Airport in northwestern New Mexico.[84] Measurements from the winters of 2011-2013 from the AMoN network

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[82] See RTC and references therein.
[83] SRP monitoring report, or Tombach & Paine 2010, and SRP comments Appendix C. "Revised BART Analysis for the Navajo Generation Station Units 1-3" (January 2009) and Appendix I. "Visibility Modeling Using Upgraded CALPUFF Model" (February 2011).
[84] See RTC and references therein.

ranged from 1.1 to 1.3 ppb for Farmington, and 0.7 – 0.9 ppb for Chiricahua, in southeastern Arizona.[85]

We further note that there is significant variability in the concentrations of ammonia measured at different times and places. Even the SRP monitoring report (Tombach & Paine, 2010, cited above) describes a surprisingly high spatial variability in ammonia concentrations. Because of the variability and its unknown causes, the data collected for SRP did not lead to a clear picture of appropriate and representative background ammonia concentrations to use with CALPUFF.

Finally, we note that using the background ammonia concentrations recommended by commenters does not change our conclusion under Factor 5 because CALPUFF modeling of SCR shows substantial visibility benefits even using the alternative assumptions.[86] Using a background ammonia concentration of 1 ppb ammonia, EPA modeled the greatest benefit from SCR+LNB/SOFA to be 5.4 deciviews at Capitol Reef NP, and modeled a visibility benefit exceeding 1 to 2 deciviews at ten additional Class I areas. Using the ammonia concentration recommended by some commenters (ranging from 0.2 ppb in winter to 1.0 ppb in summer), EPA modeled the greatest benefit of SCR to be 2.3 dv, and modeled a visibility benefit exceeding 1 deciview at nine

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[85] *Id.*
[86] See RTC and references therein.

Class I areas, with three of these nine areas having a benefit of approximately two deciviews. Even assuming a lower ammonia concentration, the modeling demonstrates that the installation of SCR+LNB/SOFA at NGS would have a significant beneficial impact on visibility at a number of Class I areas. Our conclusion as to the appropriate BART Benchmark for NGS would not accordingly change.

Comment: *EPA should have used an updated version of CALPUFF*

Several commenters asserted that EPA erred in using CALPUFF version 5.8 in its modeling rather than the more recent CALPUFF version 6.42, released by TRC. One commenter argued that CALPUFF version 6.42 predicts lower visibility benefits than version 5.8.

Response:

We disagree with the commenters that a new CALPUFF version should be used for the BART determination. We relied on version 5.8 of CALPUFF because it is the version approved by EPA through a public notice and comment rulemaking, in accordance with the Guideline on Air Quality Models ("GAQM", 40 CFR part 51, Appendix W, section 6.2.1.e).[87] CALPUFF version 6.4 is not approved by EPA for regulatory purposes, and we do not agree that the changes made to this most recent version of CALPUFF

[87] See RTC and references therein.

were simple model updates to address bugs. A full evaluation of a new model such as CALPUFF version 6.4 is needed before it should be used for regulatory purposes as errors that are not immediately apparent can be introduced along with new model features.

Comment: *Closure of Mohave Project did not improve visibility and shows CALPUFF is unreliable*

One commenter discussed the findings of an analysis conducted after the closure of the Mohave Power Project (MPP) (a 1,580 MW coal-fired power plant) to evaluate whether the closure had resulted in improved visibility in Grand Canyon National Park.[88] The commenter indicated that although CALPUFF version 5.8 modeling predicted that the plant had a significant impact on visibility in the Grand Canyon, this study concluded that there was "virtually no evidence that the MPP closure improved visibility in the Grand Canyon." The commenter asserted that this study raises questions about the reliability of CALPUFF.

Response:

We disagree that the Terhorst & Berkman (T&B) study cited by the commenters raises questions about CALPUFF's reliability. The conclusion in the T&B study on the effect of MPP closure is actually similar to that from earlier analyses, which also

[88] See RTC and references therein.

predicted improvements less than the human perceptibility threshold of 1 dv. A response to the T&B study written by White *et al.*, stated that the T&B analysis is "misleadingly presented as discrediting previous studies and their interpretation by regulators. In reality the T&B analysis validates a consensus on MPP's visibility impact that was established years before its closure."[89]

White *et al.*, explicitly addressed the purported disagreement between the T&B methodology and results from CALPUFF, pointing out that the comparison was flawed in several ways. First, the ambient data relied upon by T&B are collected only every third day; this results in an insufficient number of days for a valid statistical comparison to the 98th percentile results reported from CALPUFF. Another important flaw is that when T&B translated visibility extinction into deciviews, they used recent polluted conditions as the background for comparison, whereas the BART Guidelines and the CALPUFF results use natural conditions as background.[90] When the T&B results are

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[89] W.H. White, R.J. Farber, W.C. Malm, M. Nuttall, M.L. Pitchford, B.A. Schichtel, *Comment on "Effect of coal-fired power generation on visibility in a nearby national park (Terhorst and Berkman, 2010)"*, Atmospheric Environment 55 (2012) 173-178. doi:10.1016/j.atmosenv.2012.02.076. Also available at: http://www.dri.edu/marc-pitchford?showall=&start=2.

[90] EPA considered and rejected comments on the proposed BART Guidelines that visibility impacts should be evaluated relative to current degraded visibility conditions and concluded that "[u]sing existing conditions as the baseline for single source visibility impact determinations would create the following paradox: the dirtier the existing air, the less likely it would be that any control is required." (70 FR 39104 at 39124, July 6, 2005).

computed using natural background, they are substantially larger, and generally in agreement with CALPUFF results.

F. Comments on BART Determination for NO_X

Comment: *BART limit for NGS should be 0.04 lb/MMBtu*

One commenter argued that the final BART emission limit should be more stringent and no higher than 0.04 lb/MMBtu. The comment noted that permitting authorities have required lower NO_X limits than 0.055 lb/MMBtu in recent BACT determinations based on SCR in combination with combustion controls.

Response:

EPA disagrees with the commenter that the BART Benchmark for NGS should be 0.04 lb/MMBtu. We note that the commenter has not provided any specific information to show that NGS could demonstrate continuous compliance with an emission limit of 0.04 lb/MMBtu. The commenter generally argued that SCR systems are typically designed to achieve 90 percent removal. EPA notes that although an SCR system can be designed to a specific target, the design target is typically not equivalent to the actual emission limit.[91] EPA proposed a limit of 0.055 lb/MMBtu achievable with SCR+LNB/SOFA, and using a baseline emission rate of 0.35

[91] EPA's Environmental Appeals Board has recognized that PSD emission limits must be set to allow fluctuations in operations, stating: "To account for these possibilities, a permitting authority must be allowed a certain degree of discretion to set the emissions limitation at a level that does not necessarily reflect the highest possible control efficiency, but will allow the permittee to achieve compliance consistently." In Re Masonite Corporation, 5 E.A.D. 551, 560-61 (1994).

lb/MMBtu, this represents a removal efficiency of 84 percent.[92] However, as noted elsewhere in the RTC, the limit of 0.055 lb/MMBtu, which accommodates startup, shutdown, and low-load operation, is based on a design target of 0.03 lb/MMBtu. This represents a design target removal efficiency of 91 percent for SCR+LNB/SOFA (from a baseline of 0.35 lb/MMBtu), or 88 percent for SCR alone (i.e., from 0.24 lb/MMBtu).

EPA disagrees with the commenter's assertion that emission limits associated with BART must meet BACT or the lowest emission rate ever achieved with that technology at any coal-fired power plant. 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 at 39166) and that "[t]o complete the BART process, you must establish enforceable emission limits that reflect the BART requirements . . ." (70 FR at 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

[92] See RTC and references therein.

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. For these reasons, EPA is not using the lower limit recommended by the commenter in setting the BART Benchmark.

Comment: *BART limit for NGS should be in the range of 0.07-0.08 lb/MMBtu*

Several commenters asserted that the NO_X emission limit EPA proposed for NGS is unachievable. One commenter noted that the averaging period for the proposed limit of 0.055 lb/MMBtu includes periods when the SCR is unable to operate such as startup, shutdown, and periods of load-cycling. The commenter made the following arguments: (1) the S&L analysis submitted by the commenter shows that the proposed emission limit is unachievable on a continuous basis; (2) the NO_X emissions achieved in other SCR retrofit situations do not justify the proposed emission limit.

Response:

EPA disagrees with the commenter that the limit used in setting the BART Benchmark for NGS should be higher than our

proposed limit of 0.055 lb/MMBtu, in the range of 0.07 to 0.08 lb/MMBtu.[93]

The S&L report generally argues that because the emission limit is established based on a 30-BOD average basis, the proposed emission limit of 0.055 lb/MMBtu is not consistently achievable at NGS. The S&L analysis is based on a design target of 0.03 lb/MMBtu and suggests an emission limit in the range of 0.07-0.08 lb/MMBtu would be required to accommodate periods of load-cycling operation, startups, and shutdowns. S&L is recommending a limit that is 2.3 to 2.7 times higher than the design target, or a compliance margin of 133 to 167 percent.

The S&L report discusses the temperature limitations associated with SCR and explains that at temperatures below a specific minimum operating temperature, a component of the SCR system (i.e., ammonia injection) must cease to prevent ammonium salt formation on the catalyst. S&L asserts that a minimum operating temperature of 580°F is typical for retrofit SCR control systems installed on coal-fired electric generating units with similar coal sulfur content and states that this temperature corresponds with a gross load of approximately 650 MW (650 gross MW, or MWg). S&L further assumes that SRP will

[93] The response included in this Final Rule is abbreviated and excludes the graphs and tables EPA generated to support our response. For additional detail, please see the RTC.

likely modify the units to increase flue gas temperatures at lower operating loads by installing one of several options for low load temperature control. In their analysis, S&L assumes the low load temperature control would be achieved with a water-side bypass (to allow water to bypass the economizer tube bundles during low-load operation). The S&L report states "[b]ased on a preliminary review of the available systems, a water-side bypass system should be capable of increasing the temperature of the bulk flue gas by approximately 25°F to 65°F during low-load operation. For this evaluation, a low-load temperature control system capable of achieving a temperature increase of 65°F during low-load operations was assumed for modeling purposes." S&L further estimates that this would correspond to a minimum gross load of 450 MWg for the SCR to operate, or operation at 55 percent capacity.

Using the assumption that the SCR would not operate at loads below 450 MWg, S&L used 2012 operations data at NGS to estimate emission rates at NGS assuming a design target of 0.03 lb/MMBtu with actual steady-state operations achieving 0.04 lb/MMBtu. S&L modeled eighteen different operating scenarios and identified seven scenarios, which included periods of low load cycling along with unit startup and shutdowns, that resulted in the maximum 30-BOD average for each unit and facility-wide, that exceeded 0.055 lb/MMBtu. The highest 30-BOD average S&L modeled

was 0.077 lb/MMBtu for Unit 2, achieved under 3 different operating scenarios involving low-load cycling.

SRP and S&L did not provide the underlying data used in the S&L analysis. Therefore, EPA evaluated the S&L report by reviewing emissions data from the EPA Air Markets Program Data (AMPD) for multiple years, as well as emissions data from other facilities that were constructed or retrofit with SCR. EPA sought to understand 2012 operations at NGS within the context of longer term operational trends at the facility, as well as understand the minimum operating load assumed by S&L for NGS within the context of minimum operating loads at other facilities with SCR.

EPA evaluated the reported hourly gross load operating data for Units 1-3 at NGS for the years 2001, 2003, 2010, 2011, 2012, and 2013.[94] Emission data from AMPD show that NGS, and in particular, Unit 2, spent a higher percentage of operating hours at gross loads below 450 MWg in 2012 compared to other years. The 2012 gross load profiles for Unit 2 (as well as Units 1 and 3) are characteristic of load-cycling units, with significant periods of time below the purported SCR minimum operating load of 450 MWg, particularly in the spring. Please see the RTC for more detail. In 2010, Unit 2 also operated for significant

[94] See RTC and references therein.

periods of time at loads below 450 MWg. However, these periods in 2010 occurred following the major outage on Unit 2 (following installation of LNB/SOFA on that unit). Although Units 1-3 at NGS did appear to operate as load-cycling units and operated below 450 MWg for significant periods of time in 2012, this type of operation does not appear to be characteristic of typical operation at NGS, based on our evaluation of previous years, as well as 2013.

Based on the gross load operating profiles for six years, EPA estimated the rolling 30-BOD averages for each BOD to determine whether the operating profiles (which included actual startup, shutdown, and load-cycling in each year) would result in 30-BOD averages that would exceed 0.055 lb/MMBtu. Based on our analysis, EPA projected the highest 30-BOD average to be 0.079 lb/MMBtu (Unit 2 in 2010). Using 2012 data, representative of load-cycling operation, EPA projected the highest 30-BOD average to also occur on Unit 2 (0.075 lb/MMBtu). Similarly, S&L projected the highest 30-BOD average in 2012 was from Unit 2, at 0.077 lb/MMBtu. Therefore, although the scenarios modeled by S&L and EPA were not identical, the highest 30-BOD averages projected by EPA and S&L, using similar starting assumptions, were comparable. Our analysis, of projected SCR performance, which included emission and operating profiles of actual startup and shutdown events, and load-cycling in various years, showed

that Unit 3 was not projected to exceed 0.055 lb/MMBtu in any of the evaluated years, and that there were several years within these six selected years that Units 1 and 2 would also not exceed 0.055 lb/MMBtu.

The analysis of projected 30-BOD average emission rates assumes that S&L's value of 450 MWg (or 55 percent capacity) for the minimum operating load to operate SCR at NGS is correct. EPA notes that 450 MWg was a value that S&L assumed based on preliminary analysis of available low load temperature control systems. SRP submitted a similar S&L analysis to EPA for Units 1 and 3 at Coronado Generating Station (CGS).[95] Units 1 and 2 at CGS are 430 MWg Riley-Turbo units that typically operate as load-cycling units. CGS burns low-sulfur coal from the Powder River Basin (PRB coal). With the application of low-load temperature controls on these units, S&L's analysis suggests that the minimum operation load for SCR on Units 1 and 2 at CGS would be 138 MWg (or 32 percent capacity). This is significantly lower than the 55 percent capacity S&L assumed for NGS. S&L stated that the coal sulfur content will affect the minimum operating load for SCR. NGS does not burn PRB coal; however, NGS does burn low-sulfur coal from the Kayenta Mine. AECOM, SRP's consultant for visibility modeling, reported the maximum sulfur

[95] See RTC and references therein.

content of the coal as 0.593 percent based on daily data for the 2001-2003 period. For comparison, various sources reference PRB coal as generally low-sulfur coal with a sulfur content of less than 1 percent, or a mean of 0.5 percent.[96] In contrast, high sulfur coal is typically above 3 percent.[97]

EPA evaluated emission data of eight well-performing units burning PRB coal and generated empirical estimates for minimum operating loads and capacity requirements for SCR operation at those facilities. Based on this analysis (see RTC for further detail), EPA estimated capacity requirements for SCR operation that ranged from 35 percent to 46 percent, with an average value of 40 percent. Using the average (40 percent) and the maximum (46 percent) capacity requirement to operate SCR, EPA projected that NGS would meet a limit of 0.055 lb/MMBtu (on a 30-BOD average) for all but 3 cases (i.e., Units 1 and 2 in 2012, and Unit 2 in 2010) under the 46 percent capacity requirement. Under the 40 percent capacity requirement to run SCR, Units 1 and 2 in 2012 would remain below 0.055 lb/MMBtu and for Unit 2 in 2012 the highest 30-BOD average was projected to be exactly 0.055 lb/MMBtu. Operation of Unit 2 in 2010 was not typical of normal operation. Please see RTC for more detail on this analysis.

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[96] See, for example, publication from the U.S. Geological Survey, figure PQ-4 and Table PQ-1, available at http://pubs.usgs.gov/pp/p1625a/Chapters/PQ.pdf.
[97] *Id.*

The S&L report concludes that even with a design target for SCR of 0.03 lb/MMBtu, a limit of 0.07-0.08 lb/MMBtu is required to accommodate periods of startup, shutdown, and load-cycling operation. EPA agrees that load-cycling operation appears to be an important factor; however, EPA concludes that the critical S&L assumption, that the units at NGS must operate at approximately 55 percent capacity in order for the SCR to operate, was not sufficiently supported and was acknowledged by S&L to be an assumption based on a preliminary review of available low-load temperature control systems. EPA also notes that in the S&L revised 2013 cost analysis, S&L included costs for hot water recirculation systems which "maintains SCR in operation at *all* plant operating loads" (emphasis added).[98]

In summary, EPA is finalizing a BART Benchmark based on an emission limit for NGS of 0.055 lb/MMBtu on a rolling 30-BOD basis. In determining the achievability of this limit, EPA has conducted an analysis that considers actual periods of startup, shutdown, and low-load cycling. Based on the understanding that S&L would design the SCR system at NGS to a design target of 0.03 lb/MMBtu, the BART limit of 0.055 lb/MMBtu represents an adequate compliance margin to accommodate periods of startup, shutdown, and load-cycling operation.

[98] See page 1-2 of the Sargent and Lundy report prepared for SRP, dated January 2, 2014, included as Appendix U to the SRP comment letter in the docket for this rulemaking.

Comment: *Presumptive Limit for NO_X*

Several commenters noted that with existing LNB/SOFA controls, NGS emits NO_X at rates below the presumptive limit of 0.28 lb/MMBtu established by the EPA in the BART Guidelines. A commenter stated that to properly justify departure from the presumptive BART limit, EPA must evaluate the impacts of the presumptive BART limit in its five-factor analysis.

Response:

EPA disagrees with the comment that installation of LNB/SOFA at NGS should satisfy BART simply because it meets the presumptive limit for NO_X of 0.28 lb/MMBtu in the BART Guidelines for tangential-fired boilers burning bituminous coal. Presumptive BART limits, and the corresponding technology upon which those limits are based, do not preclude states or EPA from setting limits that differ from those presumptions based on case-specific consideration of the relevant BART factors. The presumptive limits generally represent a *minimum* level of control for BART for various types of power plants, based on EPA's assessment of the typical costs of controls and likely visibility benefits.[99] EPA further disagrees with the assertion that we did not evaluate the impacts of the presumptive BART limit in our five-factor analysis. The presumptive BART limit of

[99] See 77 FR 14604, 14608-14610 (March 12, 2012) for a detailed discussion of the presumptive limits.

0.28 lb/MMBtu is based on the installation and operation of modern combustion controls. EPA evaluated LNB/SOFA (at a limit of 0.24 lb/MMBtu, which is each unit's existing permitted NO_X limit for operation with LNB/SOFA) in the five-factor analysis on which our proposed rule was based. Please see our RTC for a detailed discussion.

Comment: *Install SCR within 3.5 years*

One commenter stated that the CAA requirement for BART to be installed "as expeditiously as practicable" requires installation and full implementation of SCR on all three units at NGS within 3.5 years rather than five years. The commenter stated that EPA provided no site-specific factors at NGS that would require a longer-than-average installation time for SCR (particularly in light of the fact that it appears contractors in the region will not be overwhelmed).

Response:

EPA disagrees with the commenter that a 3.5-year compliance deadline for the installation of SCR would be practicable for NGS. EPA agrees that there are numerous sources of information, including EPA's response to comments on its BART determination for SJGS, to suggest that on average, the time required to design and construct an SCR system can range from 37 to 43 months. The commenter also cites EPA documents suggesting that it generally takes 21 months to design, install, and test one

SCR unit, and 35 months for SCR installation at power plants with multiple SCR units, and another publication that suggests that SCR can be installed in less than five years (i.e., document from The Brattle Group). Our RTC contains a detailed discussion of our conclusion that the Brattle Group estimate of 47 months (nearly 4 years) applies to one unit, not multiple units at one facility.[100]

In addition, although EPA cited one facility where the retrofit of seven units required 35 months, EPA also stated "ideally, longer than 35 months would allow for all the retrofits to occur over a period of several years so that facility owners can properly plan outages and suppliers can properly plan for resource availability."[101]

The commenter also states that "it appears contractors in the region will not be overwhelmed" to justify why installation time for SCR should not be longer than average.[102] We note that "installation time" is one part of compliance, and that EPA must also consider time for design, procurement, and permitting. We also note that the commenter did not provide any support for its statement that contractors in the region will not be

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[100] See May 2012 Brattle Group document, page 12 and page 17, in the docket for this rule.
[101] See EPA 2002 Multipollutant Strategies document, page 22, in the docket for this rule.
[102] See page 17 of the EarthJustice comment letter, in the docket for this rule.

overwhelmed. We note that several EGUs in the southwest have compliance dates for the installation of SCR around 2018.[103] Therefore, EPA anticipates that leading up to 2018, numerous coal-fired EGUs in the region will be retrofited with post-combustion controls.

In taking action to finalize a BART Benchmark, EPA is retaining the five year compliance period as proposed. Because BART compliance at NGS involves the design, procurement, and installation of SCR on three units and upcoming ownership changes at NGS as discussed in our proposed rule, EPA is determining that a five-year BART compliance timeframe at NGS is as expeditious as practicable. This is within the range cited by the commenters and the facility operator (i.e., average of 21 to 47 months per unit, or 35 months to 67 months for multiple units at one facility) and is consistent with the CAA which requires BART compliance as expeditiously as practicable but no later than five years following the effective date of the final rule.[104]

G. Comments on BART for PM

Comment: *Support/opposition for finding not to establish PM BART*

[103] See Final BART FIP for Four Corners Power Plant an compliance dates under the BART Alternative at 77 FR 51620 at 51648 (August 24, 2012) and Final Regional Haze FIP for Arizona (phase 1) at 77 FR 72512 at 72578 (December 5, 2012).
[104] See section 169A of the CAA (sections 169A(b)(2)(A) and (g)(4)).

Several commenters supported EPA's statement in the Proposed Rule that "[b]ecause emissions of PM are well controlled at NGS through federally enforceable limits, EPA is not proposing that it is "necessary or appropriate" under the TAR to determine BART for PM emissions at NGS."

Some commenters noted that implementation of the Mercury and Air Toxics Standards (MATS) in the near future will establish an additional federally enforceable limit for PM of 0.03 lb/MMBtu. The commenters added that the BART Guidelines provide that one can generally rely on MACT standards for purposes of BART.

In contrast, two commenters asserted that EPA was incorrect to determine that it need not evaluate BART for control of PM at NGS. The commenter asserts that the existing PM limit of 0.06 lb/MMBtu was not based on a BART analysis and does not reflect a well-controlled PM emission rate for a coal-fired EGU.

One commenter asserted that the electrostatic precipitators (ESPs) at NGS do not represent the best system of control for PM. The commenter believes that EPA's determination is inconsistent with recent BART and BACT determinations for coal-fired utility boilers that set emissions limits for PM of 0.015 lb/MMBtu or lower based on the use of fabric filter baghouses. The commenter concluded that EPA should revise its determination

and complete a BART analysis for PM that includes evaluation of fabric filter baghouses.

Response:

EPA agrees with the comment that it is not necessary or appropriate to require BART for PM emissions from NGS at this time. As we stated in our proposed rule: "Emissions of PM and SO_2 are controlled by hot-side electrostatic precipitators (HS-ESPs) and wet scrubbers, respectively."[105] Because NGS will be required to comply with the PM emissions limits in the MATS rule, EPA continues to find that it is not necessary or appropriate at this time to promulgate a BART emission limit for PM from NGS. EPA is not determining that the existing PM emission limit for NGS is BART. Instead, it is EPA's position that it is not necessary or appropriate under our discretionary authority under the TAR, promulgated at 40 CFR 49.11, to conduct a BART determination for PM emissions because they are currently well-controlled and will be further reduced by compliance with the 0.03 lb/MMBtu emission limit in the MATS rule.

One commenter asserted that EPA should require fabric filter baghouses as BART for PM. EPA cannot agree or disagree that baghouses would be required as BART for PM because, as described above, we have determined that it is not necessary or

[105] 78 FR at 8279 (February 5, 2013).

appropriate at this time to conduct a BART determination for PM at NGS.

H. Comments on BART for SO_2

Comment: *Support for finding that Reasonable Progress is met for SO_2*

Several commenters noted that EPA recognized in the Proposed Rule that the emission limits EPA established for SO_2 in 1991 were determined to achieve greater reasonable progress than would BART. Several commenters agreed that no additional emission limits or controls should be required as a result of BART for SO_2 emissions. One commenter noted that the existing SO_2 limit at NGS is more stringent than the BART Guidelines' presumptive SO_2 limit.

Response:

EPA agrees with these comments. As EPA stated in our proposal in February 2013, the SO_2 emissions limit established in EPA's 1991 SO_2 FIP was determined to be better than BART under the visibility regulations addressing reasonably attributable visibility impairment. Specifically, EPA determined that promulgating a SO_2 emission limit of 0.10 lb/MMBtu on an annual average basis would result in greater cumulative SO_2 emissions reductions and visibility improvement over time than would the SO_2 BART limit that EPA had proposed for NGS. NGS installed a wet

flue gas desulfurization system to reduce SO_2 emissions on each of its boilers in 1997-1999.[106].

I. Comments on EPA's BART Alternative

Comment: *Support for EPA's authority for "better than BART"*

Several commenters discussed and supported EPA's policy and legal rationale for its discretion to approve "better than BART" alternatives and to provide an extended period for implementation of such an alternative at NGS. One commenter also opined that the 5-year compliance period for BART that is defined in section 169A(g)(4) of the CAA applies by its terms only to: (1) SIPs, by providing that the BART compliance date shall be no later than "*five years after the date of approval of a plan revision under this section*"; and (2) FIPs promulgated under CAA section 110(c), by providing that the BART compliance date under any such FIP shall be no later than "*five years after . . . the date of promulgation of such a plan revision in the case of action by the Administrator under section 110(c).*" The commenter concluded that because the FIP for NGS is not promulgated under section 110(c) of the CAA, the 5-year timeframe for BART does not apply to NGS.

Response:

[106] EPA initially codified the requirements for NGS to meet an SO_2 emission limit in an existing FIP for the State of Arizona. See 40 CFR 52.145. After promulgation of the TAR, EPA moved the NGS SO_2 FIP to 40 CFR 49.5513

EPA agrees with the comment in support of our action to find that the TWG Alternative meets the framework established in our Proposed Rule. EPA agrees that we have the legal authority under the CAA and RHR to implement a "better than BART" alternative.[107] EPA agrees that we have the authority under the CAA and the TAR to extend the compliance date that will apply to the "better than BART" alternative pursuant to CAA Section 301(d)(4) and 40 CFR 49.11(a), as discussed in detail below.

We also note that regardless of whether the commenter is correct that the CAA does not require compliance with the BART requirements within five years for sources subject to a FIP in Indian country, we consider five years to be a reasonable timeframe for the installation and operation of SCR at NGS. To the extent the commenter is correct that the timing provisions of section 169A(g)(4) are outside the scope of EPA's action to implement a FIP in Indian country under section 301 and the TAR, this further supports EPA's determination that extending the compliance deadline beyond 2018 for a BART alternative at NGS is appropriate.

EPA also agrees with the comment that approving the TWG Alternative for NGS will not compromise the ultimate goal of the RHR based on progress toward eliminating human-caused visibility

[107] See 40 CFR 51.308(e)(2); CAWCD v. EPA, 990 F.2d 1531 (9th Cir. 1993); CEED v. EPA, 398 F.3d 653 (D.C. Cir. 2005); UARG v. EPA, 471 F.3d 1333 (D.C. Cir. 2006).

impairment in Class I areas by 2064.[108] The TWG Agreement provides that NGS will cease conventional coal-fired generation in 2044. Because the TWG Agreement included this provision, we are including a provision in the Final Rule that requires the operator of NGS to cease conventional coal-fired generation by December 22, 2044.[109] The TWG Agreement further states that the Navajo Nation may elect to operate NGS after December 22, 2044 consistent with EPA approval. EPA is not including this provision in the regulatory requirements at §49.5513(j)(3)(iii); however, EPA expects that NGS would be substantially modified if the Navajo Nation were to elect to continue operation of the facility after NGS ceases conventional coal-fired generation in 2044, and that NGS would then need to meet all applicable regulatory and permitting requirements in existence at that time. In addition, any power generating units that may be built to replace NGS would also be subject to environmental review and air permitting requirements.

Comment: *General opposition to EPA's "better than BART" determinations*

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[108] See CAA section 169A(1)(a).

[109] See 79 FR 12944, 12950 (March 7, 2014). "While it is true that the Regional Haze Rule and BART Guidelines do not contemplate unit retirements as a potential BART option, neither rule prohibits states or EPA from considering a shutdown as part of a BART determination if the strategy is proposed by the owner of a BART-eligible source."

One commenter stated that EPA may approve an alternative to BART only under certain limited circumstances, with the fundamental legal requirement being a demonstration that the alternative will "achieve greater reasonable progress toward natural visibility conditions" as supported by the clear weight of evidence. The commenter indicated that there are two ways EPA can make such a demonstration: (1) showing that the distribution of emissions is substantially similar under BART and the alternative measure, and that the alternative measure provides greater emissions reductions; or (2) performing modeling to demonstrate that visibility does not decline in any affected Class I area and there is an overall improvement in visibility. The commenter stated that the EPA may not use the first prong of the above test because the TWG Alternative distributes emissions over time differently than BART. Because the TWG Alternative also results in reductions of SO_2 and PM, the commenter states that the pollutants reduced are also distributed differently. The commenter added that a BART alternative must ensure that all necessary emission reductions occur in the first planning period, which ends in 2018, and that any emission reductions resulting from the alternative measure must be surplus to reductions required under other provisions of the CAA.

Response:

EPA disagrees with the commenter's statement that the TWG Alternative fails to demonstrate that it will "achieve greater reasonable progress toward natural visibility conditions." As explained below, we disagree with the various comments underlying the argument that our framework for analyzing the TWG Alternative is flawed.

EPA appropriately focused on a comparison of the emissions reductions from BART and the TWG Alternative, rather than using visibility modeling to compare the two approaches. As the commenter noted, EPA's regulations provide a specific two-pronged test that may be used to demonstrate that a BART alternative achieves greater reasonable progress. In this rulemaking, EPA has applied the first prong of that test to demonstrate that the TWG Alternative provides for greater reasonable progress. The first prong of the test, set out in 40 CFR 51.308(e), states that if the distribution of emissions is not substantially different under BART and the alternative, and "the alternative measure results in greater emission reductions," the alternative may be deemed to achieve greater reasonable progress. Because both BART and the TWG Alternative apply to the same source the geographic distribution of emissions is similar.[110] EPA therefore applied this test to

[110] In providing states with the flexibility to adopt alternative measures in lieu of BART, EPA assumed that under the BART alternative provisions, states

determine whether the TWG Alternative provided for greater reasonable progress, taking into account total NO_X emissions over the 2009 to 2044 period from both BART and the TWG Alternative.

The commenter argues, however, that the emissions must be temporally similar in order for this test to apply. When EPA added §51.308(e)(3) to the regional haze regulations in 2005, however, we made clear that EPA intended this test to apply where the *geographic* distribution of emissions between the BART and an alternative were similar.[111] This approach is reasonable, as visibility modeling is not needed to demonstrate that a greater reduction in emissions from a source will result in greater visibility benefits than a lesser reduction in emissions from the same source. Accordingly, to the extent that the regulations are not clear that the test applies where the *geographic* distribution of emissions is similar, our interpretation is a reasonable one. In concluding that this test is the appropriate one to apply, EPA is not ignoring the commenter's argument that the TWG Alternative distributes emissions over time very differently than would BART, and that

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would most likely adopt a trading program rather source specific BART controls. See, e.g., 40 CFR 308(e)(a regional haze SIP must contain BART limits unless the State demonstrates that "an emissions trading program or other alternative will achieve greater reasonable progress…"). The geographic distribution of emissions under a trading program is unlikely to be similar to that under source-specific BART. In contrast, the geographic distribution of emissions under a "better than BART" alternative that applies only to the BART source in question would be similar.

[111] 70 FR at 39136.

in the near term, visibility would improve more rapidly if EPA were to require the installation of BART controls sooner. It is not necessary to model the visibility impacts of the TWG Alternative and BART, however, to reach that conclusion.[112]

EPA is accordingly determining that the provisions for retiring capacity and installing SCR under the TWG Alternative achieve a similar geographic distribution of emissions and that the appropriate test to apply is whether the alternative provides for greater emissions reductions than BART. In applying that test, EPA considers it reasonable to consider the cumulative emissions under BART and the BART alternative, rather than to simply compare annual emissions in some future year under the two scenarios. This approach provides a reasonable

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[112] Although the commenter argues that visibility modeling is required to demonstrate that the TWG Alternative makes greater reasonable progress, the commenter notes only in passing the second test set out in the regulations at 40 CFR 51.308(e)(3) governing situations where BART and a BART alternative will result in dissimilar distributions of emissions. In such situations, greater reasonable progress may be shown if visibility modeling shows that (i) visibility does not decline in any Class I area, and (ii) there is an overall improvement in visibility by comparing the average differences between BART and the alternative over all affected Class I areas. Even absent visibility modeling, it seems clear that the TWG Alternative, which requires NGS to reduce emissions from current levels, will not cause visibility to decline in any Class I area. Visibility modeling done by EPA in response to comments regarding the limited benefits of SO_2 and PM reductions suggests that the TWG Alternative also passes the second half of this test. As explained in the RTC, EPA modeled the visibility impacts of TWG Alternatives A1, A2, and A3 (the operating scenarios that include reductions in alternative pollutants). See RTC for further discussion. This modeling shows that the cumulative visibility benefits of the TWG Alternative outweigh those associated with BART. Although we have not modeled the visibility impacts of Alternative B, compliance with the 2009-2044 and 2009-2029 NO_x Caps will require NGS to achieve emission reductions similar to those required under Alternative A1 because the 2009-2029 NO_x Cap is based on emissions that would be expected to occur under Alternative A1 (closure of one unit in 2019) and the 2009-2044 NO_x Cap applies to all alternatives under the TWG Alternative.

mechanism to give credit to NGS for its early reduction in NO_X emissions from the installation of combustion controls.

The commenter also objects to EPA's decision to approve a BART alternative that will not be fully implemented by 2018. EPA agrees that the regional haze rule requires BART alternatives to be fully implemented by states by 2018, the end of the first planning period for states that were required to submit regional haze plans.[113] As noted in the Proposed Rule, given the deadline for the submittal of regional haze SIPs, EPA's regulations accordingly built in an additional five years beyond the BART compliance date for the implementation of BART alternatives.[114]

We note that in this action, although the TWG Alternative will not be fully implemented until 2044, NO_x emissions from NGS have already declined from historical levels, and significant additional declines in emissions are expected in 2019 and again in 2030. Nonetheless, we acknowledge that we are looking forward to 2044 for full implementation of the TWG alternative, well beyond the 2018 date in the RHR. We explained the basis for our proposed decision to set the compliance period for the TWG Alternative in the Supplemental Proposal. EPA's reasoning on this issue is grounded in CAA section 301 and the TAR. The TAR generally exempted Tribes from the CAA submittal deadlines that

[113] 40 CFR 51.308(e)(2)(iii).
[114] 78 FR at 8288.

applied to States. EPA interprets the requirement in 40 CFR 51.308(e)(2)(iii) to constitute a reasonably severable RHR submittal deadline that applies to States but not to Tribes. If the alternative measure is promulgated by the State, it must "submit[s] an implementation plan containing the following plan elements and include[s] documentation for all required analyses: . . . (iii) A requirement that all necessary emission reductions take place during the period of the first long-term strategy for regional haze." Therefore, it is a required "plan element" for a State-only required implementation plan submittal. See 40 CFR 51.308(b)(3)(requirements for States to submit long-term strategies). Because it is not mandatory for the Tribe to submit a long-term strategy, there is no mandatory requirement for the Tribe to ensure that all emissions reductions from a better than BART alternative occur within some deadline.

This result is equitable as well as reasonable. States were required to submit SIPs in 2007, allowing 11 years for a "better than BART" alternative to be achieved in 2018. Because this is a FIP for a source in Indian country, and we are only now implementing the requirement in 2014, it is equitable to extend the compliance time as well. Please see the RTC for a more detailed discussion.

In summary, EPA is determining that the TWG Alternative is "better than BART" based on achieving greater NO_X emissions

reductions over a similar geographic distribution, within the date of the goal specified in the RHR of achieving natural conditions in 2064. Given the requirement to cease conventional coal-fired generation at NGS in 2044, and with cumulative emissions over 2009 to 2044 being less than the BART Benchmark, the TWG Alternative satisfies the requirements of the RHR with respect to NO_X BART as applied to Navajo Nation based on the TAR.

Comment: *EPA overestimated the BART Benchmark*

Aside from its assertions that an approach using a BART Benchmark based on total emissions is not lawful under the CAA, one commenter (an organization representing itself and several other non-governmental organizations) stated that EPA's assumptions in calculating a numerical value for the BART Benchmark included errors and improper credits. Specifically, the commenter asserted that: (1) EPA's credit for the early installation of LNB/SOFA runs counter to the Regional Haze Rule, EPA's longstanding policies, and EPA's specific statements regarding the haze determination for NGS, (2) EPA's proposal to delay BART due to the LNB/SOFA credit creates a dangerous precedent that threatens to significantly undermine the regional haze program, (3) EPA made a number of errors in its calculations that all have the effect of artificially inflating the BART Benchmark. The specific errors purported by the commenter are outlined in more detail in the RTC. The commenter

asserts that in total, assuming a final rule by July 1, 2014, their recommended revisions to the BART Benchmark would reduce the estimated emissions under BART during EPA's chosen timeframe (2009-2044) by nearly 100,000 tons, a reduction of approximately 26 percent. The commenter asserted that if EPA persists in using the emission cap framework, EPA must correct the NO_X cap to prevent alternatives from being compared to an artificially inflated estimate of total NO_X emissions.

Response:

EPA disagrees with the assertion that we are delaying BART. As stated elsewhere in the RTC, as well as in our Proposed Rule and Supplemental Proposal, EPA did not propose to "delay BART." EPA proposed to provide additional flexibility in the compliance timeframe for alternatives to BART.[115]

The commenter alleges that "EPA's claimed reliance on "early" LNB/SOFA as an excuse to avoid or delay what is legally required is misplaced and without foundation in the facts or law."[116] The commenter cites three sources to support its assertion that the LNB/SOFA credit runs counter to the RHR and EPA's long-standing policies: (1) page 18 of a report written by Victoria Stamper (Stamper Report), which was commissioned by the

[115] See 78 FR at 8288, column 1, describing our proposed BART determination. See also 78 FR at 8289, section titled "Legal Rationale for Extending Compliance Schedule for Alternative Measures for NGS."
[116] See page 22 of the EarthJustice comment letter dated January 3, 2014 (document 0367 in the docket for this rule).

commenter and submitted as part of its comments,[117] (2) page 35728 of the July 1, 1999 Regional Haze Rule, and (3) section IV.D.4.d of the BART Guidelines.[118] EPA disagrees with these assertions.

First, the commenter's use of quotation marks around the word "early" implies that the LNB/SOFA modifications were not, as a factual matter, installed early. However, EPA notes that in 2008, when the operator of NGS began discussions with EPA regarding the permitting requirements associated with the significant increase in carbon monoxide (CO) emissions that would result from the installation of LNB/SOFA, EPA had already begun our process for evaluating BART for NGS, but had not yet proposed a BART determination or put forth our ANPR. Therefore, no requirement existed that mandated the installation of LNB/SOFA at NGS. In addition, the operator of NGS was aware that a BART determination, that would likely involve but may not be limited to LNB/SOFA, was forthcoming. As noted in our Proposed Rule, the operator of NGS could have waited until the compliance date for BART to initiate any reductions in NO_X emissions; however, the operator elected in 2008 to seek the necessary permit to install LNB/SOFA on one unit per year over 2009-

[117] See document number 0372 in the docket for this rule.
[118] *Id.* page 21.

2011.[119] Thus, because the LNB/SOFA modifications were made in 2009-2011, NO_X emissions from NGS declined from a high of over 35,000 tons in 2002 to less than 20,000 tons after 2011.[120] Although some of the decline in total NO_X emissions can be attributed to a decrease in capacity utilization (i.e., decline in heat input of approximately 13 percent when comparing 2002 to 2013), the dominant contributor to the decline in NO_X emissions from NGS was from the installation of LNB/SOFA over 2009-2011. EPA considers these emission reductions to be real reductions that were not required (i.e., voluntary and surplus) and were achieved in advance of any actual requirement to reduce emissions (i.e., early).

In addition, each of the three citations provided by the commenter does not support its assertions that our proposal to credit NGS for the early installation of LNB/SOFA runs counter to the Regional Haze Rule or EPA's long-standing policies. These three citations merely address the appropriate baseline period to use in the five-factor BART analysis. Page 18 of the Stamper Report supports our use of 2001-2003 as the baseline period for our BART determination for NGS and cites to 64 FR at 35728 of the July 1, 1999 Regional Haze Rule that discusses EPA's

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[119] See Proposed Rule at 78 FR at 8289 (February 5, 2013).
[120] See RTC and references therein. In 2011, NGS emitted 19,900 tons of NO_X, in 2012, NGS emitted nearly 16,500 tons of NO_X and in 2013, nearly 17,500 tons of NO_X.

determination that the most appropriate baseline period would be over the 2001 to 2004 timeframe. The baseline period is used for evaluating the costs and visibility benefits of controls. The Stamper Report also cites Section IV.D.4.d of the BART Guidelines at 40 CFR Part 51 Appendix Y, that states baseline emissions should generally represent a realistic depiction of anticipated emissions for the source based on actual emissions from a baseline period.

The commenter also cited the discussion in our Proposed Rule under Factor 3, where we described, in 2008, how the early installation of LNB/SOFA would not prejudice the implementation of more effective controls for BART. As stated previously, we did not use the LNB/SOFA credit to justify a less stringent determination of BART for NGS. The commenter characterizes the credit as a shift in course from the agreements and understandings established in 2008 during the PSD permit process for the installation of LNB/SOFA. EPA disagrees. As stated in our Proposed Rule, citing the Ambient Air Quality Impact Report from the 2008 Proposed PSD Permit, EPA stated that the early installation of LNB/SOFA systems would not affect the baselines for cost or visibility improvements, and therefore will not influence EPA's determination of the NO_X reductions required for

BART.[121] EPA's BART analysis for NGS was consistent with this statement. As previously noted, EPA used the 2001-2003 period as the baseline for determining cost-effectiveness and visibility benefits of controls, and determined, based on our analysis of all five factors, that SCR+LNB/SOFA is an appropriate BART Benchmark for NGS.

The commenter relies on EPA's statements about the appropriate baseline period to support an assertion that in a BART analysis, EPA should not give consideration or credit for controls installed after the baseline period. As stated in section 5.0 of the RTC (section 5.0), although we appropriately acknowledged the installation of LNB/SOFA after the baseline period at NGS under Factor 3 (existing controls at the facility), our analysis of cost-effectiveness and anticipated visibility benefits appropriately compared SCR+LNB/SOFA against the 2001-2003 baseline period.[122]

EPA's proposed credit for early installation of LNB/SOFA was not associated with our five-factor analysis or BART determination for NGS. Rather, EPA discussed the LNB/SOFA credit in our framework for evaluating alternatives to BART.

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[121] See 78 FR at 8284 (February 5, 2013).

[122] We note that in *State of North Dakota* v. *EPA,* the U.S. Court of Appeals for the Eighth Circuit vacated and remanded EPA's promulgation of a FIP for Coal Creek Station because EPA did not consider the existing pollution control technologies in use at Coal Creek Station that were voluntarily installed after the baseline period. This document is included in the docket for this rule.

Specifically, in discussing our framework for BART Alternatives, EPA calculated the cumulative NO_X reductions achieved early because the operator of NGS elected to install LNB/SOFA on one unit per year over 2009-2011, instead of waiting for the compliance period for BART. In our Proposed Rule and Supplemental Proposal we used this value, the LNB/SOFA credit, when comparing BART Alternatives to BART. As discussed elsewhere in the RTC, EPA's proposal to allow BART Alternatives to take credit for the early installation of LNB/SOFA at NGS is a reasonable use of our discretion under the TAR.[123]

EPA disagrees with the assertion that this credit creates a dangerous precedent that threatens to significantly undermine the regional haze program. EPA notes that part of our rationale for the better than BART framework for NGS (including the credit for the early installation of LNB/SOFA and the adjusted compliance timeframe for BART Alternatives) was the potential impacts to numerous tribes that rely on NGS and/or CAP, as well as EPA's regulations specifying that SIP submittal deadlines that apply to states do not apply to Tribes (or to EPA when implementing FIPs in Indian country). Further, EPA notes that the relationship between NGS and CAP is unique, the only other BART-eligible source in Indian country is the Four Corners Power

[123] See 78 FR at 62511 (October 22, 2013).

Plant, and EPA has already completed the BART determination and FIP for this facility.[124]

EPA also disagrees with the assertion that we overestimated the BART Benchmark and NO_X Cap. The commenter argues that SCR can meet a lower emission limit than proposed by EPA and that EPA should have set a compliance date within 3.5 years. As discussed in Section 8.1 of the RTC, EPA disagrees that the BART Benchmark should be based on an emission limit of 0.040 lb/MMBtu and that compliance should be required in 3.5 years. EPA is finalizing a BART Benchmark based on our determination requiring NGS to meet a limit of 0.055 lb/MMBtu within five years of the effective date of the Final Rule. Therefore, EPA is not revising the BART Benchmark or NO_X Cap to assume a limit of 0.040 lb/MMBtu or a shorter compliance time for BART.

In addition, the commenter recommends that EPA use average heat input over the baseline period (i.e., over 2001-2003) rather than the average over the pre-LNB/SOFA time period (i.e., average over 2001-2008) to calculate future emissions. The commenter notes that our calculations for cost-effectiveness use baseline heat input over 2001-2003 to calculate pre- and post-control emissions (approximately 5,264 tons per year). The commenter asserts that this inconsistency is arbitrary. The

[124] See 77 FR 51620 (August 24, 2012).

commenter correctly notes that EPA used the average heat input over 2001-2008 (the pre-LNB/SOFA time period) to estimate emissions over 2009-2019 that would have occurred if the operator of NGS had not installed LNB/SOFA early, and emissions over 2019 to 2044 under BART (5,345 tons per year). The average heat input over the baseline period of 2001-2003 was 191,505,266 MMBtu, while the average heat input over 2001-2008 was 194,373,910 MMBtu. This is a difference of about 1.5 percent. EPA agrees that use of the same 2001-2003 baseline heat input value for estimating pre- and post-control emission rates is appropriate and consistent with the RHR and BART Guidelines, particularly in light of the goal of understanding the effect of a given control technology on emissions (i.e., assume identical values for baseline and future heat input to isolate the impact of control technologies). However, this approach does not mean that an average from the three-year baseline period (2001-2003) is most appropriate for estimating future emissions in determining the BART Benchmark. EPA notes that the use of average heat input for 2001-2008 includes the baseline period recommended by the commenters and provides a larger data set, and therefore a more robust average value for estimating future emissions. EPA considers the use of an average value based on three years to be less robust than an average value based on eight years of data for representing potential future operation;

therefore, EPA is retaining our use of the average heat input over 2001-2008 for estimating emissions over 2009-2044. EPA further notes that emission caps in permit requirements are typically established based on the facility's potential to emit (PTE) and would thus be calculated using maximum heat input values. The highest observed annual heat input value was 199,398,687 MMBtu and, if used in the NO_X cap, would result in a significantly higher BART Benchmark.

The commenter also argues that in calculating the NO_X cap, EPA should use a value that reflects an annual average for post-control emission rates rather than a rate based on a 30-day average limit of 0.055 lb/MMBtu. The commenter reviewed daily data from 2000 to 2013 and calculated the ratio of the maximum 30-day average rate to the annual rate for each year and determined an average ratio of 1.135. Based on this ratio, the commenter recommended that the BART emission limit of 0.055 lb/MMBtu (on a rolling average of 30 boiler operating days) be reduced by a factor of 1.135 as an estimate of what the annual average post-control emission rate would be at NGS (i.e., 0.048 lb/MMBtu). EPA agrees that generally, emission rates averaged over an annual basis are lower than emission rates averaged over a 30-day basis. However, EPA did not propose setting a BART limit for NGS on an annual average basis and EPA did not receive any comments suggesting that we do so. Without an enforceable

annual limit, EPA considers it inappropriate to assume a lower emission rate in our calculation of the NO_X Cap. We note that the BART Guidelines require that BART limits for EGUs be set on a rolling average of 30 boiler operating days. Therefore, although the BART Guidelines would not preclude establishing multiple emission limits over different averaging periods, the BART Guidelines do not require it.

Separately, the commenter also asserts that EPA overestimated the 2009-2044 NO_X Cap. The commenter represents EPA's NO_X Cap as the scenario it calls "CAP-1" with a value of 494,899 tons. This value is consistent with the 2009-2044 NO_x Cap EPA proposed in our Supplemental Proposal.[125] The commenter asserts that this value is overestimated because (1) actual heat input data should be used to calculate the NO_X Cap; and (2) the LNB/SOFA could be installed in two years.[126] EPA disagrees with these assertions.

The commenter argues that for the period of 2009-2013, actual heat input data should be used to calculate the NO_X Cap instead of the average heat input value over 2001-2008. EPA acknowledges that actual heat input data is available for the 2009-2013 period; however, EPA considers using the average value

[125] See Table 3 of our Supplemental Proposal at 78 FR at 62516 (October 22, 2013).
[126] See Table 3 of the report written by Nathan Miller and Raijit Sahu (Miller/Sahu Report) commissioned by the commenter and submitted with its comments. See document number 0370 in the docket for this rule.

to be appropriate, recognizing that years of lower than average capacity utilization will be balanced with years of higher than average capacity utilization at NGS.

The commenter also asserts that LNB/SOFA could have been required in two years, on a separate compliance timeframe than installation of SCR and that this should have been incorporated in our calculation of the NO_X Cap. EPA is not aware of any BART determination that required combustion controls on a different schedule than post-combustion controls. Although the commenter correctly notes that LNB/SOFA was installed in three years (on one unit per year over 2009-2011), EPA notes that the operator began the permitting process in 2008 and installed the LNB/SOFA during periods of major outage for each unit, which occurs at NGS every six years for each unit.[127] EPA expects that it would not have been practicable to require installation of LNB/SOFA within two years following the final rule because, in order to accommodate one year for permitting, it would have required major outages on all three units in the same year. Therefore, EPA does not consider it practicable to assume the LNB/SOFA would or could have been installed on a separate track from the SCR.

[127] See tab titled "Outage Cycle" in the document titled "EPA Analysis of BART Alternatives" in document number 0004 in the docket for this rule.

Although the commenter makes assertions related to purported overestimations of the BART Benchmark and the 2009-2044 NO_X Cap separately, the commenter combines all of the assertions together to argue that the 2009-2044 NO_X Cap should be 373,029 tons (121,870 tons, or 25 percent, lower than EPA's proposed 2009-2044 NO_X Cap of 494,899 tons). As outlined above, EPA disagrees than any of the purported corrections suggested by the commenter are necessary or appropriate for projecting annual emissions to calculate the 2009-2044 NO_X Cap.

Comment: *EPA double-counted the benefits of LNB/SOFA*

One commenter asserted that EPA double-counted the benefits of the early installation of LNB/SOFA, stating that EPA calculated cumulative emissions for the BART alternatives including the benefits of early reductions, then subsequently applied a LNB/SOFA credit again to BART alternatives.

Response:

EPA disagrees with the assertion that we double-counted emission reductions associated with the early installation of LNB/SOFA.

In our February 5, 2013 proposed rule, EPA calculated the value of the LNB/SOFA credit based on the difference between total emissions under the BART scenario where LNB/SOFA is installed concurrently with SCR and the actual scenario when LNB/SOFA was installed early. The value of this credit was then

applied to total emissions over 2009-2044 under Alternative 1.[128] Although our calculation of emissions under Alternative 1 did account for actual emissions with early installation of LNB/SOFA, and thus applying the LNB/SOFA credit to the BART Alternative may appear to be double counting, it is not double-counting because the BART Alternatives were compared against a BART Benchmark that also accounted for actual emissions with early installation of LNB/SOFA. Thus, both the BART Benchmark and Alternative 1 were calculated the same way (actual emissions accounting for early LNB/SOFA installation), and the LNB/SOFA credit was only applied to Alternative 1. An example of double-counting would have been if EPA had applied the LNB/SOFA credit to cumulative emissions over 2009-2044 under Alternative 1 and then compared that value to total emissions over the same period under BART assuming LNB/SOFA and SCR were installed concurrently.

In our October 22, 2013 Supplemental Proposal, EPA approached the calculation from a different but equivalent perspective. The new calculation approach was used because it was more intuitive to apply and understand in the context of an enforceable cap on NO_X emissions. In the Supplemental Proposal, the BART Benchmark was established as the total emissions over

[128] See document titled "EPA Analysis of BART Alternative.xlsx" in document 0004 in the docket for the rule.

2009-2044 that would have occurred if LNB/SOFA and SCR were installed concurrently, five years following the effective date of the final rule. Total emissions under BART Alternatives were then calculated using actual emissions beginning in 2009 (i.e., accounting for the early installation of LNB/SOFA) and projections for future emissions. Thus, in the methodology used in the Supplemental Proposal, the LNB/SOFA credit was applied to the BART Benchmark and NO_X Cap, rather than to the TWG Alternative. This method is equivalent to the one used in the Proposed Rule but does not give the appearance of double-counting. In our Supplemental Proposal and supporting documents, EPA included calculations to show that these two methods are equivalent.[129] The two methods are equivalent because what matters in the "better than BART" context is the difference between total emissions under BART and total emissions under the BART Alternative. Whether the LNB/SOFA credit is applied to BART or BART Alternatives will affect the absolute value of a total (e.g., using the numbers in Table 2 of the Supplemental Proposal, the LNB/SOFA credit represents a difference of 377,008 tons or 480,489 tons), but it does not affect the difference between BART and BART Alternatives. The method used in the Supplemental Proposal is more intuitive because BART and the

[129] See Table 2 of the Supplemental Proposal (78 FR at 62515, October 22, 2013) and document number 0191 titled "Supplemental Better than BART Alterntives.xlsx" in the docket for this rule.

BART Benchmark reflect total emissions over 2009-2044 that would have occurred if LNB/SOFA were installed concurrently with SCR, and the BART Alternatives reflect actual emissions without further credit or modification. Because no credits or modifications are made to actual emissions under the BART Alternatives, this method is the more logical accounting methodology for determining compliance with the 2009-2044 NO_X Cap.

Comment: *BART Alternatives would interfere with reasonable progress goals in other states*

One commenter stated delaying the compliance date for BART will allow NGS to continue emitting pollutants in excess of the levels modeled by the WRAP and will interfere with the ability of Arizona, Utah, and Colorado to meet their reasonable progress goals for 2018.

Response:

The issue raised by the commenter is outside the scope of our rulemaking addressing the NO_X BART requirements for NGS. Although 40 CFR 51.308(d)(3) requires states to submit long-term strategies that are sufficient to ensure that the state has included all measures needed to achieve its share of emission reductions agreed to through the regional planning process, the Navajo Nation has not yet submitted a long-term regional haze strategy. In addition, EPA has not yet found it necessary or

appropriate to address these requirements through a FIP. If EPA determines it is necessary or appropriate to do so, we will take appropriate action.

Meanwhile, we note that for NGS, the WRAP assumed that NO_X emissions in 2018 would equal 10,611 tons per year. NO_X emissions under the TWG Alternative, in turn, will range from approximately 13,000 to 15,000 tons per year following the closure of one unit (or equivalent curtailment) at the end of 2019. We also note that the closure of one unit (or equivalent curtailment) by the end of 2019 would reduce not only NO_X, but also emissions of SO_2. Given the overall changes in emissions from the various regional haze actions since the WRAP made its projections, we will be better able to assess the need, if any, for further action once Arizona, Utah, and Colorado have prepared regional haze SIPs for the second planning period.

J. Comments on the TWG Alternative and EPA's Supplemental Proposal

Comment: *Opposition to TWG Alternative because it is premised on SCR as BART*

One commenter argued that the 2009-2044 NO_X Cap used for the TWG Alternative is unduly and arbitrarily stringent because it is based on a limit of 0.055 lb/MMBtu, which the commenter believes is too stringent because (1) EPA should not have determined that SCR is BART and (2) even if SCR were the

appropriate basis for BART, 0.055 lb/MMBtu is not achievable. The commenter stated that because Arizona agricultural users will phase out their use of CAP Ag Pool water by December 2030 pursuant to the 2004 Arizona Water Settlement Act (AWSA), capital costs that are collected in advance of SCR operation will be imposed on NIA users in exchange for no benefit. The commenter asserted that if EPA finalizes either of the "better than BART" alternatives without modification, it would be arbitrarily and capriciously apportioning compliance costs to NIA water users for which they are not responsible. Given EPA's acknowledgment of the compliance flexibility that exists with respect to the TAR, the commenter believes that the failure to consider potential "better than BART" alternatives that would afford compliance flexibility to all NGS stakeholders on an evenhanded basis constitutes an abuse of discretion on the part of EPA.

Response:

EPA disagrees with the assertion that the TWG Alternative is unduly and arbitrarily stringent because it is based on a BART limit of 0.055 lb/MMBtu. We consider the limit of 0.055 lb/MMBtu to appropriate for establishing the BART Benchmark for NGS. EPA addressed specific comments related to the BART limit in section 8.1 of the RTC. We also note that the TWG Alternative was developed as an agreement between diverse stakeholders,

including SRP, the operator of NGS on behalf of itself and other co-owners, and the CAWCD. Although both entities submitted comments in opposition to the proposed BART limit of 0.055 lb/MMBtu, both parties signed the TWG Agreement that establishes the NO_X Cap based on the proposed BART limit of 0.055 lb/MMBtu.

The commenters indicate that their access to CAP Ag Pool water is expected to end in 2030, and assert that the timeframes for compliance with the limit of 0.07 lb/MMBtu in 2030 would necessitate water rate increases prior to 2030. The commenter asserts that it is arbitrary and capricious for NIA water users to pay a few years of higher CAP water rates for controls that will not be operational until after their access to the CAP Ag Pool expires. EPA notes that the direct impact of compliance with the limit of 0.07 lb/MMBtu in 2030 under the TWG Agreement, presumably with installation and operation of SCR, would be on the cost of electricity generation. Increasing water rates are indirect impacts that result from the relationship between NGS and CAP. EPA does not set or determine water rates charged by CAWCD to the CAP Ag Pool or any other classes of CAP customers. EPA's proposed and final approval of requirements consistent with the TWG Agreement as a "better than BART" alternative is based on our review of the anticipated emission reductions associated with the TWG Alternative compared to BART. Although EPA, DOI, and DOE have committed to work together on many issues

related to NGS, including funding for the federal portion of capital improvements at NGS, EPA does not determine how controls would be financed and how and when electricity or water rates would be adjusted to recover costs.

Comment: *TWG Alternative does not fully meet EPA's obligations to the Gila River Indian Community*

The Gila River Indian Community said that even though it fully supports the TWG Alternative, it is concerned that EPA has not met its obligations to the Community because of the significant costs on NGS and associated impacts on the Community. Rather, the commenter views the TWG Alternative as the first step in a process that will limit the impacts on the Community because only under the TWG Alternative will key U.S. commitments contained in the TWG Agreement be realized. Specifically, under the TWG Agreement, and as outlined by the commenter, DOI will work with the Community and other tribes in the area around NGS, to evaluate the actual impacts the regulatory requirements will have on NGS over time. The commenter specifically referred to the U.S. commitment to allocate $10 million annually for 10 years starting in 2020, from the Reclamation Water Settlements Fund to reduce impacts to the Development Fund.

Response:

EPA acknowledges the comment and is aware that costs associated with implementing the TWG Alternative will have implications for numerous Tribes, including the Gila River Indian Community. EPA is committed to continuing to work with the Department of the Interior and the Department of Energy in the Interagency Working Group on NGS, as laid out in the Joint Statement signed in January 2013 by the heads of the three agencies, to work with tribes to address long-term issues related to NGS. The provisions in the TWG Agreement that are not related to EPA's authority to evaluate BART or a "better than BART" alternative, however, are beyond the scope of this rulemaking.

Comment: *TWG Alternative is vague and unenforceable*

One commenter stated that a BART determination must include clear requirements for emissions reductions and a clear timeline for those reductions, to ensure continuing visibility improvements in Class I areas. The commenter indicated that without specific emission limits and/or commitments to retire specific amounts of capacity from specific units, as of a date certain, it is impossible to calculate the visibility improvements that will result from the TWG Alternative, particularly TWG Alternatives A3 and B, and it will be impossible for individuals or EPA to assess whether NGS is on track to meet the emission reductions necessary to ensure

reasonable progress toward natural visibility in affected Class I areas.

Response:

EPA disagrees with the assertion that the TWG Alternative is vague and unenforceable. EPA acknowledges that the TWG Alternative provides flexibility in a manner that appears complex. This complexity is a result of the role future ownership outcomes will have in determining the most reasonable compliance options in the future. Once the ownership issues are resolved, the scope of options under the TWG Alternative narrows. Although some flexibility still remains in the TWG Alternative, particularly under TWG Alternative B, the options for future operation of NGS are bounded by the limitations provided by the 2009-2044 and 2009-2029 NO_X Caps.

Contrary to the assertions by commenters, EPA included proposed regulatory language in our Supplemental Proposal that provided specific and enforceable timelines for achieving emission reductions under the TWG Alternative. The proposed language under 40 CFR 49.5513(j)(3)(i), "Operating Scenarios to Comply with 2009-2044 NO_X Cap," defines the timeframes and requirements under TWG Alternatives A1, A2, A3, and B, all of which must be implemented in a manner that ensures total NO_x emissions over 2009-2044 remain below the 2009-2044 NO_x Cap. Specifically, §49.5513(j)(3)(i)(A) defines Alternative A1, and

specifies the following requirements: (1) by December 31, 2019, the owner/operator shall permanently cease operation of one coal-fired unit and (2) by December 31, 2030, the owner/operator shall comply with a NO_x emission limit of 0.07 lb/MMBtu on each of the two remaining coal-fired units. Alternative A1 is the simplest of the possible operating scenarios under the TWG Alternative and §49.5513(j)(3)(ii)(A) specifies that Alternative A1 applies under three potential future ownership possibilities.

TWG Alternative A2 is defined in §49.5513(j)(3)(i)(B) and requires (1) by December 31, 2019, the owner/operator shall permanently cease operation of one coal-fired unit, and (2) by December 31, 2019, the owner/operator may elect to increase net generating capacity of the remaining two coal-fired units by a combined total of no more than 189 MW. The actual increase in net generating capacity shall be limited to the sum of 19 MW and the ownership interest, in net MW capacity of up to 170 MW, purchased by the Navajo Nation by December 31, 2019. The owner/operator shall ensure that any increase in the net generating capacity is in compliance with all pre-construction permitting requirements, as applicable, and (3) by December 31, 2030, the owner/operator shall comply with a NO_X emission limit of 0.07 lb/MMBtu on each of the two remaining coal-fired units. The future ownership possibilities that would trigger Alternative A2 are defined in §49.5513(j)(3)(ii)(B).

TWG Alternative A3 is defined in §49.5513(j)(3)(i)(C) and requires (1) by December 31, 2019, the owner/operator shall reduce net generating capacity of NGS by no less than 561 MW. The actual reduction in net generating capacity of NGS shall be determined by the difference between 731 MW and the ownership interest, in net MW capacity of up to 170 MW, purchased by the Navajo Nation by December 31, 2019, and (2) by December 31, 2030, the owner/operator shall comply with a NO_X emission limit of 0.07 lb/MMBtu on two units. The future ownership possibilities that would trigger Alternative A2 are defined in §49.5513(j)(3)(ii)(C).

TWG Alternative B is defined in §49.5513(j)(3)(i)(D) and requires that in addition to the 2009-2044 NO_X Cap, the owner/operator shall ensure compliance with the 2009-2029 NO_X Cap. The 2009-2044 NO_X Cap is defined in §49.5513(j)(2)(ii) as no more than 494,899 tons of NO_X, and the 2009-2029 NO_X Cap is defined in §49.5513(j)(2)(i) as no more than 416,865 tons of NO_X. The 2009-2029 NO_X Cap is based on closure of one unit by December 31, 2019 and the 2009-2044 NO_X Cap is based on compliance with the BART emission limit of 0.055 lb/MMBtu by July 1, 2019. The future ownership possibilities that would trigger Alternative B are defined in §49.5513(j)(3)(ii)(D). As described in §49.5513(j)(4)(iv), if TWG Alternative B is triggered, the owner/operator must submit annual Emission Reduction Plans that

contain the anticipated year-by-year emissions to ensure compliance with the 2009-2029 and 2009-2044 NO_X Caps.

The commenter asserts that under the scenario of reduced capacity (three units remain open, i.e., TWG Alternative A3), EPA ignored other possible outcomes and simplistically assumed that two units would continue to operate at full capacity with SCR and the unit whose operation is curtailed would operate only with LNB/SOFA. The commenter asserts that there is no guarantee that the operator will choose to comply with TWG Alternative A3 in this manner. Although this specific arrangement under TWG Alternative A3 is not required, EPA disagrees that nothing compels the operator to comply with this operating scenario in a manner that reduces emissions comparably with the assumption that two units would operate at full capacity with SCR and the unit that is curtailed would operate with LNB/SOFA. EPA notes that under TWG Alternative A3, as well as all other TWG Alternatives, the owner/operator must operate the units at NGS so that total emissions remain below the 2009-2044 NO_X Cap (as well as the 2009-2029 NO_X Cap under Alternative B). For example, under TWG Alternative A3, if the operator chose to curtail all three units by a total of 561 MW equally and comply with a limit of 0.07 lb/MMBtu on two units and 0.24 lb/MMBtu on one unit, total emissions over 2009-2044 are not likely to comply with the

2009-2044 NO_X Cap.[130] Thus, the operator would be prohibited from operating in this manner and would need to, for example, significantly curtail operations to reduce emissions further, or risk violating the FIP.

As noted in our Supplemental Proposal, EPA estimated total NO_X emissions over 2009-2044 for TWG Alternatives A1, A2, and A3 to provide assurance that the owner/operator could reasonably meet the 2009-2044 NO_X Cap under the specific terms of those alternatives. EPA does not need to determine that all operating possibilities that are consistent with the requirements of TWG Alternative A1, A2, and A3 would also meet the 2009-2044 NO_X Cap. The regulatory requirements EPA is finalizing for the TWG Alternative provide specific dates on which the owner/operator must close a unit, curtail operations, and meet emission limits. While there is some flexibility in how emissions might be curtailed under TWG Alternative A3, the 2009-2044 NO_X Cap ensures that the operator does not implement a strategy that results in substantially more emissions than would be achieved by installing SCR on the two units that are operated at full capacity and curtailing operations on the unit that was not retrofit with SCR.

[130] See RTC and references therein.

The commenter asserts that there are an infinite number of ways the operator could comply with the 2009-2029 and 2009-2044 NO_X Caps under TWG Alternative B. The commenter further states that the two possibilities EPA considered in our Supplemental Proposal are not likely to be the outcomes under TWG Alternative B. EPA agrees that TWG Alternative B provides more flexibility than TWG Alternative A. However, EPA disagrees that TWG Alternative B is so open-ended that it would not be enforceable or result in emission reductions at NGS. We note that the 2009-2029 NO_X Cap was calculated based on the closure of one unit with no additional increase in capacity (i.e., equivalent to emissions under TWG Alternative A1). Thus, the operator cannot maintain the status quo (operation of all three units at full capacity at a limit of 0.24 lb/MMBtu) and meet the 2009-2029 NO_X Cap. We recognize that several commenters are concerned about the flexibility under TWG Alternative B. However, as discussed further in the RTC, we note that the range of possible operating choices for TWG Alternative B is substantially constrained by the requirement to comply with the 2009-2029 and 2009-2044 NO_X Caps.

Although we disagree with commenters that the TWG Alternative is vague and unenforceable, in response to the concerns expressed by these commenters, to provide additional assurance that cumulative emissions of NO_X from NGS under the TWG

Alternative will not exceed the BART Benchmark, EPA is adding the following provisions to the Final Rule. Under all Alternatives, if cumulative emissions of NO_X from NGS exceed the 2009-2044 NO_X Cap prior to 2044, the operator of NGS must permanently cease operation of NGS. In addition, under Alternative B, if cumulative emissions of NO_X exceed the 2009-2029 NO_X Cap prior to 2029, the operator of NGS must temporarily cease operation of all units at NGS.[131]

One commenter asserted that EPA was incorrect to claim that the TWG Alternative would absolve NGS of obligations related to a Reasonably Attributable Visibility Impairment (RAVI) finding that may be made for NGS.[132] EPA disagrees that we claimed that the TWG Alternative would absolve NGS of obligations related to RAVI. The commenter cited to footnote 21 in our Supplemental Proposal.[133] In that footnote, we acknowledged that the TWG had intended their alternative to satisfy both the "better than BART" requirements of the RHR as well as any requirements of the RAVI program. Our footnote merely noted that there was no outstanding petition to certify impairment from NGS at any Class I area and outlined the process and requirements for triggering

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[131] The combination of the 2009-2044 and 2009-2029 NO_X Caps under TWG Alternative B means that if NGS exceeds the 2009-2029 NO_X Cap prior to 2029 it must cease operation, but the operator may re-start operation after 2030 as long as cumulative emissions have not yet exceeded the 2009-2044 NO_X Cap.
[132] See EarthJustice letter, page 10, footnote 25.
[133] See Supplemental Proposal, 78 FR at 62513, footnote 21 (October 22, 2013).

a BART determination under RAVI. Although we stated that a BART determination under RAVI would likely be the same as a BART determination under regional haze (i.e., an analysis of the five factors listed in the CAA), EPA did not make any conclusions or absolve NGS of any obligations related to RAVI because there is currently no action before EPA to make an attribution finding related to NGS.

EPA is finalizing the requirements of the TWG Alternative, consistent with Appendix B of the TWG Agreement, which require, among other things, emission reductions in 2019 and 2030. EPA is also adding as an enforceable requirement, the commitment from the TWG Agreement to cease conventional coal-fired electricity generation at NGS by 2044. EPA considers these timeframes to be consistent with the stated goal of section 169A of the CAA. EPA has addressed comments regarding consistency with EPA's regulations, including the RHR and the TAR, in section 8.5 of the RTC.

Comment: *Additional concerns with TWG Alternative*

The Hopi Tribe indicated that it has serious concerns with the proposed TWG Alternative for several reasons, including because the TWG Alternative does not specify the technology, i.e., either SCR or an equivalent that will be used to achieve the same level of NO_X reductions as the BART proposal. The commenter states the TWG Alternative is ambiguous because both

scenarios are vague and do not include the same level of assurance that the NO_X reductions will be the same as under the BART proposal. Also, because the time NGS would be permitted to operate without SCR (or equivalent alternative) would be adjusted under the TWG Alternative, the commenter believes the TWG Alternative jeopardizes the goal of the CAA and the purpose of this regulation.

Response:

Our proposed BART determination did not specify what technology must be used because BART is defined as an emission limit that represents the level of control representing BART, not a particular technology. Thus, our Proposed Rule and the Supplemental Proposal both imposed emission limits for NO_x. The limits for BART (0.055 lb/MMBtu) and the TWG Alternative (0.07 lb/MMBtu) are based on what is achievable using a specific technology. Both limits are achievable with SCR, but the operator may consider using newer technologies, if available, as long as each unit complies with its applicable emission limit by its compliance date. The commenter also noted that the extended period for compliance under the TWG Alternative may jeopardize the goal of the CAA and the purpose of the RHR. Under section

169A of the CAA and the RHR, the goal of restoring visibility in Class I areas to natural conditions is set for 2064.[134]

Comment: *"Arbitrary" 2044 end date*

One commenter stated that the 2009-2044 period analyzed for the TWG Alternative is arbitrary because it is quite likely that one or more NGS units will operate beyond that time frame. The commenter asserted that if NGS units continue to operate for even 3 additional years, until 2047, the TWG Alternative permits outcomes that will result in greater total NO_X emissions than the 2009-2044 NO_X Cap.

Response:

EPA disagrees with the comment that the 2044 end date for the NO_X Cap is arbitrary. EPA used 2044 as the end date in our calculations of the BART Benchmark. We selected 2009-2044 as most appropriate because it includes the early installation dates for LNB/SOFA and extends until the anticipated 2044 termination date of the renewed site lease that was approved by the Navajo Nation.[135] Under the TWG Agreement signed by six entities including the Navajo Nation and SRP, the NGS Co-Tenants shall cease their operation of conventional coal-fired generating at NGS no later than December 22, 2044. At its election, consistent with the Lease Amendment, the Navajo Nation

[134] 40 CFR 51.308(d).
[135] See Footnote 60 in the Proposed Rule, 78 FR at 8290 (February 5, 2013).

may continue plant operations at NGS after December 22, 2044 consistent with EPA approval.[136] Thus, the Navajo Nation may seek to operate NGS after 2044, however, EPA expects that operation of NGS after the owners cease conventional coal-fired generation would involve substantial modification to NGS and NGS would be required to meet all applicable regulatory and permitting requirements in existence at that time. To make this end date federally-enforceable, EPA is adding it as a requirement to the regulatory language in today's final action. EPA is adding the regulatory language in the Final Rule under 40 CFR 49.5513(j)(3)(iii)stating that by December 22, 2044, the owner/operator shall permanently cease operation of all coal-fired units at NGS. At its election, the Navajo Nation may continue plant operation at NGS after December 22, 2044, consistent with EPA approval under the New Source Review program.

Comment: *Emissions under the TWG Alternative*

One commenter stated that neither EPA nor TWG have provided a comprehensive technical analysis of the emissions that are possible under the TWG Alternative. The commenter asserted that it is EPA's responsibility to provide an administrative record

[136] See Section VII.F of the TWG Agreement (page 14).

that contains comprehensive modeling and analysis for any BART proposal, but EPA left this critical component of the alternatives analysis undone.

The commenter provided its own calculations of emissions under TWG Alternative A and B and compared those estimates with its own calculation of a NO_X Cap and BART Benchmark, and concluded that cumulative emissions from possible scenarios under the TWG Alternative are not lower than its NO_X Cap or BART Benchmark.

Response:

EPA disagrees with the comment that we have failed to provide a comprehensive technical analysis of the TWG Alternative. We also disagree with the assertion that our administrative record for this rulemaking is incomplete. As stated elsewhere in the RTC, EPA's analysis of the TWG Alternative is consistent with the required analyses for alternatives to BART outlined in the RHR.

The comment relies on a report prepared by Nathan Miller and Ranijit Sahu (Miller/Sahu) for the commenter contending that EPA's evaluation of the TWG Alternative is incorrect. But the report changes the central inputs underlying our calculations for BART and the TWG Alternative. The specific technical reasons that we disagree with the inputs that Miller/Sahu changed (e.g., NO_X emissions limit achievable with SCR, heat input values from

baseline period, annual vs. 30-day emission rates) are explained in detail in section 8.5 of the RTC.

Table 2 in the Miller/Sahu report depicts BART-1 as "EPA BART (No Corrections)," showing a value of 379,152 tons of cumulative NO_X emissions over 2009-2044 that is nowhere traceable to EPA's documents.[137] The Miller/Sahu report then makes several "corrections" to reach a value of 280,554 tons of NO_X emissions. EPA has explained in detail why we disagree with each of the Miller/Sahu "corrections" in section 8.5 of the RTC and references therein. For the reasons set forth in section 8.5, we also continue to disagree that our calculation of the BART Benchmark or the NO_X Cap has relied on any incorrect inputs.

Because we disagree with the "corrections" and the values presented in the Miller/Sahu report, we also disagree with the conclusions of Miller/Sahu that the TWG Alternative fails to satisfy our requirements for demonstrating an alternative is "better than BART". The commenter cannot change the fact that its alternative preferences on the inputs for calculating BART are just preferences by simply calling them "corrections."

Comment: *Visibility modeling under the TWG Alternative*

One commenter stated that the TWG Alternative distributes emissions over time very differently than BART: while BART would

[137] Miller/Sahu Report, Table 2 at p. 7.

require NO_X reductions within 5 years, the bulk of the reductions in the TWG Alternative might not come until the end of the 2009-2044 period. The commenter stated that the additional analysis and modeling it conducted reveals that the TWG Alternative is likely substantially worse than BART.

Response:

As discussed elsewhere in this document, because emission reductions achieved under the TWG Alternative will have the same geographic distribution as emission reductions under BART, EPA disagrees that visibility modeling is required for our evaluation of the TWG Alternative. We note that the commenter provided its own visibility modeling and EPA disagrees with methodologies used and conclusions drawn by the commenter.

The Miller/Sahu Report compared anticipated visibility impacts from the TWG Alternative against the anticipated visibility impacts based on its own preferences for the NO_X Cap and BART Benchmark. Although the commenter asserts that its analysis shows that visibility under the TWG Alternative is substantially worse than under its preferences for the BART Benchmark and NO_X Cap, their analysis also shows that when the TWG Alternative is compared to the BART Benchmark and NO_X Cap as proposed by EPA, the TWG Alternative scenarios it explored that meet the 2009-2044 and 2009-2029 NO_X Caps (as applicable)

generally result in lower or comparable visibility impacts as BART.[138]

EPA conducted visibility modeling to compare TWG Alternatives A1, A2, and A3 in 2019 and 2030 against the BART Benchmark.[139] As indicated by commenters, other possibilities exist beyond the scenarios for the TWG Alternatives we considered explicitly in our Supplemental Proposal. EPA has stated elsewhere that we need not consider potential emissions under all possible scenarios in setting the NO_X Cap, but must verify that NGS can reasonably be expected to comply with 2009-2044 NO_X Cap under the various constraints imposed under the TWG Alternatives (i.e., closure, curtailment, and a secondary 2009-2029 NO_X cap). However, EPA explored two other possibilities under TWG Alternative A3 that included reducing capacity on all three units equally or reducing capacity on two units and installing SCR on the two units that operate at reduced capacity.[140] EPA did not include those two additional possibilities under TWG Alternative A3 in our visibility modeling analysis because those scenarios do not reduce emissions sufficiently to meet the 2009-2044 NO_X Cap.

Our visibility modeling of the TWG Alternatives compared to our proposed BART determination shows that, as expected, during

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[138] See Exhibit 2 to the Miller/Sahu report and RTC and references therein.
[139] See RTC and references therein.
[140] *Id.*

the approximate 10-year period between 2019 and 2030, the visibility impacts of NGS under the TWG Alternatives are higher than the visibility impacts of NGS under BART. After 2030, when NGS achieves additional emission reductions through compliance with a limit of 0.07 lb/MMBtu on two units, our modeling indicates that the visibility impacts under the TWG Alternatives are comparable to or lower than visibility impacts under BART (see RTC for further detail). These results are not surprising and mirror the comparative reduction in NO_X emissions under the TWG Alternatives and the BART Benchmark over time, showing greater overall visibility improvement under the TWG Alternative than under the BART Benchmark.

As noted elsewhere in the RTC, EPA is including as part of the TWG Alternative, in the regulatory language in the Final Rule, a provision consistent with the TWG Agreement that the operator of NGS permanently cease conventional coal-fired generation by the end of 2044. Thus, under the TWG Alternative, the visibility impact of NGS is likely to be zero or near zero in 2045 and thereafter.[141] Under BART, there would be no commitment or enforceable requirement to close after 2044,

[141] EPA expects that if the Navajo Nation elects to operate NGS after the owners have ceased conventional coal-fired generation, this would likely involve substantial modifications to NGS and NGS would be subject to all applicable regulatory and permitting requirements in existence at that time.

therefore, visibility impacts of NGS at all 11 Class I areas would be expected to continue in 2045 and thereafter.

Comment: *Economic Impacts of the TWG Alternative*

The Hopi Tribe expressed concern that EPA did not assess the potential economic impacts of the TWG Alternative to the Hopi Tribe. The commenter opined that EPA recognized the significance of NGS to the Hopi Tribe in its analysis under Factor 2. Because the TWG Alternative includes closure of at least one unit in 2019, and EPA did not address the potential economic impacts of partial closure of NGS on the Hopi Tribe, the commenter contended that the Agency has not complied with the RHR and BART Guidelines. The Hopi Tribe noted that in the event capacity is reduced at NGS under the Supplemental Proposal, the amount of coal and water purchases from the Tribe would decrease leading to a decrease in income to the tribe from the sale of these. The commenter also stated that the Supplemental Proposal is not as effective in improving air quality and visibility for the Hopi Reservation. Extending the timeframe during which NGS can continue to operate without SCR or an equivalent technology would cause a continued air quality burden on the Hopi Tribe.

Response:

EPA recognizes that the TWG Alternative, which includes closure of one unit at NGS or equivalent curtailment of

operation, may change the royalties and other payments related to coal and water that are paid to the Hopi Tribe. Although EPA evaluated cost-effectiveness and affordability of the options in our analysis of BART controls, we disagree that we must also conduct an economic impact analysis for alternatives to BART. The BART Guidelines provide little guidance on the evaluation of alternatives to BART and the RHR does not require an analysis of economic impacts of BART Alternatives. EPA's evaluation of potential impacts to tribes in our analysis of BART controls was used to inform our government-to-government consultation with tribes and is consistent with BART. In addition, we have held numerous government-to-government consultation meetings with tribes to discuss NGS during this rulemaking. EPA continues to recognize the issues and concerns of tribes located in Arizona regarding NGS and is committed to continuing to work with our federal partners and the tribes through the Joint Federal Agency Work Group on NGS to help address these issues.

The Hopi Tribe also expressed concern that the TWG Alternative is less effective than BART at improving air quality and visibility on the Hopi Reservation. EPA notes that the purpose of the RHR is to reduce visibility impairment at Class I areas; however, EPA disagrees that the TWG Alternative is less effective than BART. Although the timeframe for implementation of the TWG Alternative (new reductions in 2019 and 2030) is

longer than the timeframe for BART (in 2019), we note that BART would only reduce emissions of NO_X, whereas the TWG Alternative, in 2019, would also reduce emissions of SO_2, PM, CO_2, and hazardous air pollutants as a result of the closure of one unit (or equivalent curtailment).

Comment: *Support for some changes EPA made to the TWG Agreement in the Supplemental Proposal*

The TWG noted that there were several differences between Appendix B to the TWG Agreement and EPA's Supplemental Proposal of the TWG Alternative. The commenters expressed support for some of the differences, and expressed concern with others. One commenter agreed with the methodology that EPA used to calculate the 2009-2044 NO_X Cap of 494,899 tons.

The commenter supported the additional requirement to report annual heat input, although this information is already reported through the Acid Rain Program. However, the commenters requested that additional time be provided to ensure that the data submitted in the annual report are consistent with the data that the NGS operator submits to the Clean Air Markets Database (CAMD), in the annual emission inventory, and in the greenhouse gas (GHG) report required by 40 CFR part 98, which are not due until March 31st.

Response:

EPA recognizes that the TWG supports some of the changes EPA made to Appendix B to the TWG Agreement, including EPA's revisions to the 2009-2044 NO_X Cap and the requirement to report annual heat input. EPA agrees that it is reasonable to require the timeframe for the reporting requirements under BART to generally be more consistent with other reporting requirements. Therefore, EPA is revising the regulatory language accordingly.

Comment: *Suggested addition to §§49.5513(j)(4)(iv)(A) and (B)*

The TWG requested that EPA clarify the scope and content of the title V permit revision that is necessary to incorporate elements of the BART alternative by adding the language from Appendix B of the TWG Agreement to the requirements of the TWG Alternative.

Response:

EPA did not include the language from the TWG Agreement related to the title V (part 71) operating permit in the regulatory language in our Supplemental Proposal because the title V (part 71) regulations require that the operating permits include all applicable requirements, which for NGS would include the permit limits that exist in its PSD permit (i.e., the limit of 0.24 lb/MMBtu when operating with LNB/SOFA) as well as the final requirements in this FIP (e.g., the limit of 0.07 lb/MMBtu on two units in 2030). Therefore, a specific requirement in the FIP that directs the operating permit to incorporate applicable

requirements is not necessary. However, to the extent the TWG requests consistency with the language in the TWG Agreement, although EPA considers it unnecessary, EPA will amend §49.5513(j)(4)(iii) as suggested by the commenter.

We further note that in the proposed regulatory language in our Supplemental Proposal, EPA inadvertently did not specify an averaging period for the emission limits under the TWG Alternative Operating Scenarios (§49.5513(j)(3)). Therefore, EPA is adding to the regulatory language that emission limits apply over a rolling average of 30 boiler operating days, to 40 CFR §49.5513(j)(3), (j)(3)(i)(A)(2), (j)(3)(i)(B)(3), and (j)(3)(i)(C)(2).

Comment: *Another suggested addition to §§49.5513(j)(4)(iv)(A) and (B)*

The TWG stated that the Supplemental Proposal specified a short-term NO_X limit of 0.07 lb/MMBtu for TWG Alternative A, but not for Alternative B as was included in the TWG Agreement.

Response:

EPA agrees that if the owners of NGS elect to install SCR in order to comply with the applicable NO_X Caps under TWG Alternative B, then it is useful to specify the emission limit that would apply. Although the limit of 0.07 lb/MMBtu (on a rolling average basis of 30 boiler operating days) would apply under TWG Alternatives A1, A2, A3, or B, EPA notes that the

operator of NGS may need to operate SCR at an emission rate that is lower than 0.07 lb/MMBtu depending on their compliance with the NO_X Cap, but the addition of this provision would prohibit emissions of NO_X, when operating with SCR, to exceed 0.07 lb/MMBtu (on a rolling average basis of 30 boiler operating days). EPA will amend the regulatory text accordingly.

Comment: *Omitted ownership outcome*

The TWG stated that the EPA described the NGS ownership outcomes in a manner that is different from the scenarios outlined in the TWG Agreement. The commenter indicated that the ownership outcomes appear to be consistent, except that one potential outcome was omitted – the scenario in which one or more of the existing NGS Participants (LADWP or NV Energy) remain in NGS, which would trigger Alternative B.

Response:

EPA agrees that we inadvertently omitted from §49.5513(j)(3)(ii)(D) the potential scenario where one or both of the Departing Participants (i.e., LADWP or NV Energy) do not exit NGS as expected. EPA is updating the language to incorporate the omitted ownership possibility.

Comment: *Describe details of TWG Agreement more fully in the preamble to the Final Rule*

The TWG expressed concern that EPA only briefly described the elements of the TWG Agreement in the Supplemental Proposal.

One member of the TWG asserted that the limited discussion does not accurately present the provisions of the Agreement as it relates to clean energy economic development for affected Tribes, the rigorous development and consideration of clean energy alternatives to NGS, mitigation of CO_2 emissions, and Local Benefit Fund to address concerns of the public in the vicinity of NGS and the Kayenta-Black Mesa Mine Complex. Should EPA proceed with this alternative in the Final Rule, the commenter requested that the Agency fully describe the key elements in the preamble to the Final Rule.

Response:

EPA acknowledges that the TWG Agreement contains additional provisions that will be beneficial to the tribes in the area and to the environment. However, EPA does not consider it appropriate to provide a detailed discussion of these additional provisions of the TWG Agreement in our Final Rule. EPA was not a signatory to the TWG Agreement and did not participate in the TWG Stakeholder group. The TWG Agreement speaks for itself and the participants and signatories are the appropriate entities to interpret the provisions of the TWG Agreement. EPA is finding that it is necessary or appropriate to regulate NO_X emissions from NGS to reduce visibility impairment at the GCNP and 10 other Class I areas. The other measures described by the commenter are outside the scope of our authority for this

action. Therefore, EPA is declining to provide any further discussion of the provisions in the TWG Agreement that go beyond addressing regional haze concerns associated with NO_x emissions from NGS.

The comment also requests EPA to add certain language to the Final Rule. Specifically, the comment asks EPA to add: "Nothing in this final rule shall preclude the NGS Participants from seeking to obtain greenhouse gas emission reduction credits, or similar commodities associated with activities committed to in the TWG Agreement, under any Federal or State law or policy to the extent permitted under such applicable law or policy."

EPA is also declining to add the requested language to our Final Rule. EPA is not exercising any authority in this action other than implementing the BART provisions in CAA section 169A and the RHR, through our discretion in the TAR. It would be inappropriate in this action to take any position on the future use or regulation of GHG emission reductions or "similar commodities."

Comment: *TWG Alternative meets Reasonable Progress requirements*

One member of the TWG stated that the TWG Alternative was intended to meet not only BART requirements, but also reasonable progress requirements applicable to NGS through 2044. The commenter requested that EPA acknowledge, in the preamble to the

Final Rule, that the TWG Alternative satisfies both the BART and reasonable progress requirements of the CAA through 2044.

Response:

Today's final rule addresses the NO_X BART requirements of the RHR for NGS. We have not considered whether the TWG Alternative meets the reasonable progress requirements for NGS. We note that EPA has not made any finding pursuant to 40 CFR 49.11(a) that it is necessary or appropriate at this time to promulgate a FIP to meet the reasonable progress or other requirements under the RHR. The requirement for states to develop reasonable progress goals and long-term strategies to achieve those goals is set out in CAA section 169A and 40 CFR 51.308(d). There is no requirement that EPA address these requirements for sources on the Navajo Nation unless EPA makes a determination that it is necessary or appropriate for EPA to do so.

Comment: *Delete requirement to keep records of maintenance*

One member of the TWG requested that EPA delete the requirement that the NGS operator keep records of all major maintenance activities that occur at NGS. According to the commenter, the existing title V permit, which requires that the operator maintain and operate emission control equipment in a manner that is consistent with good engineering practices to keep emissions at or below applicable emissions limitations,

provides sufficient assurance that emission control equipment will be operated and maintained in accordance with best practices.

Response:

EPA is deleting the requirement proposed under §49.5513(j)(7)(vi) to require the operator of NGS to keep records of all major maintenance activities at NGS because records of major maintenance activities are not needed for demonstrating compliance with the 2009-2044 or 2009-2029 NO_X Caps or other provisions of the TWG Alternative.

Comment: *Require recordkeeping for the life of the plant*

One commenter indicated that the requirement to maintain records for 5 years is insufficient and inappropriate for the compliance schedule associated with NGS and recommended that records be maintained from 2009 through the remaining operating life of the plant.

Response:

EPA agrees that because the operator of NGS must ensure compliance with the 2009-2044 NO_X Cap, the operator of NGS should also maintain records for the life of the facility to demonstrate compliance with the TWG Alternative. In the regulatory language in our Final Rule, EPA is amending §49.5513(j)(7) to require the owner or operator of each unit to maintain records, as required under §49.5513(j)(7)(i) to (vi),

until the earlier of December 22, 2044 or the date that the owners cease conventional coal-fired operation of all units at NGS.

Comment: *Concern that affected parties were excluded from TWG*

Numerous commenters expressed frustration that all affected parties were not included in the development of the TWG Alternative. The Hopi Tribe noted that they have a Generating Performance Agreement with SRP that should have mandated their involvement. The White Mountain Apache Tribe also noted that it was not party to the TWG Agreement. Another commenter noted that Executive Order (EO) 13175 requires that all tribal nations be consulted on these types of regulations, and asserted that EPA and DOI violated this EO. Another commenter argued that the TWG did not include grassroots organizations and discouraged their participation in TWG public forums.

One commenter stated that the EPA did not give the public enough time to comment on the TWG Alternative before proposing approval of it and, on that basis, demanded that the EPA withdraw its proposed approval. The commenter added that the TWG Agreement assumes that the Hopi will support the Kayenta Mine Lease extension when it expires in 2025, but the Hopi have yet to discuss the extension with the 12 Hopi independent villages, which is a requirement in the Hopi Constitution. Furthermore, the commenter noted that the TWG Agreement ignores the

requirement of completing an EIS and ROD before the NGS site lease with the Navajo Nation expires in 2019. The commenter argued that DOI's signing of the TWG Agreement, without the fulfillment of these requirements, violates NEPA. The commenter added that in 1989, the Hopi Tribe rejected the Draft Kayenta Mine-Black Mesa Mine EIS in its entirety, and implied that the decision to accept the TWG proposal could compromise EPA's final decision.

Response:

EPA recognizes that there are affected tribes and other stakeholders that were not invited to participate in the Technical Work Group. EPA was not involved in the formation of the TWG and not involved in any meetings or discussions of the TWG.[142] As discussed in section 10.0 of the Response to Comments document, consistent with Executive Order 13175: Consultation and Coordination with Indian Tribal Governments, EPA consulted with tribes early and regularly during the development of this rulemaking for NGS. We note that the Regional Administrator for Region 9 spoke with Chairman of the Hopi Tribe, LeRoy Shingoitewa, on September 13, 2013 about the TWG Alternative and notified elected leaders or legal counsel for five tribes when

[142] At the request of the TWG, at their kick-off meeting, EPA presented a summary of our Proposed Rule and framework for BART Alternatives. The presentation at the TWG kick-off meeting was generally the same presentation EPA provided to other stakeholders. See document 0033 in the docket for the rule.

EPA signed the Supplemental Proposal. EPA also held individual and joint consultation meetings with tribal leaders in Phoenix, Arizona on December 9 and 10, 2013.

EPA disagrees that we did not provide the public enough time to review the TWG Alternative. EPA posted the TWG Alternative to the public docket on July 26, 2013, the same day it was submitted to EPA.[143] EPA reviewed the TWG Alternative and on September 25, 2013, signed a Supplemental Proposal that put forth the TWG Alternative as an additional better than BART alternative for public comment. On October 22, 2013, the Supplemental Proposal was published in the *Federal Register*.[144] The public had nearly six months to review the TWG Agreement and Alternative as submitted to EPA and approximately three months to review and comment on EPA's Supplemental Proposal. EPA also notes that EPA's rulemaking is not subject to NEPA.

Comment: *EPA's relationship to the TWG is confusing*

The White Mountain Apache Tribe stated that although EPA stated it was not involved in the Technical Work Group, EPA was a signatory of the "Joint Federal Agency Statement Regarding Navajo Generating Station," the scope of which includes numerous elements that reference EPA's commitments, along with the Departments of the Interior and Energy, in relation to NGS. The

[143] See document number 0122 in the docket for this rule.
[144] See document number 0182 and 0186 in the docket for this rule.

commenter suggests that EPA was involved in a legal triangulation with the TWG signatories and that such action is an extra-jurisdictional exercise by EPA, to which the Tribe does not consent. The commenter concludes that the Tribe cannot consider the TWG Alternative unless its published form is changed by EPA to fully disentangle the proposal from the signatory group and all non-BART Agreement terms, and additional public comment is thereafter allowed.

Response:

We disagree that the Joint Federal Agency Statement Regarding Navajo Generating Station indicates that EPA was involved in the TWG. The Joint Federal Agency Statement was signed by the Administrator of EPA and the Secretaries of the Interior and Energy on January 4, 2013. Among other things, that document acknowledged that each of the three federal agencies has an interest in the operation of NGS and set forth the goals of the agencies with respect to NGS and energy production in the region served by NGS.

Although EPA clearly has an interest in reducing the visibility impacts of NGS, EPA was not part of the TWG. EPA did not participate in any of the substantive discussions and negotiations of the TWG. Two representatives of EPA attended the beginning of the first meeting of the TWG but only to present a

summary of EPA's February 5, 2013 Proposed Rule.[145] After the initial meeting, EPA was not involved with the TWG until the TWG Agreement was completed. As such, EPA disagrees with the commenter that EPA is "entangled" with the TWG.

The TWG was not primarily composed of federal agencies. The TWG had two Tribes (Gila River Indian Community and the Navajo Nation), two environmental organizations (Environmental Defense Fund and Western Resource Advocates), two Arizona utilities (CAWCD and SRP) and DOI. Appendix B of the TWG Agreement contains provisions relating to BART but there were several other provisions of the TWG Agreement that are beyond the scope of BART and are not part of EPA's rulemaking in this action. For all the above reasons, EPA does not agree with the assumption underlying the comment that the White Mountain Apache Tribe "cannot consider the TWG Alternative unless its published form is changed by EPA to fully disentangle the proposal from the signatory group and all non-BART Agreement terms." EPA does not agree that any further public comment is warranted.

K. Other BART Alternatives

[145] At the request of the TWG, at their kick-off meeting, EPA presented a summary of our Proposed Rule and framework for BART Alternatives. The presentation at the TWG kick-off meeting was generally the same presentation EPA provided to other stakeholders. See document 0033 in the docket for the rule.

Comment: *Suggested BART Alternative from EarthJustice*

Despite its objections to the proposed BART alternatives, one commenter suggested an alternative that includes (1) an enforceable requirement that one NGS unit shut down by 2020 and (2) an enforceable requirement that the remaining two units install SCR and meet a NO_x emission limit of 0.065 lb/MMBtu by the beginning of 2020. The commenter recognized that other alternatives may exist, but asserted that for any alternative to comply with the minimum legal requirements, it must produce better visibility outcomes in Class I areas than BART and demonstrate that it does so through the use of visibility modeling.

Response:

Neither the BART requirements nor the provisions in the RHR governing alternatives to BART requires that BART sources cease operation. As such, EPA does not consider it appropriate for the Agency to require the shutdown of one unit of NGS by 2020 absent the consent of the owners. Regardless of whether the suggested alternative would provide for earlier and greater visibility improvement, it is not an option at this time. As explained in this rulemaking, the TWG Alternative does comply with the legal requirements for BART alternatives.

Comment: *Suggested BART Alternative from CAP NIA Users: New controls should not be required until after 2030*

One commenter presented a table purporting to show EPA's calculations of the NO_X caps that would apply for a range of potential BART emission limits: 0.055, 0.06, 0.07, and 0.15 lb/MMBtu. According to the commenter, the NO_X cap that would apply under limits of 0.06 and 0.07 lb/MMBtu would exceed the proposed 2009-2044 NO_X CAP by 2.5 and 7.5 percent, respectively. The commenter asserted that these differences would have imperceptible impacts on visibility and that, therefore, the use of the NO_X cap based on a limit of 0.055 lb/MMBtu unduly constrained TWG Alternative A and resulted in an unwarranted requirement to install SCR on two NGS units by 2030, which would impose inequitable compliance costs on agricultural water users. The commenter stated that a NO_X cap based on a BART limit of 0.06 or 0.07 lb/MMBtu would be very similar to the proposed 2009-2044 NO_X Cap, but would provide enough of an incremental increase to add 3 years of additional compliance flexibility for the installation of SCR on two units.

The same commenter also stated that based on the 2009-2044 NO_X Cap as proposed in the Supplemental Proposal, TWG Alternative A contains unused "headroom" that renders the operation of SCR by 2030 unnecessary. According to the commenter, TWG Alternative A has the effect of forcing NO_X emissions to a level that is at least 33,000 tons below the NO_X cap, which the commenter believes makes the requirement to install and operate SCR by 2030

artificially stringent and unnecessary, and therefore arbitrary and capricious. The commenter indicated that the headroom under TWG Alternative A1 would yield more than 6 years of additional compliance flexibility for the operation of SCR, and TWG Alternatives A2 and A3 would yield more than 3 years. The commenter concluded that EPA should revise the TWG Alternatives to provide the maximum amount of compliance flexibility for installation of SCR on NGS so as to not unnecessarily impose costs on NIA water users.

Response:

EPA disagrees with the assertion that new controls should not be required until after 2030. As stated previously, the TWG Agreement was a negotiated agreement, submitted to EPA, representing diverse interests. EPA evaluated the TWG Alternative to determine whether it was consistent with our framework for better than BART alternatives. Thus, although a few commenters may believe that the timeframes for compliance in the TWG Alternative are too stringent, the TWG Alternative is consistent with our proposed framework and it is consistent with the level of control in Appendix B to the TWG Agreement, which the operator and owners of NGS, as well as CAP, two tribes and two environmental organizations, have determined is acceptable.

As stated elsewhere in the RTC, we disagree with the assertion that BART for NGS is an emission limit associated with

SNCR (0.15 lb/MMBtu) or a less stringent limit associated with SCR (0.06 or 0.07 lb/MMBtu). Therefore, the additional time for compliance suggested by the commenters using higher BART Benchmarks or NO_X Caps is not appropriate. The commenters further assert that NGS could comply with a limit of 0.07 lb/MMBtu in 2032 and 2033 and still maintain total emissions below the 2009-2044 NO_X Cap. EPA disagrees with commenters that the "unused headroom" warrants additional time to comply with the limit of 0.07 lb/MMBtu. The emission estimates that EPA presented in our Supplemental Proposal for the TWG Alternative involved projecting future emissions to 2044 based on average heat input at NGS over 2001-2008. Heat input in the future is expected to be variable and could possibly remain higher than average over an extended period of time, significantly affecting the total flexibility or compliance margin. EPA's analysis was provided simply to assess whether operation consistent with the requirements under each TWG Alternative (A1-A3) could reasonably be determined to maintain emissions below the 2009-2044 NO_X Cap and were not intended to represent actual year-by-year emissions in the future. Thus, the "unused headroom" is theoretical and could be smaller or larger than cited by the commenters.

L. Other Comments

Comment: *Disproportionate impacts to tribes*

The Tonto Apache Tribe and the San Carlos Apache Tribe commented that both the original BART proposal and the proposed TWG Alternative are contrary to the obligations of the United States and its trust responsibilities to Indian Tribes under CAP. The commenters stated that both regulatory programs would have disproportionate impacts on tribes with CAP contracts. The commenters noted that environmental quality is of utmost importance to the tribes, but that clean air is the responsibility of all citizens. Therefore, the commenters assert that because the United States owns 24.3 percent of NGS, the costs of compliance for that 24.3 percent share should be shared among all American people, who will benefit from cleaner air. The commenters urged EPA to develop an alternative regulation that does not place additional burden on Indian Tribes.

Response:

EPA agrees that our proposed BART determination and the TWG Alternative will impact tribes with CAP water contracts. We note that the Joint Federal Agency Statement on NGS reflects the U.S. Government's recognition of its responsibilities related to NGS and trust responsibility to Indian tribes affected by NGS.

Although EPA is finalizing a BART Benchmark for NGS, the regulatory requirements of this Final Rule will include only the requirements and compliance timeframes for the TWG Alternative as proposed in our Supplemental Proposal. Under the TWG

Alternative, emission reductions at NGS would be achieved in phases, including closure of one unit or the equivalent in 2019, and compliance with an emission limit achievable with SCR in 2030. We note that the closure of one unit was possible because of the planned divestment of LADWP and NV Energy from NGS by 2019. Because LADWP and NV Energy are unrelated to CAP, EPA does not expect substantial compliance costs to be borne by Reclamation (and thus, tribes or other CAP water users) due to the first phase of emission reductions at NGS in 2019. EPA further notes that the 2030 compliance date for meeting an emission limit achievable with SCR on two units at NGS is approximately 16 years from the present day. As stated elsewhere in the RTC, the requirements under BART and the TWG Alternative include emission limits, rather than technology requirements. Thus, 16 years from now, although SCR will be capable of meeting the emission limit, other technologies or options may become available for the operator of NGS to more cost-effectively meet the NO_X emission limit of 0.07 lb/MMBtu.

EPA recognized the potential impacts to tribes of our proposed BART determination and sought ways to provide flexibility and a framework for affected stakeholders to develop alternative approaches to BART. EPA has determined that the TWG Alternative achieves greater emission reductions than would otherwise be achieved under our BART determination, while

providing additional time for compliance. This additional time allows the DOI, DOE, and EPA time to work with tribal stakeholders to identify and implement strategies for achieving the goals outlined in the Joint Federal Agency Statement on NGS.

Comment: *EPA lacks authority to regulate NGS*

Several commenters indicated that EPA overstepped its authority and stated that EPA's proposal hinders the state's ability to deal with environmental issues on a local level. One commenter stated that EPA's regulations are an attack on free enterprise, and believes that the agenda of the current administration is to ban all coal-fired power plants regardless of the economic effect.

Response:

EPA disagrees that it has overstepped its regulatory authority and disagrees that any State has authority to regulate air pollution from sources located on the Navajo reservation. EPA's authority to regulate NGS is established in sections 301(a) and 301(d)(4) of the CAA and the TAR. Section 301(d)(4) authorizes EPA to directly administer provisions of the CAA in Indian country under certain circumstances. The State of Arizona lacks authority to regulate air pollution sources located on the Navajo reservation.

EPA disagrees that the regulations promulgated in this action, which are requirements consistent with the TWG

Agreement, constitutes an attack on free enterprise. The TWG Alternative was submitted to EPA by a stakeholder group that had determined it was a more cost-effective approach to continuing to operate NGS than a prior proposal by EPA. EPA considered the direct costs of compliance in our five-factor BART analysis, and although not specifically required in the BART Guidelines, EPA also considered numerous indirect impacts and costs in our analysis of Factor 2. The comment provides no information other than conclusory statements that EPA failed to adequately consider the cost of compliance. EPA also disagrees that there is any agenda or effort to ban coal burning electricity generation. The TWG Agreement, as agreed upon by the members of the TWG, includes a provision that specifies continued operation of NGS as a conventional coal-fired power plant until 2044 when its lease with the Navajo Nation expires. Therefore, this rulemaking does not constitute a ban on burning coal.

Comment: *Lack of Consultation with Tribes*

The Navajo Nation commented that EPA should improve communication at the start of any rulemakings to ensure that the Navajo Nation can provide meaningful information. The commenter said that even when the Agency develops supporting rule information like the RIA the Navajo Nation would like to be involved as it could impact the Nation. The commenter pointed out that EPA has known for decades that the Navajo Nation would

be impacted by regulation of NGS and FCPP. The commenter quoted excerpts from Executive Order 13175 - Consultation and Coordination with Indian Tribal Governments and said that the standard for determining if a regulation has tribal implication is not whether it "impose[s] substantial *direct compliance costs* on tribal governments," but rather a regulation has "substantial *direct effects* on one or more Indian tribes."

The Navajo Nation stated that it was not consulted during the development of the ANPR and indicated that in August of 2009, one day prior to the ANPR for NGS and FCPP, EPA made a courtesy call to the President of the Navajo Nation. The Navajo Nation believes that if early and meaningful consultation with the Nation had occurred this could have led to an adequate analysis of BART controls and careful examination of non-air quality impacts.

The Gila River Indian Community expressed similar concerns regarding the lack of consultation. During a consultation on August 7, 2012, the commenter stated that it was their understanding that EPA would describe to the Community the proposed regulation prior to the rulemaking being issued. Instead, the commenter said, EPA called the night before issuing the rule, which the commenter said was inadequate and inconsistent with the expectations regarding consultation. The commenter also understood that the rule was to be proposed in

September 2012 but it was not proposed until January 2013 and in the meantime several stakeholders provided additional input to the Agency. However, the Community was not consulted during this time. In addition, the Community expects an explanation of the final rule after it is issued by EPA.

The Hopi Tribe also commented on the lack of consultation and involvement of tribes in developing the regulation. The commenter submitted multiple letters to EPA indicating its concern about not being involved in the development of the rule or consulted but without providing pertinent information. In one of the letters, the commenter said that the government acknowledged the Hopi Tribe as a stakeholder and the intention to work with the Tribe; however, contrary to statements in the Joint Federal Agency Statement on NGS to work with tribes, the Hopi Tribe was not included in the TWG.

The Hopi Tribe specifically indicated that it was denied information regarding the TWG Alternative and the development of the alternative, something the commenter pointed out is essential in order to provide relevant and useful comments to EPA. The commenter said that it has submitted two Freedom of Information Act (FOIA) requests to DOI, which included documentation related to NGS and information documenting DOI's representation of the Hopi Tribe during the negotiation of the TWG Alternative. The commenter said that until it has the

information requested via FOIA, it is not able to provide written comments on the TWG Alternative.

The Hopi Tribe asserted that it is has been treated differently than other tribal stakeholders in the TWG Agreement. For example, the TWG Agreement states that SRP will advocate to EPA the Navajo Nation's treatment as state (TAS) status. The Hopi Tribe indicated that the TWG Alternative protects the economic interests of the Navajo Nation and the Gila Indian Community but compromises the coal revenues of the Hopi Tribe and contains no mitigation measures for the significant and adverse economic impact. The Hopi Tribe indicated that it will be disproportionately and adversely affected by the reduced capacity at NGS.

The Kaibab Band of Paiute Indians expressed similar concerns regarding the lack of involvement of Indian Tribes and demanded that EPA consider the requests of the Kaibab Paiute. The commenter referred to the TWG Agreement and requested that the Kaibab Paiute Indian Reservation receive $2.5 million of the $5 million Local Benefit Fund designated for community projects within 100 miles of NGS (the reservation is 60 miles from NGS). Also, the commenter said that the TWG Agreement promotes the development of clean energy, and based on that provision of the agreement, the commenter requested a 250 MW solar farm.

The Tohono O'odham Nation objected that a number of Indian nations that would be substantially affected by the rule were excluded from the TWG. The commenter noted that it is particularly concerned with maintaining CAP water delivery under whatever rule is finalized by EPA.

Response:

EPA understands the importance of NGS to numerous tribes located in Arizona and the importance of our trust responsibility to Indian tribes affected by NGS. As a result, we have attempted to ensure that these tribes were consulted throughout the rulemaking process. We respectfully disagree that there was a lack of consultation with tribes.

EPA agrees with the Navajo Nation that Executive Order 13175 defines "policies that have tribal implications" to refer to regulations or other actions that have substantial direct effects on one or more Indian tribes.[146] We disagree that EPA's discussion of *direct compliance costs* on tribal governments is not a correct standard for consideration and note that section 5(b) of EO 13175 further states that

> To the extent practicable and permitted by law, no agency shall promulgate any regulation that has tribal implications, that imposes substantial direct compliance costs on Indian tribal governments, and that is not required by statute. . .

[146] http://www.gpo.gov/fdsys/pkg/WCPD-2000-11-13/pdf/WCPD-2000-11-13-Pg2806-2.pdf

In our discussion of EO 13175, we included consideration of *substantial direct compliance costs* to tribal governments, as well as the broader consideration of substantial direct effects on one or more Indian tribes. We conclude that our proposed action on NGS *will* have tribal implications and may have substantial indirect effects on tribes, but will not impose substantial direct compliance costs on Indian tribal governments. We also conclude that this rule is appropriate under the CAA because NGS is a facility that is subject to BART.

In our proposed rule, EPA provided a document that listed all written or telephone correspondence as well as consultation meetings between EPA and Tribes on NGS. Although the commenter suggests that EPA's telephone call to the President of the Navajo Nation one day prior to the signature of the ANPR in August 2009 was our first communication with the Nation on the subject, we note that the timeline includes a meeting between EPA and the Navajo Nation that occurred two months prior to the ANPR to discuss EPA's plans to move forward on an ANPR related to our ongoing BART analyses for FCPP and NGS.[147] EPA further

[147] See listed item indicating consultation meeting on June 10, 2009 between Laura Yoshii, Acting Regional Administrator of EPA Region 9, and President Joe Shirley, Jr., of the Navajo Nation, to discuss moving forward on the ANPR for Four Corners Power Plant and NGS. See document titled "2013_0109 Timeline of all tribal consultations on NGS.docx" in document number 0005 in the docket for this rule.

notes that the ANPR was not a proposed rule. The ANPR was an Advanced Notice of Proposed Rulemaking where we provided the public advance notice of our intention to develop rulemakings for FCPP and NGS. EPA included some initial analysis of two of the BART factors and stated that the "specific purpose of this ANPR is for EPA to collect additional information."[148] Subsequent to the publication of the ANPR in the Federal Register on August 28, 2009, and prior to our proposed rule on NGS, EPA held four consultation meetings with tribes in 2009, eight consultation meetings with tribes in 2010, eight consultation meetings in 2011, and ten consultation meetings with tribes in 2012.[149] Of these meetings, at least eight were held as group consultation sessions where all tribes in Arizona were invited to participate and were provided the opportunity to request individual consultation meetings as well.[150]

The Navajo Nation, the Hopi Tribe, the Gila River Indian Community, the Tohono O'odham Nation, the Ak-Chin Indian Community, the Pascua Yaqui Tribe, the Fort McDowell Yavapai Nation, and the Yavapai-Apache Nation, and the Inter Tribal Council of Arizona submitted comments to EPA on the ANPR. EPA

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[148] See 74 FR 44313 at 44314 (August 28, 2009).
[149] See document titled "2013_0109 Timeline of all tribal consultation on NGS.pdf" in document number 0005 in the docket for the rule at and document titled "Updated Timeline of all Tribal Consultation on NGS_for Final Rule.pdf" in the docket for the rule.
[150] *Id.*, and see, e.g., document 0008 in the docket for the rule

summarized and provided responses to comments received from tribal governments in the TSD for our proposed rule on NGS.[151] The primary concerns expressed by the tribal governments related to the economic importance of NGS and the relationship of NGS with CAP and Indian Water Settlement Agreements. The Navajo Nation also commented on specific aspects of the five-factor analysis for BART, and the Hopi Tribe submitted an economic study it had commissioned that expresses concern that regulatory actions would force NGS to close. In our proposed rule and in our development of our proposed framework for BART Alternatives, including the credit for early installation of LNB/SOFA, EPA recognized the importance of NGS to tribes in Arizona, both in contributing to the economies of the Navajo Nation and Hopi Tribe, and in serving as a source of electrical power for CAP and a source of revenue to the Lower Colorado River Basin Development Fund, as related to water settlement agreements with numerous tribes in Arizona. Based on this recognition, EPA put forth additional options for greater flexibility in the compliance timeframe and invited stakeholders to develop and submit additional BART Alternatives to EPA for consideration.

Following the publication of our proposed rule on February 5, 2013, EPA engaged in 17 consultation meetings with tribes

[151] See page 25 and 26 of the TSD to the Proposed Rule, document 0014 in the docket for this rule.

prior to the January 2014 close of the public comment period.[152] Of these meetings, at least two were held as group consultation sessions where all tribes in Arizona were invited to participate and were provided the opportunity to request individual consultation meetings as well.[153] EPA received comment letters on our proposal and Supplemental Proposal from the Navajo Nation, the Gila River Indian Community, the Tohono O'odham Nation, the Ak-Chin Indian Community, the Tonto Apache Tribe, the San Carlos Apache Tribe, and the Kaibab Band of Paiute Indians.[154] At the request of two tribes for additional time beyond January 6, 2014 to submit comments, EPA agreed that we would consider comments from tribal governments submitted after the close of the comment period. The White Mountain Apache Tribe submitted comments on February 5, 2014.[155] In addition, in response to their request to EPA for information related to NGS, we provided responsive documents to the Hopi Tribe on January 7, 2014.[156] As shown in additional correspondence, the Hopi Tribe requested additional time to submit comments, and EPA again agreed to consider late

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[152] See document titled "Updated Timeline of all Tribal Consultation on NGS_for Final Rule.pdf" in the docket for the rule.
[153] *Id.*
[154] See comment numbers 0340, 0317, 0387, 0402, 0419, and 0421 in the docket for the rule.
[155] See comment number 0440 in the docket for the rule.
[156] See document titled "2014_0107 EPA Letter to Chairman Honanie with Enclosure 1.pdf" in the docket for this rule.

comments from the Hopi Tribe.[157] EPA did not receive any further comments from the Hopi Tribe.

Several tribes also expressed concern that the Technical Work Group included only two tribes, the Navajo Nation and the Gila River Indian Community, and excluded numerous other tribes that also have a significant economic interest in NGS. EPA recognizes that many tribes were not included in the development of the TWG Agreement. EPA was not involved in the formation of the TWG or any of the negotiations between the members of the TWG in developing the TWG Agreement. In addition, our evaluation of the TWG Agreement was for the sole purpose of determining whether Appendix B to the TWG Agreement meets our framework for a "better than BART" Alternative. Therefore, although EPA agrees that many tribes have economic interest in NGS and CAP, EPA does not have any role in the distribution of funds described in the TWG Agreement.

Based on numerous consultation meetings between high-level officials from EPA and elected tribal leaders, beginning in 2009 and extending into 2013, and our development of flexible options for BART Alternatives in response to comments from tribes, EPA considers our consultation on NGS to be consistent with EO 13175 and EPA's policy to engage in early and meaningful consultation

[157] See document titled "2014_0131 Letter from Chairman Honanie.pdf" and document titled "2014_0206 EPA Response to Chairman Honanie_Hopi Tribe.pdf" in the docket for this rule.

with tribes.[158] EPA will provide notification of our Final Rule, in writing, to all tribal governments that submitted comments to EPA on our Proposed Rule or Supplemental Proposal and will provide our written responses to their specific comments. All written correspondence from tribal governments to EPA regarding NGS and our proposed BART determination is available in the docket for this rulemaking.[159]

V. Summary of Final Action

On February 5, 2013, EPA issued a proposed BART analysis of NO_X controls at NGS. Based on that analysis, EPA proposed a NO_X emission limit of 0.055 lb/MMBtu for all three units within five years of a Final Rule. Our proposed rule also set out a framework for evaluating BART alternatives at NGS. EPA proposed a "better than BART" alternative (Alternative 1), consistent with this proposed framework, requiring compliance with a NO_X emission limit of 0.055 lb/MMBtu on one unit per year in 2021, 2022, and 2023. EPA invited stakeholders to submit additional alternatives, consistent with our proposed framework for "better than BART" alternatives, to EPA for consideration.

On July 26, 2013, a stakeholder group, known as the TWG, submitted an agreement among seven diverse entities (TWG

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[158] The EPA policy on Consultation and Coordination with Indian Tribes is posted on the following website: http://www.epa.gov/tribal/consultation/consult-policy.htm

[159] See Appendix A (List of Written Comments) to the RTC and the docket for this rulemaking.

Agreement) that included an additional BART alternative (Appendix B to the TWG Agreement). In general, this alternative includes closure of one unit at NGS, or curtailment of net generating capacity by an equivalent amount, in 2019 and compliance with an emission limit of 0.07 lb/MMBtu on two units at NGS in 2030. The TWG Agreement also included a provision requiring the owners of NGS to cease conventional coal-fired generation at NGS by the end of 2044. EPA independently evaluated Appendix B to the TWG Agreement to determine whether it complied with the framework we put forth in our Proposed Rule, as well as the statutory and regulatory requirements in the CAA and the RHR.

On October 22, 2013, EPA published a Supplemental Proposal. Our Supplemental Proposal contained a detailed evaluation of Appendix B to the TWG Agreement along with a discussion of our legal rationale for proposing to approve requirements consistent with the TWG Agreement as a "better than BART" alternative. Our Supplemental Proposal and this Final Rule refer to our regulations that are generally consistent with Appendix B to the TWG Agreement as the "TWG Alternative". The Supplemental Proposal (i.e. the TWG Alternative) included regulatory requirements to achieve substantial NO_X reductions over time, as well as a cap in cumulative NO_X emissions from NGS over 2009-2044 (2009-2044 NO_X Cap) to ensure that lifetime emissions from NGS

under the TWG Alternative do not exceed lifetime emissions that would have otherwise occurred under our proposed BART determination for NGS (BART Benchmark).

Based on our review of all comments we received on the Proposed Rule and Supplemental Proposal, EPA is taking action to finalize requirements consistent with the TWG Agreement, as a "better than BART" Alternative (TWG Alternative) put forth in our Supplemental Proposal. EPA is also taking final action to determine that a BART Benchmark, consistent with our proposed BART determination, is appropriate for establishing the 2009-2044 NO_X Cap under the TWG Alternative. EPA is not finalizing our proposed BART determination for NGS in the regulatory requirements of this Final Rule, and EPA is not taking action to finalize Alternative 1, the "better than BART" Alternative we put forth in our Proposed Rule.

This Final Action is expected to result in over an 80 percent reduction in NO_X emissions and to significantly reduce the impact of NGS on visibility at 11 mandatory Class I Federal areas. EPA's action to finalize requirements consistent with the TWG Agreement as a "better than BART" alternative for NGS will ensure that lifetime NO_X emissions from NGS do not exceed the BART Benchmark.

VI. 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, Navajo Generating Station, 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 Navajo Generating Station is not a small entity and the FIP for Navajo Generating Station 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). We recognize that several tribes located in Arizona have expressed concerns regarding potential indirect effects of this Final Rule; however, these indirect effects are not direct compliance costs or requirements on small entities.

D. Unfunded Mandates Reform Act (UMRA)

This rule will impose an enforceable duty on the private sector owners of Navajo Generating Station. 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 three units at NGS if it had been required to comply with BART does not exceed $100

million (in 1996 dollars) in any one year. Because we are finalizing requirements consistent with Appendix B to the TWG Agreement, which provides more flexibility than EPA's proposed BART determination and would, at most, require installation and operation of SCR on two units, rather than three units at NGS, EPA expects the total annual cost of implementing the TWG Alternative to also not exceed $100 million (in 1996 dollars). 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 NO_X from a single source, the Navajo Generating Station.

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. EO 13175 defines "policies that have tribal implications" to refer to regulations or other actions that have substantial direct effects on one or more Indian tribes.

EPA has concluded that this Final Action will have tribal implications based on the direct relationship between NGS and the Navajo Nation. In addition, EPA anticipates that the following direct and indirect effects may result from the TWG Alternative and Reclamation's ownership interest in NGS: decreased revenues to the Hopi Tribe and the Navajo Nation associated with the closure of one unit or curtailment of electricity generation in 2019; and increased water costs to tribes associated with the installation of controls to meet an emission limit of 0.07 lb/MMBtu in 2030. However, it will neither pre-empt Tribal law nor impose substantial direct

compliance costs on tribal governments (no tribal government is an owner or participant in NGS and therefore no tribal government will be required to pay direct costs of compliance). We note that the Navajo Nation has the option to purchase up to a 170 MW share of NGS in 2019. EPA understands that the Navajo Nation has not yet made its decision and therefore, currently, no tribal government is a Participant in NGS.

The owners of NGS, together with the Navajo Nation, the Gila River Indian Community, and several other stakeholders, submitted the TWG Agreement to EPA that would provide compliance flexibility to the owners and result in greater reasonable progress than BART toward the national visibility goal. This TWG Alternative involves closure or curtailment of production on one unit of NGS and installation of add-on pollution controls to the remaining two units. EPA issued a Supplemental Proposal proposing to find that the TWG Alternative met the requirements of the CAA and RHR. Today, EPA is finalizing requirements consistent with the TWG Agreement. Because the TWG Alternative involves the closure or curtailment of production on one unit and an associated decline in the amount of coal mined and combusted, to the extent that taxes or royalties paid to the Hopi Tribe and the Navajo Nation by the operators of Navajo Generating Station and the Kayenta Mine, are tied to the amount of coal that is mined or the amount of electricity that is

generated at NGS, the revenues to the Hopi Tribe and Navajo Nation may be expected to decline. In addition, under the TWG Alternative, when the installation of add-on pollution controls occurs in 2030, EPA expects the CAWCD variable OM&R water rate to increase, affecting tribes with allocations of CAP water.

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 first put forth an ANPR on August 28, 2009 to accept comment on preliminary information provided by FCPP and NGS and to begin the consultation process with the Federal Land Managers and affected tribes.

EPA received numerous comments on the ANPR from tribes and tribal organizations, including the Navajo Nation, Hopi Tribe, Gila River Indian Community, Ak-Chin Indian Community, Tohono O'odham Nation, Pascua Yaqui Tribe, Fort McDowell Yavapai Nation, Yavapai-Apache Nation, and the Inter Tribal Council of Arizona. Comments from the Navajo Nation on NGS and from the Hopi Tribe focused on the significant contribution of coal-related royalties, taxes, and employment at NGS and the Kayenta Mine to the economies of the Navajo Nation and the Hopi Tribe. Comments from the Gila River Indian Community, the Tohono O'odham Nation, and other tribes located in Arizona focused on the importance of continued operation of NGS as a source of power to CAP, in order for the federal government to meet

obligations under existing water settlement agreements. The importance to tribes of continued operation of NGS and affordable water costs cannot be overemphasized.

Given the extent of federal and tribal interests in NGS and the federal government's trust responsibility to Indian tribes, on January 4, 2013, EPA, DOI, and DOE signed a joint federal agency statement committing to collaborate on several short- and long-term goals, including analyzing and pursuing strategies for providing clean, affordable and reliable power, affordable and sustainable water, and sustainable economic development to key stakeholders who currently depend on NGS.[160] The partner agencies have already begun to work together with stakeholders to identify and undertake actions that support implementation of BART, including seeking funding to cover expenses for pollution control or other necessary upgrades for the federal portion of NGS. The agencies have also begun work to jointly support a phase 2 report to analyze a full range of clean energy options for NGS. Finally, the agencies intend to work with stakeholders to develop a roadmap for achieving long-term, innovative clean energy solutions for NGS.

In our February 5, 2013 Proposed Rule, EPA exercised discretion to include in our analysis of Factor 2 (Energy and

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[160] See *Joint Federal Agency Statement Regarding Navajo Generating Station*, dated January 4, 2013, in the docket for this proposed rulemaking.

Non-Air Quality Impacts), an examination of the viability of continued operation of NGS if new NO_X controls are required, to address the concern expressed by numerous tribes that a BART determination requiring SCR would force NGS to close. Our analysis showed that although SCR would increase the cost of electricity generation at NGS, installing and operating SCR at NGS would still be less costly than replacing NGS with power purchased from elsewhere in the West.[161] However, we also recognized that the timing of regulatory compliance is an important consideration given potential ownership changes and other requirements related to the extension of the NGS lease and other rights-of-way agreements. As part of our Factor 2 analysis, we also estimated potential water rate increases to tribes.[162] As discussed in our proposed rule, EPA considers the potential economic impacts to tribes to argue for flexibility in the compliance timeframe for NGS.

In addition to our proposed BART determination for NGS, EPA also proposed a framework for evaluating alternatives to BART that provide options for flexibility in achieving emission reductions at NGS. EPA proposed an alternative to BART consistent with our proposed framework and invited stakeholders to submit other alternatives to BART that reduce NO_X emissions at

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[161] See Factor 2 analysis, 78 FR at 8281-8284 (February 5, 2013).
[162] *Id.*

NGS while providing long-term, sustainable benefits for tribes.[163] We noted that the extended timeframe for compliance would not, in itself, avoid or mitigate increases in water rates for tribes located in Arizona; however, it would provide time for the collaborating federal agencies to explore options to avoid or minimize potential impacts to tribes, including seeking funding to cover the expenses for the federal portion of pollution control at NGS.[164]

Following our Proposed Rule, the TWG, which included the Navajo Nation, the Gila River Indian Community, and the Interior, together with four additional groups, submitted their agreement (TWG Agreement) that contained an additional BART alternative for consideration (Appendix B to the TWG Agreement). Although EPA was not part of the TWG, we note that the TWG Agreement included seven elements, including elements directly or indirectly related to tribes, i.e., commitments by Interior to mitigate potential impacts from EPA's final BART rule to Affected Tribes and a commitment by SRP to make funds available for a Local Benefit Fund for community improvement projects within 100 miles of NGS or the Kayenta Mine.[165]

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[163] Id. at 8291.
[164] Id. at 8289.
[165] As described in our Supplemental Proposal (78 FR at 62512, October 22, 2013), the seven elements of the TWG Agreement were (1) a description of a "Reasonable Progress Alternative to BART" (Appendix B to the TWG Agreement); (2) a study of options by Reclamation for replacing the federal share of

EPA has met with tribes on numerous occasions to discuss the significance of NGS to tribal economies and tribal water interests in Arizona.[166] Consultations with tribes included potential economic impacts associated with a BART determination for NGS, as well as potential impacts from EPA's Mercury and Air Toxics Standards (MATS) rulemaking.

In recognition of the unusual complexity of regulating NGS, representatives from EPA, including the Assistant Administrator and the Deputy Assistant Administrator for the Office of Air and Radiation and the Regional Administrator for Region 9, visited NGS and affected communities in the area. EPA officials have also met with additional stakeholders, at various locations, including EPA offices in San Francisco, California and Washington, D.C., and offices of individual tribal governing councils and the Inter Tribal Council of Arizona.

Following the publication of our proposed rule on February 5, 2013, EPA engaged in 17 consultation meetings with tribes

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energy being generated from NGS with low-emitting energy; (3) commitments by Interior to reduce or offset emissions of carbon dioxide (CO_2) by three percent per year and facilitate the development of clean energy resources; (4) commitments by Interior to mitigate potential impacts from EPA's final BART rule to Affected Tribes; (5) a commitment by Interior to carry out the Phase 2 Study by the National Renewable Energy Laboratory (NREL) for the purposes of studying options for the future of NGS; (6) a commitment by SRP to make funds available for a Local Benefit Fund for community improvement projects within 100 miles of NGS or the Kayenta Mine; and (7) a summary of obligations of the Parties to the Agreement and miscellaneous legal provisions.

[166] See document titled "Updated Timeline of All Tribal Consultations on NGS for Final Rule.docx" in the docket for this rulemaking.

prior to the January 2014 close of the public comment period.[167] Of these meetings, at least two were held as group consultation sessions where all tribes in Arizona were invited to participate and were provided the opportunity to request individual consultation meetings as well.[168] EPA received comment letters on our proposal and Supplemental Proposal from the Navajo Nation, the Gila River Indian Community, the Tohono O'odham Nation, the Ak-Chin Indian Community, the Tonto Apache Tribe, the San Carlos Apache Tribe, and the Kaibab Band of Paiute Indians.[169] At the request of two tribes for additional time beyond January 6, 2014 to submit comments, EPA exercised our discretion to accept comments from tribal governments after the close of the comment period. The White Mountain Apache Tribe submitted comments on February 5, 2014.[170] In addition, in response to their request to EPA for information related to NGS, we provided responsive documents to the Hopi Tribe on January 7, 2014.[171] As shown in additional correspondence, the Hopi Tribe requested additional time to submit comments, and EPA continued to exercise our

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[167] See document titled "Updated Timeline of all Tribal Consultation on NGS_for Final Rule.pdf" in the docket for the rule.
[168] *Id.*
[169] See comment numbers 0340, 0317, 0387, 0402, 0419, and 0421 in the docket for the rule.
[170] See comment number 0440 in the docket for the rule.
[171] See document titled "2014_0107 EPA Letter to Chairman Honanie with Enclosure 1.pdf" in the docket for this rule.

discretion to accept late comments from the Hopi Tribe.[172] Our separate response to comments document contains a summary of all substantive comments and EPA's responses to those comments.

Several tribes expressed concern that the Technical Work Group included only two tribes, the Navajo Nation and the Gila River Indian Community, and excluded numerous other tribes that also have a significant economic interest in NGS. Several tribes also asserted that the Proposed Rule and Supplemental Proposal have disproportionate impacts on tribes with CAP water settlements and urged EPA to develop an alternative regulation that does not place an additional burden on Indian tribes. Another tribe requested that a portion of the funds identified in the TWG Agreement be designated to their tribe.

EPA recognizes that many tribes did not participate in the development of the TWG Agreement. EPA was not involved in the formation of the Technical Work Group or any of the negotiations between the members of the TWG in developing the TWG Agreement. In addition, our evaluation of the TWG Agreement was for the sole purpose of determining whether the TWG Alternative (Appendix B to the TWG Agreement) meets our framework for a "better than BART" Alternative. Therefore, although EPA agrees that many tribes have economic interests in NGS and CAP, EPA did

[172] See document titled "2014_0131 Letter from Chairman Honanie.pdf" and document titled "2014_0206 EPA Response to Chairman Honanie_Hopi Tribe.pdf" in the docket for this rule.

not have a role in the TWG Agreement and does not have any role in the distribution of funds described in the TWG Agreement.

EPA recognizes that our final action will have tribal implications. Because we are taking action to finalize requirements consistent with the TWG Agreement, EPA anticipates that increases in CAP water costs as a result of the installation of new air pollution controls at NGS would not occur until 2030. In addition, as stated elsewhere, EPA has committed to collaborating with other federal agencies to explore options to avoid or minimize potential impacts to tribes, including seeking funding to cover the expenses for the federal portion of pollution control at NGS.

In summary, EPA has taken numerous steps, as described in the preceding paragraphs, to evaluate the potential impacts on Tribes and to identify and provide the flexibility for others to develop alternative approaches that would meet the requirements of the CAA and the RHR while being as sensitive as possible to concerns raised by Tribes. Through the Joint Federal Agency Statement on NGS, the federal government has recognized its obligations through its trust responsibility and through its specific historical and ongoing involvement with NGS and water rights settlements with Tribes. That agreement reflects our commitment to ongoing engagement with affected Tribes and to the pursuit of a long-term solution for electricity generation that

is protective of the economic interests of Tribes and public health and the environment.

Based on numerous consultation meetings between high-level officials from EPA and elected tribal leaders, beginning in 2009 and extending into 2013, and our development of flexible options for BART Alternatives in response to comments from tribes, EPA considers our consultation on NGS to be consistent with EO 13175 and EPA's policy to engage in early and meaningful consultation with tribes.[173]

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.

[173] EPA's policy on Consultation and Coordination with Indian Tribes is posted on the following website: http://www.epa.gov/tribal/consultation/consult-policy.htm

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), Pub L. No. 104-113, 12 (10) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures and business

practices) that are developed or adopted by the VCS bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when the Agency decides not to use available and applicable VCS.

Consistent with the NTTAA, the Agency conducted a search to identify potentially applicable VCS. For the measurements listed below, there are a number of VCS that appear to have possible use in lieu of the EPA test methods and performance specifications (40 CFR Part 60, Appendices A and B) noted next to the measurement requirements. It would not be practical to specify these standards in the current 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.

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.

EPA recognizes that numerous commenters have stated that this rulemaking has environmental justice implications because NGS, which is among the largest coal-fired power plants in the country, is located on the Navajo Nation. Commenters have also expressed concern that the documents associated with this rule are too technical for community members to understand. Some commenters have also argued that EPA should apply the same standard to NGS as other coal-burning power plants (e.g., Four

Corners Power Plant), and that the extended compliance timeframe for NGS is an environmental justice issue.

Fair treatment and meaningful involvement are critical components of environmental justice and EPA takes fair treatment and meaningful involvement seriously. We provided numerous opportunities for tribal governments, environmental and tribal non-governmental organizations, and other interested stakeholders to provide input in the development of our Proposed Rule, Supplemental Proposal, and Final Rule for NGS.

As discussed in more detail in the RTC, EPA began our public involvement process for a BART determination for NGS in 2009, when we published an Advanced Notice of Proposed Rulemaking (ANPR). During 2009 through 2012, EPA met with various stakeholders, including tribal governments and Navajo environmental groups to discuss NGS and hear concerns related to a BART determination for this facility.[174] During the 11-month comment period for our Proposed Rule, EPA continued to meet with stakeholders to discuss our proposed BART determination for NGS and our framework for "better than BART" alternatives.[175]

On July 26, 2013, the TWG submitted the TWG Agreement to EPA for consideration. EPA posted the TWG Agreement to our

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[174] See, for example document number 0232 in the ANPR docket at EPA-R09-OAR-2009-0598, and document numbers 0008 and 0009 in the docket for this rule at EPA-R09-OAR-2013-0009.

[175] See, for example, document number 0150, 0152, 0166, 0173, 0302, and 0303 in the docket for this rule.

docket on the same day to provide the public an opportunity to review it.[176] On September 25, 2013, EPA posted a Supplemental Proposal, along with supporting documents, to the docket to allow for early review by interested parties.[177] The Supplemental Proposal was published in the Federal Register on October 22, 2013. The comment period for the Supplemental Proposal closed on the same day as the BART proposal, on January 6, 2014. The Supplemental Proposal also included notice of five open house and public hearing events EPA scheduled throughout Arizona in November 2013. The open houses allowed members of the public an opportunity to talk with representatives from EPA and ask questions. EPA held events at the LeChee Chapter House, located on the Navajo Nation, as well as in Page, Arizona, and provided oral interpretation services between English and Diné (the Navajo language). EPA also held an event at the Hopi Day School, located in Kykotsmovi, the seat of the Hopi tribal government.[178] Finally, we also held events in Phoenix and in Tucson, Arizona, to allow stakeholders in central and southern Arizona, representing CAP water interests and several tribes receiving

[176] See document number 0122 in docket for this rulemaking.
[177] See document numbers 0182, 0183, and 0184 in the docket for this rulemaking.
[178] EPA engaged with the government of the Hopi Tribe to search for an oral interpreter between English and the Hopi language, but the Hopi Tribe was unable to locate anyone to provide those services.

CAP water, the opportunity to provide comment and talk with representatives from EPA.

EPA understands that the TSD and *Federal Register* notices include technical information that may be difficult to understand. EPA provided Fact Sheets and handouts, written in plain language, at the open house and public hearing events.[179] EPA representatives were also present at the events to discuss and explain our Proposals.

EPA recognizes that some commenters may view the timeframe for compliance under EPA's framework for BART Alternatives as an environmental justice issue. We note that the Navajo Nation and other Tribes expressed concern with the potential economic impacts of this rulemaking. The flexibility we provided has allowed for a balance between these considerations.

We further note that the LNB/SOFA credit, an important component of the timeframe under our "better than BART" framework, was based on real, actual emission reductions beginning in 2009 that were voluntary and not required by any rule or regulation. We also note that the TWG Alternative, which calls for closure of one unit in 2019 (or equivalent curtailment), will result not only in reductions of NO_X, but also reductions of several other pollutants, including SO_2, PM, CO_2,

[179] See document 0219 in the docket for this rulemaking.

and hazardous air pollutants. Although the compliance date of emission limit for two units (achievable with the installation of SCR) under the TWG Alternative is in 2030, over 2009 to 2044, the TWG Alternative will result in greater NO_X reductions than would have been achieved under BART, will result in step-wise reductions of NO_X and additional pollutants that affect visibility or human health, and will provide an enforceable mechanism to ensure that NGS ceases conventional coal-fired electricity generation at NGS by the end of 2044. All of these measures will increase the level of environmental protection for communities affected by NGS.

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 [***insert date 60 days from publication in Federal Register***]. 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: July 28, 2014.

Gina McCarthy,

Administrator.

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

PART 49--INDIAN COUNTRY: AIR QUALITY PLANNING AND MANAGEMENT

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

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

2. Section 49.5513 is amended by adding paragraph (j) to read as follows:

§ 49.5513 Federal Implementation Plan Provisions for Navajo Generating Station, Navajo Nation.

* * * * *

(j)(1) *Applicability*. Regional Haze Best Available Retrofit Technology limits for NO_X for this plant are in addition to the requirements of paragraphs (a) through (i) of this section. The provisions of this paragraph (j) are severable, and if any provision of this paragraph (j), or the application of any provision of this paragraph (j) to any owner/operator or circumstance, is held invalid, the application of such provision to other owner/operators and other circumstances, and the remainder of this paragraph (j), will not be affected thereby. Nothing in this paragraph (j) allows or authorizes any Unit to emit NO_X at a rate that exceeds its existing emission limit of

0.24 lb/MMBtu as established by EPA permit AZ 08-01 issued on November 20, 2008.

(2) *Definitions*. Terms not defined below have the meaning given to them in the Clean Air Act or EPA's regulations implementing the Clean Air Act and in paragraph (c) of this section. For purposes of this paragraph (j):

(i) *2009-2029 NO_X Cap* means a limit on emissions from Units 1, 2, and 3 of no more than 416,865 tons of NO_X.

(ii) *2009-2044 NO_X Cap* means a limit on emissions from Units 1, 2, and 3 of no more than 494,899 tons of NO_X.

(iii) *Boiler operating day* means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the steam-generating unit. It is not necessary for fuel to be combusted the entire 24-hour period.

(iv) *Coal-fired unit* means any of Units 1, 2, or 3 at Navajo Generating Station.

(v) *Continuous Emission Monitoring System or CEMS* means the equipment required by 40 CFR part 75 and this paragraph (j).

(vi) *Departing Participant* means either Los Angeles Department of Water and Power or Nevada Energy, also known as NV Energy or Nevada Power Company.

(vii) *Emission limitation or emission limit* means the federal emissions limitation required by this paragraph.

(viii) *Existing Participant* means the existing owners of NGS: Los Angeles Department of Water and Power; Nevada Energy, also known as NV Energy or Nevada Power Company; Salt River Project Agricultural Improvement and Power District; Arizona Public Service Company; and Tucson Electric Company, together with the United States, acting through the Bureau of Reclamation.

(ix) *lb* means pound(s).

(x) *Low-NO_x Burners and Separated Over-Fire Air* or *LNB/SOFA* means combustion controls installed on each Unit between 2009 and 2011.

(xi) *Navajo Nation* means the Navajo Nation, a federally recognized Indian Tribe.

(xii) *NGS or Navajo Generating Station* means the steam electric generating station located on the Navajo Reservation near Page, Arizona, consisting of Units 1, 2, and 3, each 750 MW (nameplate rating), the switchyard facilities, and all facilities and structures used or related thereto.

(xiii) *NO_X* means nitrogen oxides expressed as nitrogen dioxide (NO_2).

(xiv) *Owner/operator* means any person(s) who own(s) or who operate(s), control(s), or supervise(s) one more of the Units of the Navajo Generating Station.

(xv) *MMBtu* means million British thermal unit(s).

(xvi) *Operating hour* means any hour that fossil fuel is fired in the unit.

(xvii) *Unit* means any of Units 1, 2, or 3 at Navajo Generating Station.

(xviii) *Valid data* means CEMs data that is not out of control as defined in 40 CFR part 75.

(3) *"Better than BART" alternative for NO_X*. Total cumulative NO_X emissions from Units 1, 2, and 3, from January 1, 2009 to December 31, 2044, may not exceed the 2009-2044 NO_X Cap. The owner/operator must implement the applicable operating scenario, under paragraph (j)(3)(i) of this section, to ensure NO_X emission reductions sufficient to maintain total cumulative NO_X emissions from Units 1, 2, and 3 below the 2009-2044 NO_X Cap.

(i) *Operating scenarios to comply with 2009-2044 NO_X Cap*. The owner/operator must comply with one of the following operating scenarios based on the applicability provisions in paragraph (j)(3)(ii)of this section.

(A) *Alternative A1*. (1) By December 31, 2019, the owner/operator must permanently cease operation of one coal-fired Unit; and

(2) By December 31, 2030, the owner/operator must comply with a NO_X emission limit of 0.07 lb/MMBtu, based on a rolling average of 30 boiler operating days, on each of the two remaining coal-fired Units.

(3) The owner/operator must permanently cease operation of Units 1, 2, and 3 if total cumulative emissions of NO_X from Units 1, 2, and 3, based on annual reports required under paragraph (j)(4)(ii) of this section, exceed the 2009-2044 NO_X Cap at any time prior to December 31, 2044.

(B) *Alternative A2.* (1) By December 31, 2019, the owner/operator must permanently cease operation of one coal-fired Unit; and

(2) By December 31, 2019, the owner/operator may increase net generating capacity of the remaining two coal-fired Units by a combined total of no more than 189 MW. The actual increase in net generating capacity shall be limited by the sum of 19 MW and the ownership interest, in net MW capacity, purchased by the Navajo Nation by December 31, 2019. Nothing in paragraph (j) of this section alters any regulatory requirements, including those for pre-construction permitting, associated with any increase in the net generating capacity of the Unit(s).

(3) By December 31, 2030, the owner/operator must comply with a NO_X emission limit of 0.07 lb/MMBtu, based on a rolling average of 30 boiler operating days, on each of the two remaining coal-fired Units.

(4) The owner/operator must permanently cease operation of Units 1, 2, and 3 if total cumulative emissions of NO_X from Units 1, 2, and 3, based on annual reports required under paragraph

(j)(4)(ii) of this section, exceed the 2009-2044 NO_X Cap at any time prior to December 31, 2044.

(C) *Alternative A3.* (1) By December 31, 2019, the owner/operator must reduce the net generating capacity of NGS by no less than 561 MW. The actual reduction in net generating capacity of NGS shall be determined by the difference between 731 MW and the ownership interest, in net MW capacity and limited to 170 MW, purchased by the Navajo Nation by December 31, 2019.

(2) By December 31, 2030, the owner/operator must comply with a NO_X emission limit of 0.07 lb/MMBtu, based on a rolling average of 30 boiler operating days, on two Units.

(3) The owner/operator must permanently cease operation of Units 1, 2, and 3 if total cumulative emissions of NO_X from Units 1, 2, and 3, based on annual reports required under paragraph (j)(4)(ii) of this section, exceed the 2009-2044 NO_X Cap at any time prior to December 31, 2044.

(D) *Alternative B.* (1) Total cumulative NO_X emissions from Units 1, 2, and 3 may not exceed the 2009-2044 NO_x Cap or the 2009-2029 NO_X Cap.

(2) The owner/operator must cease operation of Units 1, 2, and 3 if total cumulative emissions of NO_X from Units 1, 2, and 3, based on annual reports required under paragraph (j)(4)(ii)of this section, exceed the 2009-2029 NO_X Cap at any time prior to

December 31, 2029. The owner/operator may restart operation of Units 1, 2, and 3 after January 1, 2030, as long as total cumulative emissions of NO_X from Units 1, 2, and 3, based on annual reports required under paragraph (j)(4)(ii) of this section, do not exceed the 2009-2044 NO_X Cap.

(3) The owner/operator must permanently cease operation of Units 1, 2, and 3 if total cumulative emissions of NO_X from Units 1, 2, and 3, based on annual reports required under paragraph (j)(4)(ii)), exceed the 2009-2044 NO_X Cap at any time prior to December 31, 2044.

(ii) *Applicability of alternatives*. (A) Alternative A1 applies if by December 31, 2019, one of the following occurs:

(1) Both of the Departing Participants retire their ownership interests in NGS by December 31, 2019, and the Navajo Nation does not purchase an ownership interest in NGS; or

(2) Both of the Departing Participants sell their ownership interests in NGS to Existing Participants, and the Navajo Nation does not purchase an ownership interest in NGS; or

(3) One of the Departing Participants retires its ownership interest in NGS and the other Departing Participant sells its ownership interest in NGS to an Existing Participant, and the Navajo Nation does not purchase an ownership interest in NGS.

(B) Alternative A2 applies if by December 31, 2019, one of the following occurs:

(1) Both of the Departing Participants sell their ownership interests in NGS to Existing Participants, the Navajo Nation has purchased an ownership interest in NGS, and the owner/operator has increased net generating capacity of the two remaining Units by a combined total of no more than 189 MW; or

(2) One of the Departing Participants retires its ownership interest in NGS and the other Departing Participant sells its ownership interest in NGS to an Existing Participant, the Navajo Nation has purchased an ownership interest in NGS, and the owner/operator has increased net generating capacity of the two remaining Units by a combined total of no more than 189 MW.

(C) Alternative A3 applies if by December 31, 2019, one of the following occurs:

(1) Both of the Departing Participants sell their ownership interests in NGS to Existing Participants, the Navajo Nation has purchased an ownership interest in NGS, and the owner/operator has not increased net generating capacity of the Units at NGS; or

(2) One of the Departing Participants retires its ownership interest in NGS and the other Departing Participant sells its ownership interest in NGS to an Existing Participant, the Navajo Nation has purchased an ownership interest in NGS, and the owner/operator has not increased net generating capacity of the Units at NGS.

(D) Alternative B applies if, by December 31, 2019, if one of the following occurs:

(1) Any of the Departing Participants sell their ownership interests in NGS to a Party other than the Navajo Nation that is not an Existing Participant, or

(2) Any of the Departing Participants remains as a participant in NGS.

(iii) By December 22, 2044, the owner/operator shall permanently cease conventional coal-fired electricity generation by all coal-fired Units at NGS.

(4) *Reporting and implementation requirements for BART.* (i) No later than December 1, 2019, the owner/operator must notify EPA of the applicable Alternative for ensuring compliance with the 2009-2044 NO_x Cap.

(ii) Beginning in 2015, and annually thereafter until the earlier of December 22, 2044 or the date on which the owner/operator ceases conventional coal-fired electricity generation by all coal-fired Units at NGS, the owner/operator must report to EPA, the annual heat input, the annual emissions of sulfur dioxide, carbon dioxide, and NO_X from the previous full calendar year. In addition, the owner/operator must also report total cumulative emissions of NO_X from NGS to assure compliance with the 2009-2044 NO_X Cap and the 2009-2029 NO_X Cap (if applicable). The owner/operator must make this report available

to the public, either through a link on its website or directly on its website. The report must be made available within 30 days of the submittal deadline associated with the annual emission inventory required by the Part 71 Operating Permit for NGS.

(iii) No later than December 31, 2020, the owner/operator must submit an application to revise its existing Part 71 Operating Permit to incorporate the requirements and emission limits of the applicable Alternative to BART under paragraph (j)(3) of this section. The Part 71 Operating Permit for NGS must incorporate practically enforceable limits for NO_X of 0.24 lb/MMBtu, on a 30-day rolling average basis, for each Unit equipped with LNB/SOFA, and 0.07 lb/MMBtu, on a rolling average basis of 30 boiler operating days, for each Unit equipped with SCR, as federally enforceable permit conditions.

(iv) In addition to the requirements of paragraphs (j)(4)(i), (ii) and (iii) of this section, if Alternative B applies, the owner/operator must submit annual Emission Reduction Plans to the Regional Administrator.

(A) No later than December 31, 2019 and annually thereafter through December 31, 2028, the owner/operator must submit an Emission Reduction Plan containing anticipated year-by-year emissions from Units 1, 2, and 3 covering the period from 2020 to 2029 that will assure that the operation of NGS will result in emissions of NO_X that do not exceed the 2009-2029 NO_X Cap. The

Emission Reduction Plan may contain several potential operating scenarios and must set forth the past annual actual emissions and the projected emissions for each potential operating scenario. Each potential operating scenario must demonstrate compliance with the 2009-2029 NO_X Cap. The Emission Reduction Plan shall identify emission reduction measures that may include, but are not limited to, the installation of advanced emission controls, a reduction in generation output, or other operating strategies determined by the owner/operator. The owner/operator may revise the potential operating scenarios set forth in the Emission Reduction Plan, provided the revised plan ensure that NO_X emissions remain below the 2009-2029 NO_X Cap.

(B) No later than December 31, 2029 and annually thereafter, the owner/operator shall submit an Emission Reduction Plan containing year-by-year emissions covering the period from January 1, 2030 to December 31, 2044 that will assure that the operation of NGS will result in emissions of NO_X that do not exceed the 2009-2044 NO_X Cap. The Emission Reduction Plan shall identify emission reduction measures that may include, but are not limited to, the installation of advanced emission controls, a reduction in generation output, or other operating strategies determined by the owner/operator. The owner/operator may revise the potential operating scenarios set

forth in the Emission Reduction Plan, provided the revised plan ensure that NO_X emissions remain below the 2009-2044 NO_X Cap.

(C) The requirement to submit annual Emission Reduction Plans beginning no later than December 31, 2019, shall be incorporated into the Part 71 Operating Permit for NGS as federally enforceable permit conditions.

(5) *Continuous emission monitoring system (CEMS).* (i) At all times, the owner/operator of each unit must maintain, calibrate, and operate a CEMS, in full compliance with the requirements found at 40 CFR part 75, to accurately measure NO_X, diluent, and stack gas volumetric flow rate from each unit. All hourly valid data will be used to determine compliance with the emission limitations for NO_X in paragraph (j)(3) of this section for each unit. If the CEMs data is not valid, that CEMs data shall be treated as missing data and not used to calculate the emission average. CEMs data does not need to be bias adjusted as defined in 40 CFR part 75. Each required CEMS must obtain valid data for at least 90 percent of the unit operating hours, on an annual basis.

(ii) The owner/operator of each unit shall comply with the quality assurance procedures for CEMS found in 40 CFR part 75. In addition to these Part 75 requirements, relative accuracy test audits shall be calculated for both the NO_X pounds per hour measurement and the heat input measurement. The calculation of

NO_X pounds per hour and heat input relative accuracy shall be evaluated each time the CEMS undergo relative accuracy testing.

(6) *Compliance determination for NO_X emission limits*. (i) Compliance with the NO_X emission limits under paragraphs (j)(3)(i) of this section shall be determined on a rolling average basis of thirty (30) Boiler Operating Days on a unit by unit basis. Compliance shall be calculated in accordance with the following procedure: sum the total pounds of NO_X emitted from the Unit during the current Boiler Operating Day and the previous twenty-nine (29) Boiler Operating Days; sum the total heat input to the Unit in MMBtu during the current Boiler Operating Day and the previous twenty-nine (29) Boiler Operating Days; and divide the total number of pounds of NO_X by the total heat input in MMBtu during the thirty (30) Boiler Operating Days. A new 30 Boiler Operating Day rolling average shall be calculated for each new Boiler Operating Day. Each 30 Boiler Operating Day rolling average shall include all emissions that occur during periods within any Boiler Operating Day, including emissions from startup, shutdown, and malfunction.

(ii) 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 for that 30 boiler operating day period.

(7) *Recordkeeping*. The owner/operator of each Unit must maintain the following records until the earlier of December 22, 2044 or the date that conventional coal-fired operation of all units at NGS permanently ceases:

(i) All CEMS data, including the date, place, and time of sampling or measurement; parameters sampled or measured; and results as required by Part 75 and as necessary to calculate each units pounds of NO_X and heat input for each hour.

(ii) Each Boiler Operating Day rolling average emission rate for NO_X calculated in accordance with paragraph (j)(6)(i) of this section.

(iii) Each unit's 30 Boiler Operating Day pounds of NO_X and heat input.

(iv) Records of quality assurance and quality control activities for emissions measuring systems including, but not limited to, any records required by 40 CFR part 75.

(v) Records of the relative accuracy calculation of the NO_X lb/hr measurement and hourly heat input.

(vi) Any other records required by 40 CFR part 75.

(8) *Reporting*. All reports and notifications under this paragraph (j) must be submitted to the Director, Navajo Environmental Protection Agency, P.O. Box 339, Window Rock, Arizona 86515, and to the Director of Enforcement Division, U.S. EPA Region IX, at 75 Hawthorne Street, San Francisco, CA 94105.

(i) The owner/operator must notify EPA within two weeks after completion of installation of NO_X control technology on any of the units subject to this section.

(ii) Within 30 days after the first applicable compliance date in paragraph (j)(3) of this section and within 30 days of every second calendar quarter thereafter (i.e., semi-annually), the owner/operator must submit a report that lists for each calendar day, calculated in accordance with paragraph (j)(6) of this section, total lb of NO_X and heat input (as used to calculate compliance per paragraph (j)(6) of this section, for each unit's last 30 boiler operating days. The owner/operator must include the results of the last relative accuracy test audit and the calculated relative accuracy for lb/hr NO_X and heat input performed 45 days prior to the end of that reporting period. The end of the year report shall also include the percent valid data for each NO_X, diluent, and flow monitor used in the calculations of compliance with paragraph (j)(6) of this section.

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

violation of any standard or applicable emission limit in the plan.

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

(11) *Affirmative defense*. The affirmative defense provisions of paragraphs (c)(2) and (i) of this section do not apply to this paragraph (j).

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