

(kk) Limited Liability Company Krona Bank
 (ll) National Standard Bank Joint Stock Company
 (mm) New Moscow Bank
 (nn) NK Bank Joint Stock Company
 (oo) Primorsky Territorial Commercial Bank Society with Limited Liability
 (pp) Public Joint Stock Commercial Bank Derzhava
 (qq) Public Joint Stock Company Bank Alexandrovsky
 (rr) Public Joint Stock Company Bank Sinara
 (ss) Public Joint Stock Company Finstar Bank
 (tt) Public Joint Stock Company Metkombank
 (uu) Public Joint Stock Company National Bank Trust
 (vv) Public Joint Stock Social Commercial Bank of Primorye Primsotsbank
 (ww) Rossita Bank
 (xx) Russian Public Joint Stock Commercial Roads Bank
 (yy) Russian Universal Bank
 (zz) Vitabank PJSC
 (aaa) Waybank JSC

OFFICE OF FOREIGN ASSETS CONTROL

Russian Harmful Foreign Activities Sanctions Regulations 31 CFR Part 587

GENERAL LICENSE NO. 114

Authorizing Certain Transactions Related to Debt or Equity of, or Derivative Contracts Involving, Certain Entities Blocked on November 21, 2024

(a) Except as provided in paragraphs (d) and (e) of this general license, all transactions prohibited by Executive Order (E.O.) 14024 that are ordinarily incident and necessary to the divestment or transfer, or the facilitation of the divestment or transfer, of debt or equity issued or guaranteed by the following blocked entities (“Covered Debt or Equity”) to a non-U.S. person are authorized through 12:01 a.m. eastern standard time, December 20, 2024:

(1) Gazprombank Joint Stock Company;

(2) Interstate Bank; or

(3) Any entity in which one or more of the above persons own, directly or indirectly, individually or in the aggregate, a 50 percent or greater interest.

(b) Except as provided in paragraph (e) of this general license, all transactions prohibited by E.O. 14024 that are ordinarily incident and necessary to facilitating, clearing, and settling trades of Covered Debt or Equity that were placed prior to 4:00 p.m. eastern standard time, November 21,

2024 are authorized through 12:01 a.m. eastern standard time, December 20, 2024.

(c) Except as provided in paragraph (e) of this general license, all transactions prohibited by E.O. 14024 that are ordinarily incident and necessary to the wind down of derivative contracts entered into prior to 4:00 p.m. eastern standard time, November 21, 2024 that (i) include a blocked person described in paragraph (a) of this general license as a counterparty or (ii) are linked to Covered Debt or Equity are authorized through 12:01 a.m. eastern standard time, December 20, 2024, provided that any payments to a blocked person are made into a blocked account in accordance with the Russian Harmful Foreign Activities Sanctions Regulations, 31 CFR part 587 (RuHSR).

(d) Paragraph (a) of this general license does not authorize:

(1) U.S. persons to sell, or to facilitate the sale of, Covered Debt or Equity to, directly or indirectly, any person whose property and interests in property are blocked; or

(2) U.S. persons to purchase or invest in, or to facilitate the purchase of or investment in, directly or indirectly, Covered Debt or Equity, other than purchases of or investments in Covered Debt or Equity ordinarily incident and necessary to the divestment or transfer of Covered Debt or Equity as described in paragraph (a) of this general license.

(e) This general license does not authorize:

(1) Any transactions prohibited by Directive 2 under E.O. 14024, *Prohibitions Related to Correspondent or Payable-Through Accounts and Processing of Transactions Involving Certain Foreign Financial Institutions*;

(2) Any transactions prohibited by Directive 4 under E.O. 14024, *Prohibitions Related to Transactions Involving the Central Bank of the Russian Federation, the National Wealth Fund of the Russian Federation, and the Ministry of Finance of the Russian Federation*; or

(3) Any transactions otherwise prohibited by the RuHSR, including transactions involving any person blocked pursuant to the RuHSR other than the blocked persons described in paragraph (a) of this general license, unless separately authorized.

Lisa M. Palluconi,
 Acting Director, Office of Foreign Assets Control

Dated: November 21, 2024

Lisa M. Palluconi,
 Acting Director, Office of Foreign Assets Control.

[FR Doc. 2024–29676 Filed 12–17–24; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R09–OAR–2024–0005; FRL–11919–02–R9]

Partial Approval and Disapproval of Air Quality Implementation Plans; Arizona; Regional Haze State Implementation Plan for the Second Implementation Period and Prong 4 (Visibility) for the 2015 Ozone and 2012 Particulate Matter Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is partially approving and partially disapproving the regional haze state implementation plan (SIP) revision submitted by Arizona on August 15, 2022 (“2022 Arizona Regional Haze Plan”), under the Clean Air Act (CAA) and the EPA’s Regional Haze Rule (RHR) for the program’s second implementation period. Arizona’s SIP submission was developed to address the requirement that states must periodically revise their long-term strategies for making reasonable progress towards the national goal of preventing any future, and remedying any existing, anthropogenic impairment of visibility, including regional haze, in mandatory Class I Federal areas. The SIP submission also addresses other applicable requirements for the second implementation period of the regional haze program. Within this action, the EPA is also disapproving the visibility transport prong of Arizona’s infrastructure SIP submittals for the 2012 annual fine particulate matter (PM_{2.5}) and 2015 ozone National Ambient Air Quality Standards (NAAQS). The EPA is taking this action pursuant to CAA sections 110 and 169A.

DATES: This rule is effective on January 17, 2025.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–R09–OAR–2024–0005. All documents in the docket are listed on the <https://www.regulations.gov> website. Although listed in the index, some information is not publicly

available, e.g., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available through <https://www.regulations.gov>, or please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section for additional availability information. If you need assistance in a language other than English or if you are a person with a disability who needs a reasonable accommodation at no cost to you, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

FOR FURTHER INFORMATION CONTACT: Michael Dorantes, Geographic Strategies & Modeling Section (AIR-2-2), Planning & Analysis Branch, Air and Radiation Division, EPA Region IX, 75 Hawthorne Street, San Francisco, CA 94105; phone: (415) 972-3934; email: dorantes.michael@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, “we,” “us” and “our” refer to the EPA.

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I. Background

A. Regional Haze Plan for the Second Implementation Period

On August 15, 2022,¹ the Arizona Department of Environmental Quality (ADEQ) submitted the 2022 Arizona Regional Haze Plan. ADEQ supplemented its SIP revision on

¹ Letter dated August 15, 2022, from Daniel Czecholinski, Director, Arizona Department of Environmental Quality Air Quality Division, to Martha Guzman, Regional Administrator, EPA Region IX (submitted electronically August 15, 2022). On August 16, 2022, the EPA determined that the SIP submittal met the completeness criteria outlined in 40 CFR part 51, Appendix V. Letter dated August 16, 2022, from Elizabeth Adams, Director, Air and Radiation Division, EPA Region IX, to Daniel Czecholinski, Director, Arizona Department of Environmental Quality Air Quality Division.

August 25, 2023, with nonpoint source rules (“2023 Arizona Regional Haze Rules Supplement”).² ADEQ made these SIP submissions to address requirements of the CAA’s regional haze program pursuant to CAA sections 169A and 169B and 40 CFR 51.308.

On May 31, 2024, the EPA published a notice of proposed rulemaking proposing partial approval and partial disapproval of the 2022 Arizona Regional Haze Plan SIP submission as partially satisfying the regional haze requirements for the second implementation period contained in the CAA and 40 CFR 51.308.³ We did not propose to act on the 2023 Arizona Regional Haze Rules Supplement.

The EPA is now approving the elements of the 2022 Arizona Regional Haze Plan related to requirements contained in 40 CFR 51.308(f)(1), (f)(4)–(6), and (g)(1)–(5). The EPA is disapproving the elements of the 2022 Arizona Regional Haze Plan related to requirements contained in 40 CFR 51.308(f)(2), (f)(3), and (i)(2)–(4). Our proposed action and our responses to comments in section II of this document contain more information on the basis for this rulemaking and on our evaluation of the submittal.

B. Prong 4 (Visibility) of the 2012 PM_{2.5} NAAQS and 2015 Ozone NAAQS Infrastructure SIPs

Arizona submitted its infrastructure SIP submission for the 2012 PM_{2.5} NAAQS on December 11, 2015 (“2015 PM_{2.5} I–SIP submittal”).⁴ Arizona also submitted its infrastructure SIP submission for the 2015 ozone NAAQS on September 24, 2018 (“2018 Ozone I–SIP submittal”).⁵

Our May 31, 2024 proposed rulemaking action proposed to disapprove the prong 4 portions of Arizona’s 2018 Ozone I–SIP submittal and 2015 PM_{2.5} I–SIP submittal. The EPA is now disapproving the Prong 4 elements of Arizona’s 2018 Ozone I–SIP submittal and 2015 PM_{2.5} I–SIP submittal. Our proposed action contains more information on the basis for this

² Letter dated August 21, 2023, from Daniel Czecholinski, Director, Arizona Department of Environmental Quality Air Quality Division, to Martha Guzman, Regional Administrator, EPA Region IX (submitted electronically August 25, 2023).

³ 89 FR 47398.

⁴ Letter dated December 11, 2015, from Eric Massey, Director, Air Quality Division, ADEQ, to Jared Blumenfeld, Regional Administrator, EPA Region IX.

⁵ Letter dated September 24, 2018, from Timothy S. Franquist, Director, Air Quality Division, ADEQ, to Michael Stoker, Regional Administrator, EPA Region IX (submitted electronically September 24, 2018).

rulemaking and on our evaluation of the submittals.

II. Public Comments and EPA Responses

The EPA’s May 31, 2024 proposed rulemaking action provided a 30-day public comment period that would have ended on July 1, 2024. We received four comments requesting an extension of the comment period. On June 26, 2024,⁶ the EPA extended the comment period for the proposed rulemaking action by 14 days in response to requests from commenters. This action extended the close of the comment period to July 15, 2024.

The EPA received an additional ten unique comments, including one anonymous comment,⁷ two comments from private individuals,⁸ and comment letters from Tri-State Generation and Transmission Association, Inc. (“Tri-State”),⁹ ADEQ,¹⁰ the Arizona Chamber of Commerce and Industry and the Arizona Manufacturers Council (“the Chamber and AMC”),¹¹ Tuscon Electric Power (TEP),¹² the Salt River Agricultural Improvement and Power District (SRP),¹³ 12 community organizations (“Community Sign-on Letter”),¹⁴ and Earthjustice on behalf of the National Parks Conservation Association, Sierra Club, and the Coalition to Protect America’s National Parks (“NPCA et al.”).¹⁵ The anonymous comment and the comments from the private individuals were unrelated to our proposed rulemaking. These three comments do not require a response. We respond to the issues raised in the seven remaining comment

⁶ 89 FR 53372.

⁷ Available at <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0014>.

⁸ Available at <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0015> and <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0019>.

⁹ Available at <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0016>.

¹⁰ ADEQ submitted its comment letter twice. The letter is available at both <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0017> and <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0018>.

¹¹ Available at <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0020>.

¹² Available at <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0021>.

¹³ Available at <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0023>.

¹⁴ Available at <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0022>.

¹⁵ The comment letter and all Exhibits except for Exhibits 24 and 60 are available at <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0024>. Exhibits 24 and 60, including an emailed copy of the NPCA et al.’s comment letter, are available at <https://www.regulations.gov/comment/EPA-R09-OAR-2024-0005-0025>.

letters received on our proposed rulemaking in this action.

A. Comment Letter From Tri-State

Sections I (“Introduction”), II (“Background Information on Tri-State”), and III (“Tri-State Supports the Provisions of the Arizona Department of Environmental Quality’s State Implementation Plan Submittal for which EPA has Proposed Approval”) of Tri-State’s comment letter either provide background information or are supportive of the EPA’s proposal and therefore do not require a response in our final action. We respond to sections IV (“The Partial Disapproval is Overly Vague and Should Be Reproposed with a Fulsome and Specific Explanation of What EPA Finds Inconsistent with the Clean Air Act and the Implementing Regulations”), V (“Additional Emission Reductions Are Inappropriate for Springerville Unit 3”), and VI (“EPA’s Reliance on the July 8, 2021, Clarifications Memorandum Is Inappropriate Because It Was Issued Only Days Prior to the Regional Haze State Implementation Plans Being Due”) of Tri-State’s comment letter below.

Comment A.1. Tri-State comments that the proposed rule, specifically the partial disapproval, is overly vague and does not lend itself to the general public being able to adequately understand what the EPA finds objectionable regarding the SIP submission. Tri-State asserts that the EPA made broad statements about divergences from the Control Cost Manual and inadequacies in four-factor analyses and that “it [is] impossible to understand with certainty the sources to which these overly broad statements apply.” The commenter also notes that the proposed rulemaking action only gives limited examples of what the EPA is referring to and asserts that the EPA needs to clearly provide where it has issues with the SIP revision as it was submitted not just examples of what it is concerned about. Specifically, Tri-State states that the proposed rulemaking action makes general comments about ADEQ conducting analyses for well-controlled sources to further reduce emissions but makes no reference to which sources that the EPA finds to be lacking in this area. Tri-State also comments that the vagueness of the proposal is not consistent with the cooperative nature of the CAA in the EPA working with states.

Response A.1. We do not agree that the proposal was overly vague or that the basis for our proposed partial disapproval was unclear. The proposal provided a detailed summary of the 2022 Arizona Regional Haze Plan and the EPA’s evaluation of the Plan with

regard to each of the applicable requirements of the CAA and the RHR. With respect to the EPA’s partial disapproval specifically, the proposal laid out multiple reasons for the EPA’s determination that the long-term strategy did not fully meet the requirements of 40 CFR 51.308(f)(2), related to source selection, four-factor analyses (specifically, controlled emissions rates and deviations from the Control Cost Manual), and control determinations (specifically, the application of cost thresholds, the use of visibility as a factor to avoid controls, and the mass-based emissions caps at Springerville Generating Station (SGS)).¹⁶ In each instance, we provided at least one example of a unit to which this reason applied.¹⁷ We also explained why the disapproval of the long-term strategy also necessitated disapproval of the RPG and FLM consultation elements.¹⁸

We disagree with the commenter’s suggestion that it was necessary for the EPA to specify the extent to which each of the flaws identified by the EPA applied to each unit considered by ADEQ. The EPA’s role in reviewing SIPs is to determine whether they meet all of the applicable CAA requirements.¹⁹ In evaluating whether a SIP revision (or a portion thereof) meets all of the applicable requirements, the EPA is not required to separately evaluate and discuss each of the thousands of pieces of information, analyses and determinations comprising the SIP submission. Rather, the EPA may focus on those specific elements of the SIP revision that form the basis for our determination that certain applicable requirements are met and certain applicable requirements are not met. Therefore, in this instance, it was reasonable for the EPA to summarize our evaluation and cite to examples of where the State’s documentation, analyses, and determinations did not meet CAA requirements, rather than separately evaluating and discussing every such instance throughout the SIP revision.

For example, regarding source selection, our proposal stated that:

ADEQ did not provide an adequate justification for screening out certain sources and units from conducting a four-factor

analysis on the basis that they are ‘effectively controlled’ as part of its source selection process. Specifically, in some cases, ADEQ did not identify the controls for each pollutant at each unit or process, the associated limits, or where the controls/limits currently exist in the Arizona SIP. In other cases, ADEQ listed the controls, but did not clearly explain why it is reasonable to assume, without conducting a four-factor analysis, that no additional controls would be reasonable.

We then provided examples of specific sources to which these concerns applied. In addition, table 3 of the proposal listed all of the units that ADEQ screened out as “effectively controlled” and includes the entirety of ADEQ’s rationale for each unit.²⁰ This table clearly shows that for many of the units, ADEQ did not list controls for one or more of the three relevant pollutants (NO_x, SO₂, and PM). Moreover, even for those units where ADEQ did list this information, it did not explain why it is reasonable to assume, without conducting a four-factor analysis, that no additional controls would be reasonable. Furthermore, our proposed rulemaking action clearly stated that ADEQ did not adequately explain whether *any* of the existing controls for facilities evaluated within the SIP submittal were necessary for reasonable progress and therefore a part of the state’s long-term strategy. Therefore, it was not necessary to specifically identify each source that was deficient in this respect because the deficiency applied to every source determined to be effectively controlled.

Finally, regarding the cooperative nature of the CAA, we note that the EPA worked extensively with ADEQ during SIP development. EPA and ADEQ staff met on a monthly basis beginning in 2019 and continuing through 2021 to discuss the development of the Plan. The EPA also provided informal written feedback on various elements of the Plan between 2019 and 2022. In these communications, the EPA identified many of the flaws that are the basis for the partial disapproval, so ADEQ was aware of the EPA’s concerns prior to the EPA’s proposal.

In conclusion, based on the findings discussed in our proposal and elsewhere in this document, we find that the long-term strategy in the 2022 Arizona Regional Haze Plan does not meet the requirements of 51.308(f)(2) and we are disapproving the Plan with respect to this requirement. Therefore, pursuant to CAA section 110(c), the EPA will be required to develop a new

¹⁶ 89 FR 47398, 47428–47432.

¹⁷ *Id.*

¹⁸ *Id.* at 47432–47433 and 47435–47436.

¹⁹ See CAA section 110(k)(3) (“the Administrator shall approve [a SIP] submittal as a whole if it meets all of the applicable requirements of [the CAA]. If a portion of the plan revision meets all the applicable requirements of [the CAA], the Administrator may approve the plan revision in part and disapprove the plan revision in part”).

²⁰ Consistent with their labeling in the Plan, Appendix C.1, Table 147, these rationales appear under the heading of “Comments.”

long-term strategy as part of a FIP, unless the EPA approves a subsequent SIP submission that fully meets these requirements. That long-term strategy would necessarily include updated source selection, four factor analyses, and control determinations that address the deficiencies we identified in the Plan. We are available to work with ADEQ following this final action to develop a SIP revision, including these elements.

Comment A.2. Tri-State asserted that additional emissions reductions are “inappropriate” for Springerville Generating Station (SGS) Unit 3. Tri-State made a few arguments in support of this contention.

First, Tri-State noted that ADEQ evaluated the currently installed NO_x emissions controls against technically feasible emissions controls and concluded that the current NO_x emissions controls constitutes best available control technology (BACT) for coal-fired electric generating units (EGUs). For SO₂, Tri-State indicated that ADEQ’s analysis for SGS Unit 3 clearly demonstrates that Unit 3’s emissions ranged from 0.069 to 0.090 lb/MMBtu on an annual basis and has continuously complied with the Mercury and Air Toxics Standard (MATS) SO₂ emissions standard of 0.20 lb/MMBtu, and therefore does not warrant further emissions controls. Tri-State also noted language in the EPA’s “Guidance on Regional Haze State Implementation Plans for the Second Implementation Period” (“2019 Guidance”)²¹ that describes scenarios in which the EPA believes it may be reasonable for a state not to select a particular source for further analysis for EGUs that have add-on flue gas desulfurization (FGD) and that meets the applicable alternative SO₂ emissions limit of the MATS rule for power plants.

Second, Tri-State noted the visibility improvement at the Mount Baldy Wilderness Area in the first planning period, and that Arizona will have four additional 10-year planning periods to achieve the 1.3 deciview improvement needed to achieve natural conditions.

Finally, Tri-State stated that its intent is to retire SGS Unit 3 by September 15, 2031, and requested that the EPA include in the final rule a provision to allow sources to work with their state regulatory agencies to adopt an

enforceable commitment to retire a unit, such as through a permit condition, to allow the source to forego any further emissions control or reduction requirements if a unit is retiring within ten years of the Regional Haze SIP approval.

Response A.2. We partially agree with this comment. First, with respect to NO_x emissions at SGS Unit 3, ADEQ noted in the Plan “[t]he current controls ([low-NO_x burners (LNB), overfire air (OFA) with selective catalytic reduction (SCR)] represent the most effective NO_x control technologies for coal fired EGUs and are estimated to achieve 85–95% removal efficiency.”²² We agree that the existing LNB, OFA and SCR constitute effective controls for NO_x at SGS Unit 3. As described in our proposal and in response B.1 of this document, existing effective controls are generally necessary to make reasonable progress and must be included in the SIP, unless the state provides a weight-of-evidence demonstration to justify that the existing effective controls are not necessary to make reasonable progress. Because the Arizona SIP does not include a NO_x emissions limit corresponding to these controls for SGS Unit 3, the State should have provided such demonstration. Specifically, the State should have considered whether SGS Unit 3 is subject to an enforceable NO_x emissions limit that ensures its NO_x emissions rate will not increase. Without proper justification that emissions of visibility impairing pollutants will not increase, it is unclear how reasonable progress is being made within the State’s long-term strategy for the second planning period.²³

Similarly, with respect to SO₂ emissions at SGS Unit 3, we agree that, as described in the 2019 Guidance, an add-on FGD meeting the applicable alternative SO₂ emissions standard under MATS may constitute an effective control for SO₂. However, as noted in the previous paragraph, existing effective controls are generally necessary to make reasonable progress and must be included in the SIP, unless the state provides a weight-of-evidence demonstration to justify that the existing effective controls are not necessary to make reasonable progress. Because the Arizona SIP does not include a SO₂ emissions limit corresponding to the existing SO₂ controls at SGS Unit 3, the State should have provided such a demonstration, including consideration

of whether SGS Unit 3 is subject to an enforceable SO₂ emissions limit that ensures its SO₂ emissions rate will not increase.

Second, regarding the Mount Baldy Wilderness Area, although we commend the efforts in Arizona that contributed to the noted visibility improvement at the Mount Baldy Wilderness Area in the first planning period, previous and ongoing measures are not automatically sufficient to ensure ongoing reasonable progress. The regional haze requirements of CAA sections 169A and 169B and 40 CFR 51.308 need to be satisfied.²⁴ In particular, the increment of progress that is “reasonable progress” for a given implementation period is determined through the four statutory factors.²⁵ While progress made in the first implementation period, ongoing emissions trends, and anticipated changes in emissions may inform a state’s regional haze planning process, these circumstances alone do not satisfy a state’s obligation to determine and include in its SIP the measures that are necessary to make reasonable progress in the second planning period. We also note that, while Mount Baldy is the closest Class I area to SGS and therefore has the highest Q/d (emissions in tons per year divided by distance to an affected Class I area in kilometers) value (339) with respect to SGS,²⁶ this does not mean that Mount Baldy is the only Class I area affected by emissions from SGS. ADEQ did not specifically identify all the Class I areas that may be affected by emissions from each of the sources it evaluated. Nonetheless, given that SGS had a 2018 Q of 17,044 tons per year (tpy)²⁷ and is located within 300 km of 15 different Class I areas,²⁸ it is likely to contribute to visibility impairment at a number of Class I areas.

Finally, with respect to Tri-State’s request regarding enforceable shutdowns, we note that the EPA’s role in acting on SIP submittals is to evaluate whether they meet applicable CAA

²⁴ See 64 FR 35714 (July 1, 1999), 35721–35722 for additional explanation as to the EPA’s determination that emissions from *all States* reasonably contribute to visibility impairment and thus are subject to the regional haze regulations. Additionally, in the 2017 RHR, the EPA “reiterated[ed] that the CAA requires States to consider the four statutory factors . . . in each implementation period to determine the rate of progress towards natural visibility conditions that is reasonable for each Class I area.” 82 FR 3078 (January 10, 2017), 3080.

²⁵ 40 CFR 51.308(f)(2)(i).

²⁶ Plan Appendix C, p. 21, Table 1. Q is calculated as the total 2018 annual facility-wide NO_x, SO₂, and PM₁₀ emissions in tpy, excluding processes determined by ADEQ to be effectively controlled.

²⁷ Id.

²⁸ 79 FR 9318, 9360, Table 50 (February 18, 2014).

²¹ Guidance on Regional Haze State Implementation Plans for the Second Implementation Period. <https://www.epa.gov/visibility/guidance-regional-haze-state-implementation-plans-second-implementation-period>. The EPA Office of Air Quality Planning and Standards, Research Triangle Park (August 20, 2019).

²² 2022 Arizona Regional Haze Plan, p. 219.

²³ See CAA 169A(a)(1) “Congress hereby declares as a national goal *the prevention of any future*, and the remedying of any existing, impairment of visibility in [Class I areas.]” (emphasis added).

requirement, not to establish new requirements. Tri-State may choose to work with ADEQ to establish enforceable shutdowns as part of a subsequent SIP revision. However, we note that even if there were an enforceable shutdown in 2031, this would not automatically preclude the unit from consideration under a four-factor analysis.²⁹

Comment A.3. Tri-State comments that it was unreasonable for the EPA to use the July 8, 2021 “Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period” (“2021 Clarifications Memo”) as a basis for disapproval of the 2022 Arizona Regional Haze Plan. Tri-State indicated that although ADEQ submitted its plan over a year late on August 22, 2022, ADEQ was over three years into the process of developing the plan, working with the Western Regional Air Partnership, the EPA, other states, Federal Land Managers (FLMs) and members of the public, was nearly complete and ready to go through the Arizona rulemaking process when the EPA published the 2021 Clarifications Memo. Tri-State also noted that the rulemaking process can take over a year due to various tasks required.

Response A.3. The EPA disagrees that it used the 2021 Clarifications Memo as a basis for disapproving portions of the 2022 Arizona Regional Haze Plan. Contrary to the commenter’s suggestion, the EPA’s guidance, including the 2021 Clarifications Memo, is not the basis for our disapproval. Rather, the partial disapproval is based on the Plan’s failure to satisfy the requirements of the relevant portions of the RHR and CAA sections 169A and 169B. We did cite the guidance documents because these documents provide helpful context explaining the EPA’s interpretations of the applicable statutory and regulatory requirements against which we are required to evaluate SIP submittals. Commenters are free to disagree and raise concerns with those interpretations as part of the notice and comment process on individual SIP actions. However, in this instance, the commenter does not appear to object to any of the interpretations in the 2021 Clarifications Memo, only to the fact that they were provided shortly before the due date for the plans.

With regard to timing, we note that the 2021 Clarifications Memo was developed in response to issues that

EPA regions and other stakeholders had raised regarding draft regional haze SIP revisions that were already under development by states.³⁰ The 2021 Clarifications Memo therefore necessarily came during the SIP development process and, in comparison to the SIP-specific feedback previously provided by the EPA prior to its issuance, was intended to “offer feedback more broadly to help support SIP development, submittal, review, and action for the second planning period.”³¹ With regard to Arizona’s Plan specifically, throughout the EPA’s collaboration with ADEQ during early engagement, EPA staff advised ADEQ of many of the interpretations that would be expressed in the 2021 Clarifications Memo. Therefore, we do not agree that it was improper for the EPA to cite to the 2021 Clarifications Memo as further explanation for why portions of the 2022 Arizona Regional Haze Plan did not comply with the applicable statutory and regulatory requirements.

B. Comment Letter From ADEQ

Sections I (“Background”) and XI (“Conclusion”) of ADEQ’s comment letter are informational and therefore do not require a response. We respond to sections II–X of ADEQ’s comment letter below.

Comment B.1. ADEQ asserts that the EPA’s changing guidance increased the burden of ADEQ’s planning efforts by introducing uncertainty and rework. ADEQ noted delays between final publication of the 2017 RHR and the 2019 Guidance, as well as later changes to the EPA’s interpretation of the RHR that came close to the plan submittal deadline, including the 2021 Clarifications Memo. ADEQ asserts that the state did not have the resources to undertake the evaluation of existing control measures, as noted in the 2021 Clarifications Memo, a process that ADEQ states was unreasonably broad-reaching and duplicative.

Response B.1. We disagree with ADEQ’s assertions about the EPA’s additional guidance increasing the burden of ADEQ’s planning efforts by introducing uncertainty and rework. First and foremost, as stated previously and throughout this notice, the EPA did not rely on guidance as the basis for its partial disapprovals. Rather, the 2019 Guidance and the 2021 Clarifications Memo merely provide additional context to the EPA’s interpretations of the statutory and regulatory requirements. Both the 2019 Guidance and the 2021 Clarifications Memo were

drafted to be used as tools by States in the development of their second planning period regional haze plans. However, neither of these documents were necessary for States to develop and submit their SIP revisions.

Regarding the contents of the guidance, we do not agree that the EPA significantly changed its interpretations in either the 2019 Guidance or the 2021 Clarifications Memo. The commenter has not provided any examples of interpretations that it believes were changed under the 2019 Guidance and provided only a single example from the 2021 Clarifications Memo, relating to the section entitled, “Determining When Existing Measures are Necessary for Reasonable Progress.” We do not agree that interpretations set forth in this section of the 2021 Clarifications Memo represented a significant change in interpretation. Rather, they were intended to clarify the following statement in the 2019 Guidance:

If a state determines that an in-place emission control at a source is a measure that is necessary to make reasonable progress and there is not already an enforceable emission limit corresponding to that control in the SIP, the state is required to adopt emission limits based on those controls as part of its long-term strategy in the SIP via the regional haze second planning period plan submission.³²

Many states and other stakeholders raised questions about this statement. In response, as part of the 2021 Clarifications Memo, the EPA laid out in further detail our interpretation of the CAA and RHR regarding how to make such a determination.

We also disagree, on multiple grounds, with the commenter’s assertion that the “EPA’s revised guidance requires an unreasonably broad-reaching review of all existing control measures that are not separately included in the regional haze plan to evaluate whether those same measures should be duplicated in the regional plan to support reasonable visibility progress.”

First, the 2021 Clarifications Memo did not establish any new requirements. On the contrary, it clearly states that “[t]his memorandum does not change or substitute for provisions or requirements of the CAA or RHR, nor does it create any new requirements. Rather, this memorandum clarifies and provides further information on the existing statutory and regulatory requirements.”³³ One of the key requirements of the CAA and RHR is that all measures that are necessary to make reasonable progress must be

²⁹ See 2019 Guidance, pp. 20–21 (“It may be more challenging for a state to reasonably use a shorter remaining useful life as the basis for not selecting sources the further away the enforceable shutdown date gets from 2028”).

³⁰ 2021 Clarifications Memo, p. 1.

³¹ *Id.*

³² 2019 Guidance, p. 423.

³³ 2021 Clarifications Memo, p. 2.

included the SIP.³⁴ However, neither the CAA, the RHR, or the 2019 Guidance explain how to determine whether an existing measure that results from a four-factor analysis (or is used as the basis to avoid such an analysis) is necessary to make reasonable progress. Based on questions received on this subject during SIP development, it was clear that further guidance on this question would be helpful. Accordingly, the EPA provided this guidance in the 2021 Clarifications Memo.³⁵

Regarding “existing measures,” the Memo explains:

When the outcome of a four-factor analysis is that no new measures are reasonable for a source, the source’s existing measures are generally needed to prevent future visibility impairment (*i.e.*, to prevent future emission increases) and thus necessary to make reasonable progress. Measures that are necessary to make reasonable progress must be included in the SIP.

However, there may be circumstances in which a source’s existing measures are not necessary to make reasonable progress. Specifically, if a state can demonstrate that a source will continue to implement its existing measures and will not increase its emission rate, it may not be necessary to require those measures under the regional haze program in order to prevent future emission increases.

Similarly, with regard to existing “effective controls” used to screen out sources from a four-factor analysis:

A decision to forgo a full four-factor analysis based on a source’s existing effective controls is equivalent to a determination that no new measures are necessary to make reasonable progress. In this scenario, existing effective controls are, therefore, generally necessary to make reasonable progress and thus must be adopted into the regulatory portion of the SIP. However, the state may provide a weight-of-evidence demonstration as described in Section 4.1 to justify that the existing effective control is not necessary for reasonable progress.

Thus, the 2021 Clarifications Memo clarifies that, under the CAA and the RHR, there is a general presumption that existing measures resulting from a four-factor analysis (or relied upon to avoid such an analysis) are necessary to prevent future visibility impairment and therefore necessary to make reasonable progress. Accordingly, states have the option to submit all such measures into the SIP (to the extent they are not already approved into the SIP) without further evaluation of whether the measures are necessary to make reasonable progress. Alternatively, states may choose to provide a weight-of-evidence demonstration that such

measures are not necessary to make reasonable progress. Importantly, however, such a demonstration is needed only where an enforceable emissions limitation corresponding to an existing measure has not already been approved into the SIP and is not being submitted for SIP approval as part of the regional haze plan. Therefore, we do not agree that a review of “all existing control measures that are not separately included in the regional haze plan” is required.

Third, to the extent that a state chooses to undertake such a demonstration that existing measures are not necessary to make reasonable progress, we do not agree that it would be duplicative. On the contrary, because such a demonstration is necessary only for measures for which emissions limitations are not submitted into the SIP, the state and the EPA need to evaluate relevant evidence concerning whether the source will continue to implement its existing measures and maintain its emissions rate in the absence of SIP-approved requirements to do so, to ensure that visibility impairment does not increase.

In sum, we disagree with ADEQ’s characterization of the contents of the 2021 Clarifications Memo and its role in our partial approval and partial disapproval of the Plan.

Comment B.2. ADEQ comments that the EPA should not issue binding decisions based on guidance alone where the bases for disapproval are not in the rule or statute. ADEQ cites to statements in the 2019 Guidance and 2021 Clarifications Memo regarding screening out of effectively controlled sources and determinations of whether existing controls are necessary to make reasonable progress, as the examples of guidance. Specifically, ADEQ asserts that “[i]t was unreasonable for the EPA’s clarification memo to issue these additional specific barriers to a determination that existing measures were effective at a given source late in the development of second round regional haze plans through guidance, and without additional notice and comment.”

Response B.2. We disagree that we issued our proposed decision based on guidance. Rather, the proposal action clearly indicates that the partial disapproval was based on failing to satisfy the requirements of the relevant portions of the RHR and CAA sections 169A and 169B, with citations to our guidance as further explanation. See Response A.3 for more explanation.

We also note that ADEQ’s comment appears to conflate two separate questions: first, whether its justification

for screening out a unit based on existing effective emissions controls was sufficient, and second, whether such existing effective control measures are necessary to make reasonable progress. In our proposal, we discussed each of these issues as two separate grounds for our proposed partial disapproval with respect to 40 CFR 51.308(f)(2).³⁶ While both questions apply to sources that are screened out from a four-factor analysis based on existing effective controls, they are distinct. The first issue is further addressed in Response B.3 of this document, while the second is addressed in Response B.1. Therefore, we do not agree that the 2021 Clarifications Memo created any additional barriers to a determination that existing measures were effective at a given source.

Comment B.3. ADEQ disagreed with the EPA’s proposed determination that Arizona failed to provide adequate justification for deferring certain emissions units from consideration. ADEQ indicated that the state has the flexibility to reasonably select a set of sources for an analysis of control measures, and that it did not exclude entire facilities from consideration or exempt sources that had previously adopted BART or reasonable progress controls, but rather excluded just the emissions processes or units that recently installed highly effective controls from the calculation of the Q/d value for that facility. ADEQ also provided additional information regarding effective controls in Attachment A of its letter.

Response B.3. We agree that states have flexibility to reasonably select a set of sources for analysis of controls measures. However, as described in our proposal, we find that ADEQ’s approach to screening out units from conducting a four-factor analysis on the basis that they are “effectively controlled” was not adequately documented.³⁷ Specifically, in some cases, ADEQ did not identify the controls for each pollutant at each unit or process, the associated limits, or where the controls and/or limits currently exist in the Arizona SIP. In other cases, ADEQ listed the controls, but did not clearly explain why it is

³⁶ See 89 FR 47398, 47428 (“ADEQ did not provide an adequate justification for screening out certain sources and units from conducting a four-factor analysis on the basis that they are ‘effectively controlled’ as part of its source selection process”) and 47431 (“ADEQ has not addressed whether any of the existing measures relied upon in its four-factor analyses or its ‘effective controls’ determinations are necessary to make reasonable progress and thus should be a part of the State’s long-term strategy for the second planning period.”).

³⁷ 89 FR 47398, 47428.

³⁴ CAA 169A(b)(2); 40 CFR 51.308(f)(2).

³⁵ 2021 Clarifications Memo, pp. 8–9.

reasonable to assume, without conducting a four-factor analysis, that no additional controls would be reasonable.³⁸ Accordingly, ADEQ should have identified where the existing limits are found in the SIP or FIP and clearly explained why no additional controls would likely be reasonable under a four-factor reasonable progress analysis for the second planning period. Without this analysis and explanation, it is not clear what is a part of Arizona's long-term strategy for the second planning period.

As noted in its comment, ADEQ conducted its effective controls screening on a unit-specific basis. However, it did not do so on a pollutant-specific basis. Rather, ADEQ screened out entire units from further evaluation for NO_x, SO₂, or PM₁₀ if the units met ADEQ's screening criteria for any one of these pollutants. We find that this approach was unreasonable because it resulted in the screening out of entire units without consideration of whether the unit had effective controls for all three of the pollutants covered in ADEQ's long-term strategy. For example, ADEQ screened out AEPSCO Apache Unit 3 and TEP Irvington Generating Station (IGS) Unit 4 from any further analysis because these units were converted from coal to natural gas under better-than-BART alternatives during the first planning period.³⁹ The EPA acknowledges that fuel combustion units that are required to combust pipeline-quality natural gas are generally considered to be effectively controlled for SO₂ and PM.⁴⁰ However, they are not necessarily effectively controlled for NO_x, based on burning natural gas alone. Therefore, we find that ADEQ has not provided adequate justification for screening these units out from an analysis of NO_x controls.

Additionally, we appreciate the documentation in Attachment A that ADEQ provided in its attachment letter. However, this information would need to be part of a SIP revision subject to review by the public and FLMs in order for the EPA to consider it as part of the long-term strategy. If ADEQ develops a new SIP revision intended to remedy the deficiencies discussed in our proposed and final actions on the Plan,

it may be appropriate to include this information in that SIP revision.

Comment B.4. ADEQ asserts that, despite indicating that flawed emissions rates were used for some of ADEQ's analyses, the proposed action identified one example of differing achievable emissions rates for selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) controls for SGS Units 1 and 2's four factor analyses. In this example, ADEQ used 0.060 lb/MMBtu and 0.15 lb/MMBtu as reasonable estimates of the achievable rates at TEP SGS Units 1 and 2 for SCR and SNCR, respectively.

For SCR, ADEQ additionally states the study that the EPA cited for its justification that SCR has been demonstrated to achieve 0.05 lb/MMBtu (or up to 90 percent reduction) was published in 2005 and found that the 20 SCR systems examined in 2003 achieved NO_x emissions rates between 0.04 and 0.07 lb/MMBtu.⁴¹ In addition, ADEQ noted that EPA found 0.065 lb/MMBtu as a "reasonable estimate of average SCR performance" in its 2016 Regional Haze FIP action for the Salt River Project Coronado Generating Station Unit 1.

For SNCR, ADEQ additionally states that the EPA did not provide a technical citation for disagreeing with ADEQ's use of 0.15 lb/MMBtu for SNCR. ADEQ noted that the proposed rule indicated that ADEQ did not demonstrate why source specific conditions would cause SNCR on these units to achieve as little as a 15 percent reduction. ADEQ noted that Srivastava et al. found that while smaller boilers (e.g., 76–78 MW units) were able to achieve greater than 60 percent NO_x reductions, larger boilers (e.g., 500 MW units) "may be capable of achieving reductions of only ~30%." ADEQ indicates that SGS Units 1 and 2 units have nameplate ratings of 425 MW and would be expected to achieve less reductions than smaller units. ADEQ also points to the inlet concentration as another consideration for achievable emissions rates with post combustion emissions control. Citing Srivastava et al., ADEQ notes that the study found that "in the absence of reliable SCR inlet NO_x data, the SCR efficiencies are estimated using an inlet NO_x level of 0.5 lb/10⁶ Btu." However, in the case of SGS Units 1 and 2, the NO_x concentration in the exhaust from these

units is less than 100 parts per million by volume (ppmv) with an assumed rate of 0.174 lb/MMBtu and 0.178 lb/MMBtu being used in ADEQ's four factor analysis cost calculations for Unit 1 and Unit 2, respectively. Given the already low NO_x inlet concentration, an achievable emissions rate of 0.15 lb/MMBtu was determined to be reasonable. ADEQ further noted that additional information related to achievable emissions rates for SNCR for SGS Unit 1 and Unit 2 can be found in Appendix K, Section II(J), Comment 10 of the 2022 Arizona Regional Haze Plan.

Response B.4. We acknowledge that we only highlighted a single example of flawed emissions rates in our proposal—for NO_x at SGS Units 1 and 2. However, as explained in response A.1, in evaluating whether a SIP revision (or a portion thereof) meets each of these CAA requirements, the EPA is not required to separately evaluate and discuss each of the thousands of pieces of information, analyses and determinations comprising the SIP submission. Rather, the EPA may focus on those specific elements of the SIP revision that form the basis for our determination that certain applicable requirements are met and certain applicable requirements are not met. In this instance, we focused on these units because they are expected to have the highest NO_x emissions of any units in the State (2,099 and 2,283 tpy respectively) by 2028, so it is important to carefully examine whether additional NO_x reductions from these units are necessary to make reasonable progress. Given this context, and for the reasons outlined below, we do not agree with ADEQ that it has adequately documented the emissions rates assumed in this analysis, which are a critical component of a four-factor analysis.

The emissions rate achievable by a unit equipped with SCR is determined by several parameters and technological limitations. There are periods of operation in which the SCR is not able to operate, particularly during periods of startup and shutdown.⁴² The SCR emissions rate (lb/MMBtu) achievable by a particular unit represents the combination of two primary elements: (1) the controlled NO_x emissions rate during periods of normal unit operation when the SCR is able to operate, and (2) the uncontrolled NO_x emissions rate

³⁸ See 40 CFR 51.308(f)(2)(i) ("... The State must include in its implementation plan a description of the criteria is used to determine which sources or groups of sources it evaluated and how the four factors were taken into consideration in selecting the measures for inclusion in its long-term strategy"). See also 2021 Clarifications Memo, p. 5; 2019 Guidance, p. 23.

³⁹ 2022 Arizona Regional Haze Plan, Appendix C, Table 147.

⁴⁰ See 2019 Guidance, p. 24.

⁴¹ Ravi K. Srivastava, Robert E. Hall, Sikander Khan, Kevin Culligan & Bruce W. Lani (2005) Nitrogen Oxides Emission Control Options for Coal-Fired Electric Utility Boilers, *Journal of the Air & Waste Management Association*, 55:9, 1367–1388, DOI: 10.1080/10473289.2005.10464736. Available at: <https://doi.org/10.1080/10473289.2005.10464736>.

⁴² Control Cost Manual, Section 4, Chapter 2 Selective Catalytic Reduction (June 2019), section, 2.2.1 Reduction Chemistry, Reagents, and Catalyst, available at https://www.epa.gov/sites/default/files/2017-12/documents/scrcostmanualchapter7thedition_2016revisions2017.pdf.

during periods of startup and shutdown when the SCR system cannot operate, and result in unit emissions higher than the SCR controlled emissions rate that increase the unit's overall emissions rate.

With regard to the first element, the 2005 study is not the sole basis for our finding that an overall emissions rate of 0.050 lb/MMBtu is achievable with SCR on an annual average basis. There are multiple instances of coal-fired units installing SCR on a retrofit basis and achieving 0.050 lb/MMBtu in practice on an annual average basis.⁴³ These units are typically able to achieve this overall level of control by being able to operate at NO_x annual emissions rates at or below 0.050 lb/MMBtu based upon periods of normal operation. Even several of the units identified by ADEQ operating in the annual average emissions rate range of 0.055 to 0.065 lb/MMBtu are still achieving emissions rates of 0.050 lb/MMBtu and lower based upon periods of normal operation.⁴⁴ We consider this information sufficient to establish that an 0.050 lb/MMBtu emissions rate warrants consideration as technically feasible for coal fired units generally during periods of normal operation, absent source specific factors affecting feasibility. We are not aware of assertions by either ADEQ or TEP that the Springerville units specifically cannot achieve 0.050 lb/MMBtu when operating with SCR during periods of normal operation.⁴⁵ Therefore, we find that ADEQ should have considered a controlled NO_x emissions rate of 0.050 lb/MMBtu for SGS Units 1 and 2 when operating with SCR during periods of normal operation.

The majority of analysis performed by ADEQ is relevant to the second element and is intended to support a position that, when the annual emissions rate achievable during normal operations is combined with emissions from the number of startup/shutdown cycles exhibited by SGS Units 1 and 2, an annual average emissions rate of 0.06 lb/MMBtu is what is reasonably achievable for these units. We consider it appropriate to account for the effect of

startup/shutdown emissions on the emissions rate achievable by the unit, but disagree that the analysis provided by ADEQ supports an annual average emissions rate of 0.060 lb/MMBtu. TEP's four factor analysis and ADEQ's SIP submittal did not include startup/shutdown history to support the assertion that Springerville has more startup/shutdown events than comparable tangentially-fired coal fired boilers. A review of Clean Air Markets Program Data (CAMPD) emissions and operating data over a 2021–2023 timeframe indicate that SGS Units 1 and 2 each experienced approximately 9 to 14 startup events per year. While we acknowledge that some portion of SGS baseline emissions consist of startup/shutdown emissions that cannot be controlled by an SCR system, the substantial majority of baseline emissions are attributable to emissions during normal operation. We estimate that approximately 97–98% of baseline emissions are attributable to normal operations that could be controlled by SCR.⁴⁶ Given that the majority of unit emissions can be controlled by SCR to 0.050 lb/MMBtu or lower and that the remaining 2–3 percent of operations are characterized by low inlet SCR emissions rates, we do not consider the historical startup/shutdown operating profile to support deviating to an 0.06 lb/MMBtu emissions rate on an annual average basis.

ADEQ cites a limit of 0.065 lb/MMBtu established for SRP Coronado Unit 1 in a 2016 Regional Haze FIP action as support for the use of an annual average emissions rate of 0.060 lb/MMBtu. We wish to clarify that the 0.065 lb/MMBtu value was not the annual average emissions rate used in cost calculations, but was the emissions limit established on a rolling 30-boiler operating day (BOD) average, for Coronado Unit 1. We relied upon an 0.050 lb/MMBtu annual average emissions rate in developing cost calculations for SCR,⁴⁷ which is

⁴⁶ See Docket Item F–17 [SGS CAMPD 2021–23.xlsx]. To illustrate SCR control potential during periods of normal operation, this spreadsheet is based on the key assumption that emissions from any day a unit did not operate a full 24 hours would be attributable to startup/shutdown periods. An hourly analysis would provide a more refined and precise assessment, though we consider this assumption to overestimate the emissions attributable to startup/shutdown by including all emissions from partial operating days towards startup/shutdown.

⁴⁷ See Docket Item EPA–R09–OAR–2012–0021–0204 for cost calculation details. More information related to establishing a 30 BOD limit relative to an annual emissions rate can be found in our March 31, 2015 (80 FR 17010) proposed reconsideration, including Docket Items EPA–R09–OAR–2015–0165–0029 through –0033 for further details. We note that SRP identified an SCR design target

consistent with our action here. In establishing a rolling 30–BOD limit for Coronado Unit 1 in that action, we acknowledged that upward revisions to the SCR design rate achievable on an annual average basis would be appropriate in order to accommodate the effect that multiple startup/shutdown events would have to overall unit emissions rates on an averaging period that could be as short as 30 days. Based upon startup/shutdown frequency and projected controlled emissions rate information provided by SRP, we finalized 0.065 lb/MMBtu as an appropriate emissions limit and reasonable estimate of SCR performance over a short-term period.⁴⁸ Given that the 0.065 lb/MMBtu limit reference here corresponds to a different, shorter averaging period, and was itself based on an 0.05 lb/MMBtu annual average emissions rate, we do not consider it supportive of an 0.060 lb/MMBtu annual average emissions rate.

For SNCR, we appreciate the additional analysis provided in the comment and citation to Appendix K summarizing ADEQ's responses to public comments. We acknowledge that low inlet NO_x concentrations are a general consideration in evaluating NO_x controls that can negatively impact control efficiencies and achievable controlled emissions rates. Therefore, in order to further evaluate whether a rate lower than 0.15 lb/MMBtu may be achievable with SNCR at SGS Units 1 and 2 on an annual basis, we examined CAMPD emissions data over a 2019–2023 time period for SNCR-equipped units comparable to SGS Units 1 and 2, specifically filtering for tangentially-fired coal units operating with SNCR on a retrofit basis.⁴⁹ We identified four currently operating SNCR-equipped units achieving NO_x emissions rates below 0.15 lb/MMBtu, ranging between 0.10 to 0.12 lb/MMBtu.⁵⁰ These values represent the highest performing SNCR-equipped units, with the next best performing units operating at emissions rates of 0.15 lb/MMBtu and higher. At least one of the four units we identified has the capability to use natural gas,

during periods of normal operation as low as 0.03 lb/MMBtu for Coronado Unit 1, though we acknowledge there are source specific differences with the SGS units.

⁴⁸ It is unclear to what extent a comparable 30–BOD limit may be appropriate for the SGS units, but we note that the SGS units appear to have historically had at least as many startup/shutdown events as Coronado Unit 1.

⁴⁹ See Docket Item F–21, “SNCR Tangential Coal Units.xlsx.”

⁵⁰ See Docket Item F–21. These units include Boswell Energy Center (MN) Unit 4, Will County (IL) Unit 4, and Jeffrey Energy Center (KS) Units 2 and 3.

⁴³ See Docket Item F–16 “SCR Tangentially fired Coal.xlsx.”

⁴⁴ Id.

⁴⁵ TEP has indicated that vendors have been unwilling to provide manufacturer guarantees of 0.050 lb/MMBtu over the lifetime of the SCR system. Because manufacturer guarantees include contractual and financial considerations beyond technical performance of the SCR system, we do not consider an inability to secure a manufacturer guarantee to constitute a determination that an emission rate of 0.050 lb/MMBtu is not technically feasible, particularly with regard to periods of normal operation.

which could have the effect of lowering emissions rates relative to units that do not have this capability, such as SGS Units 1 and 2.⁵¹ Based on the three remaining units, each unit had relatively low pre-SNCR emissions rates that are comparable to SGS Unit 1 and 2, and each unit is able to achieve SNCR emissions rates below 0.15 lb/MMBtu and control efficiencies better than 15 percent. Neither ADEQ or TEP has provided documentation to support a claim that SGS Units 1 and 2 specifically cannot achieve an annual emissions rate lower than 0.15 lb/MMBtu with SNCR. Therefore, we find that ADEQ should have considered a NO_x emissions rate of lower than 0.15 lb/MMBtu for SNCR at SGS Units 1 and 2.

We also note that this was one of multiple flaws that formed the basis of our determination that the State's long-term strategy did not satisfy the requirements of 40 CFR 51.308(f)(2), including reasons related to source selection and control determinations, as detailed in our proposal and elsewhere in this document. Therefore, even assuming that a control efficiency of 15 percent for SNCR at SGS Units 1 and 2 was reasonable, it would not have changed our determination that the 2022 Arizona Regional Haze Plan did not satisfy the requirements of 40 CFR 51.308(f)(2).

Comment B.5. ADEQ disagrees with the EPA's determination that Arizona deviated from the Control Cost Manual without documentation as part of its four factor analyses with regards to remaining useful life calculations for the El Paso Natural Gas (EPNG) Williams facility and the use of source specific interest rates without providing adequate documentation in the control measure analyses for the EPNG Williams and Willcox facilities.

ADEQ indicates that the EPA Control Cost Manual Section 4, Chapter 2, states that ". . . a representative value of the equipment life for SCR at power plants can be considered as 30 years . . . [f]or other sources, the equipment life can be between 20 and 30 years." ADEQ noted that while it erroneously omitted this citation from the EPNG Williams Turbine analysis, the Control Cost Manual citation and justification for use of 25 years is the midpoint between the 20–30 year range for non-EGU SCR systems and was included in the EPNG Willcox SCR analysis for Turbines 1 and

2.⁵² ADEQ also noted that it received cost calculation spreadsheets utilizing a 25-year useful life for SCR for the EPNG Williams Turbine 1 from the US Forest Service.⁵³

ADEQ also explains that in its analysis of remaining useful life for compressor engines at the EPNG Williams facility, ADEQ documented the assumptions and basis for using 20 years to amortize NO_x controls in Appendix C, Section C3.7.6.5, which includes citations to the Control Cost Manual and the EPA's 2016 technical support document for the Cross State Air Pollution Rule for the 2008 Ozone NAAQS.

Response B.5. We appreciate the clarification regarding ADEQ's reasoning for use of a 25-year remaining useful life for the EPNG Williams turbines and 20 years for the EPNG Williams engines. While there are instances of combustion turbines with operating lifetimes beyond 25 years (with or without retrofit controls), we acknowledge that EPA guidance such as the Control Cost Manual has not recommended a value beyond the 20–30 year range. ADEQ's use of a 25-year useful life represents the midpoint of Control Cost Manual recommendations, and therefore we agree that it is consistent with the Control Cost Manual. However, we note that the lack of documentation of remaining useful life for the units at Williams Compressor Station was one of the many flaws that we identified in the state's long-term strategy including reasons related to source selection and control determinations, as detailed in our proposal and elsewhere in this document. Therefore, this clarification does not change our determination that the 2022 Arizona Regional Haze Plan did not satisfy the requirements of 40 CFR 51.308(f)(2).

Comment B.6. ADEQ disagrees with the EPA's determination that ADEQ did not reasonably weigh the statutory factors in reaching its control determinations with regards to application of cost thresholds. ADEQ disagrees that Arizona's consideration of incremental cost effectiveness in its four factor analyses were done in an unreasonable manner. ADEQ cites to its explanation that the incremental cost of requiring low-emission combustion 2 (LEC 2) as opposed to Air-Fuel ratio adjustments is \$5,034/ton, which ADEQ considered reasonable, and therefore ADEQ found that LEC 2 is a more

appropriate control for Williams Reciprocating Engine 1 (RECIP–1).⁵⁴

ADEQ also asserts that it also analyzed other determinations from the regional haze first implementation period besides the incremental cost effectiveness value for the Nelson Lime Plant action, and ADEQ provides this information in Table 1 of its comment letter.

Response B.6. We appreciate ADEQ's explanation about LEC 2 on RECIP–1, but we note that ADEQ also rejected LEC 3 on Williams RECIP–1, on the grounds that the incremental costs of these controls, relative to less stringent controls, were excessive. In addition, ADEQ did not provide or consider incremental cost effectiveness values for the same controls for the other units at the same source (RECIP–2 or RECIP–5). Although states may choose to consider incremental costs in a reasonable manner,⁵⁵ we find it was unreasonable for ADEQ to do so only for specific units and controls, rather than in a consistent manner across all units and controls. Such inconsistent treatment of sources without explanation is the "the hallmark of arbitrary action."⁵⁶

We also appreciate the addition of Table 1 identifying other first implementation period incremental cost effectiveness decisions. However, this information was not included in the Plan and therefore not subject to review by the public or FLMs. Accordingly, it cannot be relied upon to meet the requirement of 40 CFR 51.308(f)(2)(iii) for States to document the technical basis for their long-term strategy. Moreover, even if the information had been included in the Plan, it would not have justified ADEQ's inconsistent consideration of incremental cost effectiveness, for the reasons described in our proposal and the preceding paragraph.

Comment B.7. ADEQ states that, contrary to the EPA's contention, ADEQ did not rely upon visibility benefits for its control determinations, but rather visibility impacts were reported for some sources to give reference to the reader as to the relative impact of these sources or controls on visibility. ADEQ also asserts that nothing in the CAA, RHR, or 2019 Guidance prevents the department from considering visibility benefits as part of its analysis and stated that "the ADEQ's labeling of the visibility benefits associated with specific control scenarios as 'small'

⁵¹ Based on reported natural gas fuel usage, the Boswell Energy Center appears to use natural gas primarily as a startup fuel, but does periodically use quantities of natural gas that suggest co-firing with coal for electricity generation purposes.

⁵² 2022 Arizona Regional Haze Plan, Appendix C, Section C3.8.5.2, Page 146.

⁵³ 2022 Arizona Regional Haze Plan, Appendix L, Section 4.2.4, Comment 14.

⁵⁴ 2022 Arizona Regional Haze Plan, Appendix C, Section C3.7.6.2, page 129.

⁵⁵ See, e.g., 2019 Guidance, p. 40.

⁵⁶ *Nat'l Parks Conservation Ass'n v. EPA*, 788 F.3d 1134, 1145 (9th Cir. 2015).

comports with similar language used by the EPA in their regional haze actions.”⁵⁷

Response B.7. We agree with ADEQ that in its Response to Comments, ADEQ stated that “[v]isibility impacts were reported for some sources to give reference to the reader as to the relative impact of these sources or controls considered on visibility. However, this information was not considered in the Department’s emissions control measure determinations.”⁵⁸ However, this assertion is contradicted by the language of some of the control determinations in the Plan. For example, in the NO_x four-factor analysis for SGS, ADEQ stated that:

*ADEQ does find visibility impacts a useful consideration given the goal of the regional haze program is to improve visibility in Class I areas. As such, ADEQ reports modeled visibility impacts in this documentation. The small modeled visibility benefits associated with the modeled hypothetical NO_x emission reduction supports the determination that no additional NO_x controls are necessary to make reasonable progress towards natural visibility at Class I areas during this implementation period.*⁵⁹

Similar language appears following the SO₂ four factor analysis for SGS⁶⁰ and in the summary of ADEQ’s NO_x reasonable progress determination for IGS Unit 3.⁶¹ This language indicates that ADEQ did consider visibility for these units, and specifically, that it weighed the “small modeled benefits” of controls in determining that no additional NO_x controls were warranted at SGS Units 1 and 2 and IGS Unit 3, and no more stringent SO₂ controls were warranted at SGS Units 1 and 2.

While states have the option to consider visibility benefits, along with the four statutory factors, in making control determinations, if they choose to do so, they must do so “in a reasonable way that does not undermine or nullify the role of the four statutory factors in determining what controls are necessary to make reasonable progress.”⁶² In this

⁵⁷ Citing *e.g.*, “relatively small visibility benefits” in 79 FR 52419, 52439 (September 3, 2014).

⁵⁸ *Id.*, Appendix K, p. 9.

⁵⁹ Plan, Appendix C, p. 221 (emphases added).

⁶⁰ *Id.* at 234 (“The small visibility benefits associated with the modeled SO₂ controls supports the determination that CDS and wet FGD control options are not necessary to make reasonable progress towards natural visibility at Class I areas during this implementation period.”).

⁶¹ *Id.* at 197 (“The small modeled visibility benefits associated with additional controls support the determination that no additional controls are necessary to make reasonable progress towards natural visibility at Class I areas during this implementation period.”).

⁶² 2021 Clarifications Memo, p. 12 (quoting Response to Comments on Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule at 186).

case, we find it was not reasonable for ADEQ to consider visibility benefits only for specific sources and without any explanation of what would constitute a significant visibility benefit.

In the action cited by ADEQ where the EPA considered “relatively small visibility benefits,”⁶³ we were comparing the relatively small benefits of a control at one source to the relatively larger visibility benefits expected to result from controls at other sources.⁶⁴ In contrast, in the 2022 Arizona Regional Haze Plan, ADEQ did not find any visibility benefits at any source to be anything other than small. Thus, as explained in our proposal regarding SGS Units 1 and 2, “[i]n the absence of any opportunities for larger emissions reductions and corresponding visibility benefits, we find that ADEQ’s reliance on ‘small’ visibility benefits as an additional justification for not adopting more stringent controls at these units is not persuasive.”⁶⁵

Finally, we note that, even assuming that ADEQ did not consider visibility benefits as part of its control determinations for SGS Units 1 and 2, we would still conclude that the determinations were flawed for other reasons. In particular, for NO_x, ADEQ did not adequately justify the control efficiency used for SCR and SNCR, as discussed in the proposal and response B.4.⁶⁶ For SO₂, ADEQ unreasonably rejected wet FGD on the basis of incremental cost, and set mass-based caps that will not ensure implementation of the emissions reduction measures that are necessary to make reasonable progress at these units, as discussed in the proposal and response B.8. Furthermore, the lack of clarity in the Plan regarding whether or not ADEQ considered visibility benefits in making its control determinations for SGS Units 3 and 4 and IGS Unit 3, indicates a lack of reasoned decision making that also supports our disapproval of the Plan’s long-term strategy.

Comment B.8. ADEQ disagrees with the EPA’s determination that ADEQ did not reasonably weigh the statutory factors in reaching its control determinations with regards to three issues noted in the proposed rule concerning the mass-based emissions caps at SGS and IGS.

First, ADEQ asserts that the EPA’s rationale is arbitrary and capricious in

⁶³ 79 FR 52420, 52439.

⁶⁴ See, *e.g.*, *id.* at 52442 (referring to “large visibility benefits”) and 52458 (“we consider this visibility benefit sufficient to support installation of controls.”).

⁶⁵ 89 FR 47398, 47430.

⁶⁶ 89 FR 47398, 47428 (May 31, 2024).

regard to the rejection of wet FGD for SGS Units 1 and 2. ADEQ states that the use of emissions limits in lieu of codifying specific control technologies is a flexibility that the EPA itself used in its reasonable progress determination for Phoenix Cement Clarkdale (PCC).⁶⁷ ADEQ asserts that the EPA established an emissions limit for PCC that did not require the installation of a particular control technology but rather compliance through other means of meeting the limit.

Second, regarding the EPA’s contention that spray dry absorber (SDA) upgrades may still be cost effective after the establishment of the mass-based emissions caps, ADEQ comments that this manner of analysis is not contemplated in the four-factor analysis as outlined in the RHR or the 2019 Guidance. ADEQ asserts that the EPA has never applied this standard whereby after the establishment of an emissions limit based on the reductions achievable from a considered control technology that a State must revisit and update the baseline emissions of its four-factor analysis to reflect the new emissions limit. ADEQ claims that for its analysis of SGS, ADEQ did not select a control scenario in its four-factor analysis that included the imposition of both emissions limits and the installation of SDA upgrades, and therefore, the EPA should not substitute its judgment for ADEQ’s selection of SDA upgrades as the evaluated control measure for SGS Units 1 and 2 or reject ADEQ’s determination based on an arbitrary and circular four factor analysis standard.

Third, ADEQ further disagrees with the EPA’s assertion that the mass-based emissions caps at SGS and IGS would not meaningfully constrain the emissions from one unit during periods when the other unit is not operating and argues that the rationale is arbitrary and capricious. ADEQ notes that the EPA referenced TEP’s 2023 Integrated Resources Plan (IRP) and highlighted TEP’s plans to retire SGS Unit 1 in 2027, but states that as the operating scenarios outlined in the IRP are not federally enforceable conditions, ADEQ has no basis for the consideration of these future scenarios as part of its control measure analysis and the establishment of the mass-based emissions limits. ADEQ states that the EPA should not rely upon unenforceable and hypothetical operating scenarios to reject ADEQ’s reasonable progress determinations.

Lastly, ADEQ disagrees with the EPA’s rationale that IGS Unit 3’s mass-

⁶⁷ 79 FR 52420, 52460.

based emissions limits are not yet enforceable and therefore are not an appropriate basis for modifying the baseline control scenario for a four-factor analysis. ADEQ cites that for the EPA's BART determination for Arizona Public Service (APS) Cholla generating station, the EPA accepted a source specific permit revision for APS Cholla Unit 2 that included a trigger that was conditional on the EPA's approval of the SIP revision that altered the remaining useful life of the unit in ADEQ's four factor analysis.⁶⁸ Therefore, ADEQ concludes that the EPA should approve ADEQ's reasonable progress determination for IGS Unit 3.

Response B.8. We disagree with ADEQ's comments arguing that the EPA's justification for disapproving the reasonable progress determinations for SGS and IGS as it relates to the mass-based emissions caps at SGS and IGS was improper.

First, we wish to clarify that we do not object to the use of numeric emissions limitations as a means to implement control determinations. Indeed, CAA section 169A(b)(2) specifically requires the long-term strategy to include "enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress." As explained in our proposal:

The amount of progress that is "reasonable progress" is based on applying the four statutory factors in CAA section 169A(g)(1) in an evaluation of potential control options for sources of visibility impairing pollutants, which is referred to as a "four-factor" analysis. The outcome of that analysis is the emissions reduction measures that a particular source or group of sources needs to implement to make reasonable progress towards the national visibility goal. . . . Such measures must be represented by "enforceable emissions limitations, compliance schedules, and other measures" (i.e., any additional compliance tools) in a state's long-term strategy in its SIP.⁶⁹

We find that the mass-based emissions caps set for SGS do not represent the emissions reduction measures that were the outcome of the state's four-factor analysis for the reasons described in our proposal⁷⁰ and herein. Therefore, these caps do not meet the requirements of 169A(b)(2) and (g)(1), or the corresponding provisions of the RHR.

Regarding PCC, we agree that in the EPA's reasonable progress determination for PCC in the first implementation period, the EPA established a mass-based emissions

limitation for NO_x. However, the circumstances between PCC and SGS Units 1 and 2 differ in important ways. The limit for PCC was set pursuant to 40 CFR 51.308(d)(3), which required the long-term strategy for the first implementation period to "include enforceable emissions limitations, compliance schedules, and other measures *as necessary to achieve the reasonable progress goals* established by States having mandatory Class I Federal areas."⁷¹ In this instance, the Class I areas primarily affected by emissions from PCC were in Arizona,⁷² and the emissions reductions from PCC were reflected in the applicable RPGs for these areas by scaling of visibility extinction components in proportion to changes in total annual emissions.⁷³ Under these circumstances, an annual mass-based emissions limit corresponding to the level of annual emissions reductions assumed in the RPG calculations was sufficient to meet the applicable requirement for an emissions limit "as necessary to achieve" the relevant RPGs.

In contrast, for the second planning period, the EPA clarified in 40 CFR 51.308(f)(2) that "the long-term strategy must include the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress, as determined pursuant to (f)(2)(i) through (iv)." 40 CFR 51.308(f)(i) in turn requires the state to "evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering" the four statutory factors. Thus, the revised rule clarifies that the long-term strategy must include emissions limitations, compliance schedules, and other measures representing the emissions reduction measures that the state determined to be necessary to make reasonable progress, considering the four statutory factors.

The EPA provided recommendations on the appropriate form of such emissions limitations and other measures in the 2019 Guidance and the Clarifications Memo. Specifically, the 2019 Guidance recommends the use of throughput-based limits, rather than mass-based limits (i.e., "caps") for emissions limitations to implement measures necessary for reasonable progress in most instances.⁷⁴ The Guidance notes that mass-based limits

are allowed under the RHR, but explains that, "[i]f the state has determined, independent of the forecasted operating level, that operation of the emission control equipment . . . is necessary to make reasonable progress, a mass-based emission limit may not be appropriate."⁷⁵ The Clarifications Memo also reaffirms that "whether for new or existing measures . . . an emission limit . . . should be in the form of the emission rate achieved when implementing those measures (e.g., pounds per million British thermal units or lbs/MMBtu, pounds per hour or lbs/hr, or pounds per ton or lbs/ton of produced material)."⁷⁶

With regard to SGS 1 and 2, ADEQ concluded, based on a four-factor analysis that, "it is reasonable to require TEP to upgrade the current SDA systems"⁷⁷ and did not indicate that this determination was conditioned on a particular level of operation. Therefore, ADEQ should have set limits in the form of the emissions rates achieved when implementing SDA upgrades, e.g., lb/MMBtu limits, or should have provided a rationale for why the mass-based limits, which could be met without any control upgrades, nonetheless represent SDA upgrades.

We also note that the mass-based limit at PCC was for a single unit, meaning that it necessarily constrained the emissions from that unit on an annual basis. In contrast, the mass-based limit at SGS Units 1 and 2 were set across two units. Accordingly, if one unit ceases to operate, the limits would not meaningfully constrain emissions from the other unit. In addition, ADEQ rejected more stringent controls at SGS Units 1 and 2 based on its "determination that another viable reasonable control exists to reduce SO₂ emissions from Units 1 & 2 (upgraded SDA)." In contrast, the EPA did not reject any more stringent controls for PCC based on incremental cost effectiveness. Furthermore, the cap at PCC was intended, in part, to address concerns raised during consultation with the facility's owner, the Salt River Pima Maricopa Indian Community (SRPMIC).⁷⁸ No similar considerations exist with respect to SGS Units 1 and 2. Therefore, we find that the circumstances concerning the PCC

⁶⁸ Id. pp. 44–45.

⁶⁹ 2021 Clarifications Memo, p. 11.

⁷⁰ Plan Appendix C, p. 232.

⁷¹ 79 FR 9318, 9366 ("An annual cap would allow SRPMIC to delay installation of controls until the Plant's production returns to pre-recession levels and would thus help to address the Community's concerns about the budgetary impacts of control requirements.")

⁷² 40 CFR 51.308(d)(3) (emphasis added).

⁷³ See 79 FR 9318, 9354 Table 41 (showing impacts on Arizona I class I areas).

⁷⁴ 79 FR 52420, 52468–52469; *FIP_RPG_estimates.xlsx*.

⁷⁵ 2019 Guidance p. 44.

⁶⁸ 81 FR 46852, 46860 (July 19, 2016).

⁶⁹ 89 FR 47398, 47402–47403.

⁷⁰ 89 FR 47398, 47430.

mass-based cap are distinguishable from those concerning SGS Units 1 and 2.

Second, regarding our finding that SDA upgrades would be cost effective after the establishment of the mass-based emissions caps, we disagree that we substituted our judgment for ADEQ's by arbitrarily rejecting ADEQ's determination based on a circular four-factor analysis standard. Contrary to ADEQ's suggestion, we did not state that ADEQ was required to revisit and update the baseline emissions of its four-factor analysis to reflect the new emissions limitation. However, we note that ADEQ did use this approach for IGS Unit 3 and determined that with the emissions reductions associated with the new Unit 3 emissions caps, no additional controls are necessary to make reasonable progress. ADEQ did not provide any rationale for why it used this approach for IGS Unit 3, but not for SGS Units 1 and 2.

Furthermore, the fact that the SDA upgrades would still be cost effective following implementation of the mass-based caps at SGS Units 1 and 2 is relevant to whether the use of caps (in lieu of throughput-based limits) is reasonable and appropriate in this particular case. The fact that throughput-based (e.g., lb/MMBtu) limits equivalent to SDA would still be cost-effective following implementation of the caps (i.e., if TEP complies with the caps by lowering its operating level) indicates that throughput limits based on the emissions rates achievable with SDA upgrades may be necessary to make reasonable progress, regardless of the future operating level. As previously noted, the 2019 Guidance explains that, under such circumstances, mass-based caps are generally not appropriate. Therefore, we believe this consideration is relevant to the evaluation of whether mass-based caps were reasonable and consistent with the requirements of the RHR in this case.

Third, we agree with ADEQ's statement that the operating scenarios outlined in the IRP are not federally enforceable conditions. However, ADEQ's statement in its comment letter that it has "no basis for the consideration of these future scenarios as part of its control measure analysis and the establishment of the mass-based emission limits" is inconsistent with its stated rationale in the Plan for establishing caps instead of mass-based limits. Specifically, ADEQ stated that:

As discussed in TEP's 2020 IRP, Units 1 will transition to seasonal operation in 2023 and Unit 2 in 2024. TEP is planning to retire Unit 1 in 2027 and Unit 2 in 2032. TEP will be very likely to manage its operating level strategically instead of completing the

upgrades to the SDA systems for meeting the RP requirements. Therefore, ADEQ determines that a mass-based emission limit is reasonable.⁷⁹

In other words, ADEQ elected to establish caps *specifically because* it anticipated that TEP could comply with these caps by reducing its operating level consistent with its then-current IRP. Therefore, we do not agree that it was inappropriate for the EPA to consider information contained in TEP's most recent (2023) IRP in evaluating whether the mass-based caps were reasonable and consistent with the RHR.

Lastly, we agree that for APS Cholla Unit 2, the EPA accepted a source-specific permit revision that included a trigger that was conditional on the EPA's approval of the SIP revision that altered the remaining useful life of the unit in ADEQ's four factor analysis. However, the APS Cholla scenario was distinguishable because, as explained in the proposed rule,⁸⁰ the SIP revision for APS Cholla replaced the FIP that was applicable to these units.⁸¹ Therefore, it would not have been reasonable to subject them to two inconsistent requirements, one State and one Federal, under the RHR at the same time. Thus, under these circumstances it was appropriate for ADEQ to make the effectiveness of the permit conditions contingent on EPA SIP approval. In the current case, there is no existing FIP in place applicable to IGS Unit 3, so no similar rationale exists for making the cap contingent upon approval by the EPA.

Comment B.9. ADEQ asserts that the EPA should approve ADEQ's reasonable progress goal (RPG) for the Sycamore Canyon Wilderness Area. The state indicates that it provided the required "robust demonstration" by including a detailed analysis of visibility data at the Sycamore site to demonstrate that its slower rate of progress results from significant increases in light extinction from coarse mass.

Response B.9. As ADEQ notes in its comment, its analysis regarding Sycamore Canyon focused on the substantial increase in coarse mass and soil impairment at the Sycamore Canyon site. However, as explained in our proposal, the rule requires a state with a Class I area whose RPG is above the glidepath to demonstrate, based on the source selection and four factor analyses required under 40 CFR 51.308(f)(2)(i), that there are no additional emissions reduction

measures for sources that may reasonably be anticipated to contribute to visibility impairment in the Class I area that would be reasonable to include in the long-term strategy.⁸² Although ADEQ provided a detailed analysis of monitoring data concerning Sycamore Canyon, it did not provide "a robust demonstration, including documenting the criteria used to determine which sources or groups or sources were evaluated and how the four factors required by paragraph (f)(2)(i) were taken into consideration in selecting the measures for inclusion in its long-term strategy."⁸³ Instead, it relied solely on monitoring data and the source selection and four-factor analyses contained elsewhere in the Plan.⁸⁴ For the reasons described in our proposal and elsewhere in this document, we find that these analyses were inadequate to meet the requirements of 40 CFR 51.308(f)(2). Therefore, the Plan also did not meet the requirements of 40 CFR 51.308(f)(3)(ii)(A) with respect to Sycamore Canyon.

Comment B.10. ADEQ indicates that the State intends to coordinate with EPNG to provide supporting documentation for the interest rate. ADEQ indicates that it intends to provide the interest rate documentation as confidential business information (CBI) to the EPA for review prior to publication of the final rule and requests that the EPA approve the cost calculation for EPNG Willcox and Williams based on the site-specific interest rate and supporting documentation.

Response B.10. Although ADEQ referenced the existence of documentation and the possibility of sharing it with the EPA in its response to comments in the Plan,⁸⁵ no supporting documentation for the interest rate was submitted as part of the Plan or prior to the close the public comment period on the EPA's proposed partial approval and partial disapproval. Therefore, the EPA is unable consider the interest rate information as part of this action.

Additionally, we note that the lack of documentation of EPNG's firm-specific interest rate was one of several flaws that we identified in the state's long-term strategy. Therefore, even if the appropriate documentation had been submitted and within the proper time frame, that alone would not have changed our determination that the

⁸² 89 FR 47398, 47433.

⁸³ 40 CFR 51.308(f)(ii)(A).

⁸⁴ See Plan p. 106, footnote 112 (citing Plan Section 8 and Appendix C).

⁸⁵ 2022 Arizona Regional Haze Plan, Appendix K.

⁷⁹ 2022 Arizona Regional Haze Plan, Appendix C, p. 236.

⁸⁰ 89 FR 47398, 47407, Table 1.

⁸¹ 77 FR 72511 (December 5, 2012).

2022 Arizona Regional Haze Plan did not satisfy the long-term strategy requirements of 40 CFR 51.308(f)(2).

Comment B.11. ADEQ voiced procedural concerns with the lack of specificity in the EPA's proposed disapproval of the 2022 Arizona Regional Haze Plan. ADEQ cites CAA 307(d)(3) as requiring a detailed notice of rulemaking and cites *Small Ref. Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 518–19 (D.C. Cir. 1983), for the proposition that the notice provided in the proposal may be too general to be adequate and that “[a]gency notice must describe the range of alternatives being considered with reasonable specificity.” The commenter asserts that the EPA's proposed rule does not provide “detailed notice” of certain specific issues that form the basis for disapproval of entire sections of the 2022 Arizona Regional Haze Plan, denying ADEQ the opportunity to specifically address those bases for disapproval during the comment period.

Response B.11. We disagree that the EPA's proposal provided inadequate notice. The EPA's action on the 2022 Arizona Regional Haze Plan is not subject to the requirements of CAA section 307(d). Those requirements apply only to specific enumerated types of actions under the CAA and to “such other actions as the Administrator may determine.”⁸⁶ Actions on SIPs are not one of the enumerated actions, and the Administrator had not determined that this action is subject to 307(d) pursuant to Section 307(d)(1)(V). Therefore, this action is subject to the procedural requirements of the Administrative Procedure Act (APA).

Accordingly, pursuant to 5 U.S.C. 553(b)(2) and (3), the EPA's notice of proposed rulemaking regarding the Plan was required to include “reference to the legal authority under which the rule is proposed” and “either the terms or substance of the proposed rule or a description of the subjects and issues involved.” The proposal clearly met these requirements, as it stated the applicable legal authorities and provided the EPA's review of the Plan in relation to those requirements. The comment provides no basis to conclude that the proposal failed to meet these requirements. Indeed, the opinion cited by the commenter contrasts these more general APA requirements to the more exacting requirements of CAA section 307(d) concerning the contents of proposed rulemaking.⁸⁷ While we agree with the commenter that “[a]gency

notice must describe the range of alternatives being considered with reasonable specificity,”⁸⁸ we find that our proposal met this requirement, as it plainly stated that the EPA was considering partially approving and partially disapproving the 2022 Arizona Regional Haze Plan and detailed the reason for this proposed action. Please also see Responses A.1.

Comment B.12. ADEQ acknowledges that further FLM consultation is required for a plan revision that will correct the deficiencies identified in the proposed rulemaking action, but contends that the inclusion of the nonpoint source selection analysis and selected controls for nonpoint sources in the FLM review draft of the plan provided FLMs adequate notice and review of Arizona's nonpoint source rules that were codified after plan submission and submitted in the 2023 Arizona Regional Haze Rules Supplement.⁸⁹

Response B.12. The EPA disagrees with ADEQ's contention that it provided the FLMs with adequate notice and review of Arizona's nonpoint source rules. The information about FLM consultation regarding the rules specifically is not detailed in either the 2023 Arizona Regional Haze Rules Supplement, or the 2022 Arizona Regional Haze Plan. The 2023 Arizona Regional Haze Rules Supplement indicated that further information on how this SIP revision complied with 40 CFR 51.308(i) requirements for federal land manager consultation is section 2.4 of the 2022 Arizona Regional Haze Plan.⁹⁰ However, section 2.4 of the plan only describes the FLM review of the 2022 Arizona Regional Haze Plan, and does not specify if ADEQ provided a draft of the three nonpoint source rules to the FLMs for review. The rules were not included in the 2022 Arizona Regional Haze Plan. Should Arizona choose to submit a SIP revision, clarification of the FLM review process of the nonpoint source rules that are listed in Table 1–1 of the 2023 Arizona Regional Haze Rules Supplement would be helpful for EPA review.

C. Comment Letter From the Chamber and AMC

Parts I (“The Chamber and AMC are supportive of the goals of the Regional Haze Rule”) and III (“Conclusion”) of the Chamber and AMC's comment letter are informational and therefore do not

require a response. We respond to part II, sections A–E of the Chamber and AMC's comment letter below.

Comment C.1. The Chamber and AMC note that the EPA's delayed action and partial disapproval of Arizona's Regional Haze Plan is an example of erosion of cooperative federalism. The commenter contends that the timeline of events leading up to the EPA's partial disapproval of Arizona's Regional Haze Plan is problematic and that the EPA seems to routinely miss statutory deadlines, only to get sued by third-party entities for failure to act, resulting in agreements to deadline extensions that delay action for years. In the meantime, the resources and analysis invested by states depreciate in value, often requiring states to reinvest in efforts to update an analysis with new information. The commenter also asserted that “[r]egularly, an even worse scenario plays out in which EPA denies a SIP because the information submitted in good faith by a state has since become dated and stale.”

Response C.1. We do not agree that either the timing or substance of the EPA's partial disapproval of Arizona's Regional Haze Plan is an example of the erosion of cooperative federalism. We acknowledge that the EPA did not act on the 2022 Arizona Regional Haze Plan within the statutory deadline under CAA section 110(k)(3), and that we were subsequently sued for failing to meet that deadline. This resulted in a court-ordered deadline for the EPA to take action on the Plan by March 30, 2025.⁹¹ However, we do not agree that this resulted in a “deadline extension” of any sort, or an erosion of cooperative federalism. On the contrary, in issuing a partial approval and partial disapproval of the Plan, the EPA is fulfilling our statutorily-mandated role to review SIPs for compliance with the requirements of the CAA and the RHR, as further described in Response D.3.

We also disagree with the suggestion that the EPA is disapproving the 2022 Arizona Regional Haze Plan, partially or entirely because information became “dated or stale.” The comment did not provide examples of information becoming dated, resulting in disapproval; thus, we cannot comment on any specific concerns the commenter has with the information within the 2022 Arizona Regional Haze Plan.

Further, as explained in Responses A.1 EPA staff also discussed with ADEQ many of the concerns that became bases for our disapproval during the SIP development process.

⁹¹ *Sierra Club v. EPA* (D.D.C. Case No. 1:23-cv-01744–JDB), Consent Decree entered July 12, 2024.

⁸⁸ *Id.* at 549.

⁸⁹ ADEQ SIP Revision: Nonpoint Rules to Supplement Arizona's 2022 Regional Haze SIP, “2023 Arizona Regional Haze Rule Supplement,” August 22, 2023.

⁹⁰ *Id.* at Chapter 4.

⁸⁶ CAA Section 307(d)(1).

⁸⁷ *Small Ref. Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 518–19 (D.C. Cir. 1983).

Comment C.2. The Chamber and AMC state that guidance should not be cited as grounds to disapprove the 2022 Arizona Regional Haze Plan. The commenter asserts that guidance should be viewed only as a reference and not a legal requirement to be used to approve or disapprove a state's plan. The Chamber and AMC also claim that the EPA published final guidance for Regional Haze Plans three weeks before the plans were due, making compliance with the guidance practically impossible before the deadline. The commenter concludes that relying on the guidance to partially disapprove the Plan was therefore arbitrary and capricious, and the EPA should withdraw all of the proposed disapprovals based upon the 2021 Clarifications Memo.

Response C.2. The EPA disagrees that it relied on guidance, including the 2021 Clarifications Memo, as the basis for our partial disapproval. See responses A.5, B.1, and B.2.

Comment C.3. The Chamber and AMC assert that Arizona's source selection methodology was reasonable and that the EPA should give deference to the State on this matter. The commenter indicates that sources that applied controls in the first round of Regional Haze had recently made significant investments in the design, engineering, procurement, construction and operation of those air pollution control devices. They note that forcing facilities to consider improvement or replacement of these air pollution control devices long before they have depreciated is an unnecessary economic burden for the source and the State. The Chamber and AMC note that ADEQ chose not to force additional analysis from these sources and reasonably relied upon reductions from other emissions sources for visibility improvement, a method that resulted in all but one of Arizona's Class I areas either meeting or exceeding the uniform rate of progress (URP) toward natural conditions.

Response C.3. We disagree that it was reasonable for Arizona to screen out sources solely because they applied controls during the first planning period, for the reasons described in section IV.E.2.a. of our proposal and in response B.3 of this document.

We also disagree that our disapproval will automatically force sources to consider improving or replacing any recently installed air pollution devices. Rather, ADEQ has the option to provide additional documentation and justification for its effective control determinations in a responsive SIP revision. We anticipate that for many

units that recently installed controls, ADEQ will be able to provide an adequate demonstration of effective controls on a unit-specific and pollutant-specific basis, if it chooses to do so, which would preclude the need for a four-factor analysis for those units and pollutants. Any affected units and pollutants for which ADEQ is unable to make such demonstration would be subject to the four-factor analysis requirement as required by 40 CFR 51.308(f)(2).

Finally, we note that all states are subject to the requirements at 40 CFR 51.308(f)(2) and (3) regardless of whether the 2028 RPGs for Class I Areas they affect are above or below URP.

Comment C.4. The Chamber and AMC assert that the EPA should give deference to Arizona's deviation from the EPA Control Cost Manual in developing cost estimates. The commenter notes that the Cost Control Manual is not accurate for all sources and cites examples such as variable interest and emissions rates. They conclude that the use of different interest rates and different control efficiencies for different projects should be viewed as reasonable.

Response C.4. We do not agree that we should have deferred to Arizona's deviation from the EPA Control Cost Manual in the absence of adequate justification. As discussed in Response D.3, Congress charged the EPA with independently evaluating and reviewing SIP submissions for compliance with the applicable requirements under the CAA. 40 CFR 51.308(f)(2)(iii) requires states to "document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects." The technical documentation must include the modeling, monitoring, cost, engineering, and emissions information on which the state relied to determine the measures necessary to make reasonable progress. For the reasons noted in section IV.E.2.b.ii ("Deviations from Cost Control Manual") of our proposed rule, we found that Arizona failed to adequately document the technical basis that it relied upon to determine emissions reduction measures, as required by 40 CFR 51.308(f)(2)(iii). Specifically, as explained in our proposal, it is important to use consistent methods in order to allow for reasoned comparisons between different sources within a state,

and cost analyses in other states.⁹² Therefore, while our regulations allow for flexibility among various methodologies, where a state deviates from these methods, it should explain how its alternative approach is reasonable, appropriate, and consistent with the regulations and the statutory requirement to make reasonable progress towards the national goal. Arizona did not do so. We therefore disagree that the EPA should give deference to Arizona's approach in the Plan.

Comment C.5. The Chamber and AMC indicate that Arizona's plan should be viewed in the context that it results in all but one monitor having an RPG that provides for a greater rate of visibility improvement than the adjusted URP. The commenter asserts that Arizona has created a plan that meets or exceeds the URP at all monitors except for Sycamore Canyon, which was moved to an intersection of two dirt roads in 2014. The commenter concludes that the fact that visibility at Arizona's Class I areas is improving at a pace to reach natural conditions prior to the RHR goal of 2064 is important context in evaluating the source selection methodology and other decisions made by Arizona.

Response C.5. We do not agree with the commenter's characterization of the role of the URP. As explained in our proposal:

The URP is a planning metric used to gauge the amount of progress made thus far and the amount left before reaching natural visibility conditions. However, the URP is not based on consideration of the four statutory factors and therefore cannot answer the question of whether the amount of progress being made in any particular implementation period is "reasonable progress."⁹³

Moreover, being on or below the URP does not exempt a state from any of the requirements of the CAA or the Regional Haze Rule.⁹⁴

It should also be noted that the URP represents the amount of visibility improvement that would need to be achieved during each implementation period to achieve natural visibility conditions by the end of 2064. However, the 2064 date is used solely to calculate the URP as a tracking metric. The CAA and RHR do not contain any end dates for the regional haze program and do not have a "goal" or requirement to achieve natural conditions by 2064 specifically.

Please also see Response B.9 for more information on the robust

⁹² 89 FR 47398, 47428–47429.

⁹³ 89 FR 47398, 47406.

⁹⁴ See 82 FR 3078,3093 and 3099–3100.

demonstration required for Sycamore Canyon under 40 CFR 51.308(f)(3)(ii), which is missing from Arizona's submission.

D. Comment Letter From TEP

The "Background" section of TEP's comment letter is informational and therefore does not require a response. We respond to the "Comments of Proposed Disapproval" section of TEP's comment letter below.

Comment D.1. TEP claims that ADEQ's source selection methodology was reasonable and the EPA should approve the determination. First, TEP cites to the 2019 Guidance and 2021 Clarifications Memo as providing states discretion for source selection and notes that ADEQ applied a Q/d screening threshold of 10 for each process at a source. TEP further describes ADEQ's screening out processes where the facility recently adopted "effective controls," which the Agency defined as controls installed to meet the requirements of the PSD program (BACT), the first regional haze planning period (BART), or other NAAQS requirements. Second, TEP further suggests that the EPA is proposing to approve "many aspects of ADEQ's source selection process," including ADEQ's choice of screening threshold and focus on NO_x, SO₂, and PM₁₀ in evaluating visibility impacts, but simultaneously proposing to find that the State did not adequately justify its determination of effective emissions reduction measures.

Response D.1. First, we disagree with the commenter that ADEQ applied a Q/d screening threshold of 10 for each process at a source. As noted in the 2022 Arizona Regional Haze Plan, the Q value was calculated from *facility-wide* PM₁₀, NO_x, and SO₂ annual emissions, not process-specific emissions.⁹⁵

Second, we clarify that the EPA did not propose to approve "many aspects of ADEQ's source selection process." We found that ADEQ reasonably and adequately explained and documented many aspects of its source selection process, such as its focus on sulfate, nitrate, and coarse mass and its use of a Q/d value of 10 for point sources. However, we are not separately approving or disapproving specific elements of ADEQ's long-term strategy, including any elements of the source-selection process. Rather, we are disapproving the long-term strategy as a whole under 40 CFR 51.308(f)(2), for the reasons described in our proposal and in this document.

⁹⁵ 2022 Arizona Regional Haze Plan, Appendix C.2.2, p. 26.

Comment D.2. TEP asserts that ADEQ reasonably evaluated existing controls at IGS Unit 4 and SGS Units 3 and 4.

First, the commenter states that ADEQ did not determine that sources were effectively controlled based on BART controls alone, but also evaluated additional emissions reduction measures at several units that were controlled during the first regional haze planning period, citing Table 8–2 in the 2022 Arizona Regional Haze Plan. For IGS Unit 4 specifically, the commenter states that ADEQ evaluated existing emissions reduction measures at IGS Unit 4 from a source-specific perspective, and determined that further analysis would be futile. TEP cites to statements regarding post-combustion controls in the 2019 Guidance and states that, in a recent FIP action for Arizona, the EPA determined that eliminating coal combustion at Unit 4 would control emissions beyond the best available NO_x and SO₂ controls.⁹⁶ TEP concludes that these emissions reduction measures remain the best available controls at this unit in the second planning period. TEP further notes that ADEQ's determination that IGS Unit 4 is well-controlled is also consistent with recent decreasing emissions trends across BART-eligible EGUs, including IGS Unit 4, and between 2014 and 2019. TEP points to the recent proposed rule for Georgia's Regional Haze SIP,⁹⁷ and comments that the EPA cited to similar visibility-impairing emissions trends as support for Georgia's source-selection methodology. Citing to the 2021 Clarifications Memo,⁹⁸ TEP also indicates that ADEQ was not required to consider emissions trends and that the State has discretion to emphasize other considerations, such as the EPA's prior FIP evaluation.

Second, TEP states that the EPA's proposed disapproval fails to engage with ADEQ's analysis for SGS Unit 3 and 4. TEP notes that ADEQ considered potential additional control measures that could be used to achieve emissions reductions at SGS Units 3 and 4 based on an initial control analysis submitted by TEP.⁹⁹ In this analysis, TEP provided

⁹⁶ 79 FR 52420, 52422.

⁹⁷ 89 FR 47481 (June 3, 2024).

⁹⁸ Specifically, TEP quotes page 3 of the 2021 Clarifications Memo ("[t]he [Regional Haze Rule] does not explicitly list factors that states must or may not consider when selecting sources for analysis,") and cites page 5 of the 2021 Clarifications Memo as supporting its assertion that "EPA has recommended that states consider projected and actual emissions in evaluating existing emission reduction measures."

⁹⁹ TEP, Identification and Evaluation of Emission Control Measures for Units 3 and 4 at the Springerville Generating Station for Purposes of the Regional Haze Second Planning Period Under 40

information on technically feasible control measures, as well as the actual and projected emissions rates at each unit.

Response D.2. We disagree that ADEQ's evaluations regarding effective controls at IGS Unit 4 and SGS Units 3 and 4 were reasonable and justified. Contrary to TEP's claim, ADEQ did not evaluate additional emissions reduction measures at several units that were controlled during the first regional haze planning period. Table 8–2 cited by TEP to support its claim that ADEQ evaluated additional emissions reduction measures at units that were controlled during the first regional haze planning period only depicts annual, source-level total emissions of NO_x, SO₂ and PM₁₀ and does not include any information regarding unit-specific or pollutant specific emissions rates or controls. The commenter also provides no citation for its assertion that ADEQ evaluated existing emissions reduction measures at IGS Unit 4 from a source-specific perspective. Therefore, based on the contents of the 2022 Arizona Regional Haze Plan, it was reasonable for the EPA to determine that ADEQ did not evaluate additional emissions reduction measures at units that were controlled during the first regional haze planning period.

Similarly, the commenter's citation to the discussion of post-combustion controls in the 2019 Guidance is misleading because no such controls were installed at IGS Unit 4. Rather, the unit was converted from coal to gas as part of a "better-than-BART" determination pursuant to 40 CFR 51.308(e)(2).¹⁰⁰ Therefore, the actual relevant effective controls discussion in the 2019 Guidance is the discussion of fuel combustion units that are required to burn pipeline quality natural gas. Such units are generally considered to be effectively controlled for SO₂ and PM.¹⁰¹ However, they are not necessarily effectively controlled for NO_x. Therefore, we disagree with the commenter that, given TEP's recent conversion of IGS Unit 4 from coal to natural gas, ADEQ's conclusion that further analysis was not required was reasonable. As stated in the proposed rule,¹⁰² ADEQ should have explained why it is reasonable to assume, without conducting a four-factor analysis, that no additional NO_x controls would be reasonable.¹⁰³

CFR 51.308(f)(2) (Mar. 2020), available at https://static.azdeq.gov/aqd/haze/tep_spr_4fa_u34.pdf.

¹⁰⁰ See 40 CFR 52.145(j)(4).

¹⁰¹ See 2019 Guidance, p. 24.

¹⁰² 89 FR 47398, 47428.

¹⁰³ See 40 CFR 51.308(f)(2)(i) ("... The State must include in its implementation plan a

The commenter's discussion of emissions trends is also misleading on several grounds. First, the commenter mischaracterizes the EPA's review of Georgia's regional haze source selection methodology. In the section of the Georgia proposal cited by TEP, the EPA considered trends in total measured visibility impairment at three Class I areas affected by Georgia's sources as supporting the reasonableness of the state's overall source selection methodology.¹⁰⁴ The EPA did not, however, consider trends in emissions from specific sources and did not indicate that such trends would be relevant either to the reasonableness of a state's overall source selection methodology or especially to the question of a whether a particular source may be screened out on the grounds that it is "effectively controlled." Furthermore, the trends cited by the commenter were for multiple BART-eligible EGUs, not just IGS. Therefore, we do not agree that decreasing SO₂ and NO_x emissions at BART-eligible EGUs in Arizona between 2014 and 2019 are relevant to whether IGS Unit 4 is effectively controlled.

Second, the commenter mischaracterizes the contents of the 2021 Clarifications Memo as it relates to how to determine whether a source is effectively controlled. The first section cited by the commenter, regarding "Factors to Consider for Source Selection"¹⁰⁵ relates to a State's overall source selection methodology, which is generally considered to be the first step of determining what measures are necessary for reasonable progress.¹⁰⁶ Whether and how to screen out particular sources on the grounds that they are effectively controlled is a subsequent step. As previously noted, we found that many aspects of ADEQ's source selection process were reasonable and adequately explained and documented,¹⁰⁷ consistent with the statement in the Clarifications Memo that, "whatever choices states make should be reasonably explained and produce a reasonable outcome."¹⁰⁸

description of the criteria is used to determine which sources or groups of sources it evaluated and how the four factors were taken into consideration in selecting the measures for inclusion in its long-term strategy."). See also 2021 Clarifications Memo, p. 5; 2019 Guidance, p. 23.

¹⁰⁴ 89 FR 47481, 47497–47498.

¹⁰⁵ 2021 Clarifications Memo, p. 3.

¹⁰⁶ Id. ("Source selection is a critical step in states' analytical processes. All subsequent determinations of what constitutes reasonable progress flow from states' initial decisions regarding the universe of pollutants and sources they will consider for the second planning period.")

¹⁰⁷ 89 FR 47428.

¹⁰⁸ 2021 Clarifications Memo, p. 3.

However, once the sources were initially selected for evaluation of additional control measures, we found that ADEQ did not provide an adequate justification for subsequently screening out certain sources and units from ultimately conducting a four-factor analysis on the basis that they are effectively controlled.

The second section of the 2021 Clarifications Memo mischaracterized by the commenter, "Sources that are Not Selected Based on Existing Effective Controls," does address the screening out of particular sources on the grounds that they are effectively controlled. In particular, this section recommends that, "States should *first* assess whether the source in question already operates an 'effective control' as described in the August 2019 Guidance. They should *further* consider information *specific to the source*, including recent actual and projected emission rates, to determine if the source could reasonably attain a lower rate."¹⁰⁹ For the reasons detailed in our proposal and elsewhere in this document, we find that ADEQ did not reasonably explain and support its determination at the first step that IGS Unit 4 already operates effective controls, particularly for NO_x. Moreover, even if IGS Unit 4 does have effective controls, ADEQ should have considered recent actual and projected emissions rates *for this particular* unit, not for all BART-eligible units as a group, in order to determine whether these controls are necessary to make reasonable progress.

Finally, we disagree that our proposed disapproval fails to engage with ADEQ's analysis for SGS Unit 3 and 4. Contrary to the commenter's suggestion, ADEQ did not screen out SGS Units 3 and 4 at the source selection stage,¹¹⁰ but instead conducted four-factor analyses for these units.¹¹¹ We summarized these analyses on pages 47422–47423 of our proposal. We did not note any particular flaws in these analyses or the resulting determinations that no additional controls were necessary to make reasonable progress in our proposal. However, we found that ADEQ had not addressed whether any of the *existing* measures relied upon in these four-factor analyses were necessary to make reasonable progress and thus should be a part of the State's long-term strategy for the second planning period.¹¹² We also noted that, as part of its analysis of whether these existing measures are

¹⁰⁹ Id., p. 5 (emphasis added).

¹¹⁰ 2022 Arizona Regional Haze Plan, Appendix C, Exhibit CI.

¹¹¹ Id., Chapter C3.13.

¹¹² 89 FR 47431.

necessary to make reasonable progress, the State should have considered whether the relevant sources are subject to enforceable emissions limits that ensure their emissions rates will not increase. Without this information, it is not clear what measures are in the State's long-term strategy for the second planning period and how controls on these units result in each of the affected Class I areas making reasonable progress towards the national goal.

Comment D.3. TEP asserts that ADEQ reasonably evaluated additional control measures using a four-factor analysis for SGS Units 1 and 2. Citing *Oklahoma v. EPA*, 723 F.3d 1201, 1209 (10th Cir. 2013), the commenter asserts that while the statute identifies the factors that must be considered, Congress left to states the determination as to how these factors should be weighed.

Response D.3. While we agree that states have significant discretion in how they consider and apply the four statutory factors as part of a Regional Haze SIP, they do not have unlimited discretion. On the contrary, the EPA has a crucial role in reviewing such SIP submissions for compliance with the requirements of the CAA and the RHR. Pursuant to CAA section 110, states must submit SIP revisions to the EPA for review and the EPA must evaluate whether each SIP submission meets all of the applicable requirements of the Act.¹¹³ The EPA must disapprove any SIP revision that "would interfere with any applicable requirement" of the Act.¹¹⁴ CAA section 110(a)(2)(J) specifically requires that SIPs "meet the applicable requirements" of Part C of Title I of the CAA including the requirements for visibility protection set forth in sections 169A and 169B.¹¹⁵ Pursuant to section 169A(b), the EPA is required to promulgate visibility protection regulations that apply to "each applicable implementation plan" (*i.e.*, each SIP or FIP)¹¹⁶ for each State containing one or more Class I areas and each State "emissions from which may reasonably be anticipated to cause or contribute to any impairment of

¹¹³ CAA section 110(a)(1), (k)(3), 42 U.S.C. 7410(a)(1) and (k)(3).

¹¹⁴ CAA section 110(l), 42 U.S.C. 7410(l).

¹¹⁵ CAA sections 110(a)(2)(J), 169A and 169B 42 U.S.C. 7410(a)(2)(J), 7491 and 7492.

¹¹⁶ Under the CAA, "applicable implementation plan" is defined as "the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under [CAA section 110], or promulgated under [CAA section 110](c) . . . and which implements the relevant requirements of [the CAA]." CAA section 302(q), 42 U.S.C. 7602(q). In other words, an "applicable implementation plan" is an EPA-approved SIP or Tribal Implementation Plan, or an EPA-promulgated FIP.

visibility in any [Class I area].” The CAA specifies that these regulations (including the RHR) must require each such SIP or FIP to “contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal.”¹¹⁷ Thus, the statute provides the EPA a key oversight role in reviewing SIPs, including regional haze SIPs, and the “EPA has substantive authority to assure that a state’s proposals comply with the Act, not simply the ministerial authority to assure that the state has made some determination.”¹¹⁸

Nothing in the *Oklahoma* case cited by the commenter undermines this authority. On the contrary, the *Oklahoma* court upheld the EPA’s disapproval of BART determinations that were part of a regional haze SIP, noting BART “does not differ from other parts of the CAA—states have the ability to create SIPs, but they are subject to EPA review.”¹¹⁹ Likewise, all regional haze SIPs are subject to EPA review, as described in the preceding paragraph.

In our action on the Plan, we are exercising our substantive authority to review the state’s submittal for compliance with the applicable requirements of the CAA and RHR. Based on our review of the Plan, we find, among other things, that ADEQ had not reasonably evaluated and weighed the four statutory factors for SGS Units 1 and 2 for the reasons noted in section IV.E.2 of our proposal and responses B.4., B.6, B.7 and B.8 of this document.

Comment D.4. TEP states that ADEQ’s choice of cost-effectiveness threshold was reasonable, and that the EPA’s proposed rule did not afford appropriate deference to ADEQ’s assessment of reasonable cost-effectiveness values. TEP also cites a previous EPA action stating that “Congress did not provide any direction as to how states should consider ‘the costs of compliance’ when determining reasonable progress.”¹²⁰ TEP also provides the following reasons for why it believes ADEQ’s choice of cost-effectiveness threshold was reasonable.

First, TEP states that ADEQ selected a threshold based on the State’s evaluation of the highest cost controls during the first planning period. TEP notes that this threshold is nearly \$1,000/ton higher than the 98th

percentile value for EGU boilers during the first planning period and \$1,500/ton higher than costs rejected by Georgia in evaluating additional emissions reduction measures in its SIP submission.¹²¹

Second, TEP claims that ADEQ’s bright-line approach to analyzing available controls above its cost-effectiveness threshold was also reasonable. TEP disagrees with the EPA’s concern about the average cost of installing SNCR at SGS Unit 2 being \$269/ton above ADEQ’s \$6,500/ton threshold.¹²² TEP states that the 2019 Guidance emphasized that the RHR does not prevent states from implementing “bright line” cost-effectiveness thresholds when considering additional control measures, consistent with the Ninth Circuit’s decision in *NPCA v. EPA*.¹²³ TEP asserts that this threshold sets an amount above which a state would reject control options as too expensive, and that for controls falling below this threshold, it is reasonable for ADEQ to evaluate additional factors, such as incremental costs, visibility impacts, and the other statutory factors, in determining whether these controls are necessary for reasonable progress.

Response D.4. As TEP describes, the EPA noted in prior rulemakings that “Congress did not provide any direction as to how states should consider ‘the costs of compliance’ when determining reasonable progress.” However, consistent with our prescribed statutory role, as described in Response D.3, the EPA is required to evaluate whether each State exercised its flexibility and conducted the required analyses in a reasonable way and in accordance with the applicable requirements. As described throughout our proposal and this final action, we determined that Arizona did not do so.

For example, contrary to TEP’s claim, the EPA did not find that ADEQ’s average cost-effectiveness thresholds of \$6,500/ton for point sources and \$5,000/ton for nonpoint sources were unreasonable. Rather, as explained in our proposal, we found that the State inconsistently and unreasonably applied these cost thresholds to the control determinations.¹²⁴

In particular, we found that ADEQ incorrectly characterized its average cost effectiveness threshold for points sources as a bright-line threshold,¹²⁵

given that ADEQ, in fact, rejected controls that were below this threshold. In these instances, ADEQ relied on incremental cost effectiveness as a basis to find the cost of control excessive, but, again, did not do so consistently, as described in Response B.6 of this document. Thus, ADEQ did not consistently apply either its chosen average cost effectiveness threshold or any defined incremental cost effectiveness threshold as a basis to choose whether to adopt or reject control measures, nor did it explain its reasoning for these inconsistencies. The EPA finds this to be unreasonable. Based on this and other flaws in the long-term strategy described in the proposal and elsewhere in this document, we find that the long-term strategy in the Plan did not meet the requirements of 40 CFR 51.308(f)(2).

We also note that, while our proposed rule recommended that ADEQ revisit control determinations with controls that were slightly above the cost thresholds, given the flaws in the cost-effectiveness analyses, we did not indicate that, in the absence of such flaws, use of a bright line threshold would have been improper, as long it was appropriately justified and consistently applied. Finally, we note that the fact that other states have applied lower or similar thresholds does not automatically make Arizona’s threshold reasonable.

Comment D.5. TEP states that ADEQ’s evaluation of control costs is conservative and results in projected costs that are lower than what TEP would incur. TEP asserts that ADEQ selected baseline assumptions consistent with the EPA’s Control Cost Manual. In particular, TEP indicates that ADEQ calculated control costs using an assumed interest rate of 4.75 percent and a maximum equipment life of 30 years, but that these assumptions resulted in unrealistically low control cost estimates. TEP noted that the EPA previously used 20-year equipment life and 7 percent interest rate for both NO_x and SO₂ candidate emissions reduction measures for IGS as part of a previous regional haze FIP,¹²⁶ and that these assumed values of 7 percent and 20 years better reflect actual control costs.

TEP also asserted that ADEQ is not required to treat the guidance provided by the Control Cost Manual as dispositive, and, citing *Wyoming v. EPA*, 78 F.4th 1171, 1180 (10th Cir. 2023), TEP asserted that the EPA cannot treat nonbinding guidelines as mandatory in evaluating a SIP submission.⁸⁸

¹¹⁷ 42 U.S.C. 7491(b)(2).

¹¹⁸ *Arizona ex. rel. Darwin v. EPA*, 815 F.3d 519, 531 (9th Cir. 2016).

¹¹⁹ *Oklahoma v. EPA*, 723 F.3d 1201, 1209 (10th Cir. 2013).

¹²⁰ 81 FR 296, 310 (January 5, 2016).

¹²¹ 89 FR 47494.

¹²² 89 FR 47429.

¹²³ 2019 Guidance at 38 (citing *NPCA v. EPA*, 788 F.3d 1134, 1142–43 (9th Cir. 2015)).

¹²⁴ 89 FR 47398, 47429.

¹²⁵ See 2022 Arizona Regional Plan, Appendix K, p. 7.

¹²⁶ 79 FR 9318.

Response D.5 We do not agree that ADEQ's evaluation of costs was conservative and results in projected costs that are lower than what TEP would incur. Regarding the EPA's previous analyses for IGS, first, we note that the EPA has revised several chapters of the Control Cost Manual, since the 2014 regional haze FIP cited by TEP in the comment letter. In particular, the chapter concerning SCR was updated in 2019.¹²⁷ As part of that update, the remaining useful life for SCR was revised from 20 years to 30 years.¹²⁸ Consistent with this change, ADEQ used a remaining useful life of 30 years for SCR, but used 20 years for SNCR.¹²⁹

Second, as explained in the Control Cost Manual,¹³⁰ interest rates change with time due to changes in prices over time for all relevant goods and services such as capital equipment, engineering services, other materials and reagents used in the construction and operation of control equipment. In the absence of source-specific information, ADEQ relied on a 4.75 percent interest rate developed by analyzing and averaging historical bank prime rate data. ADEQ looked at 3-year average bank prime rates for the periods of 2017–2019 (4.83 percent) and April 2018–March 2020 (4.78 percent). These dates were chosen as they were the most recent data at the time of the analysis.¹³¹ In contrast, ADEQ also explained in its SIP submittal that the 7 percent interest rate from the first planning period FIP cited by TEP was the 3-year average bank prime rate during 2005–2007.¹³² Therefore, the 7 percent rate used by the EPA in our previous FIP was not appropriate for the cost analysis for the

Plan, which was developed in 2020–2022.

Finally, we disagree with the commenter's suggestion that we treated the Control Cost Manual, or any other guidance, as binding. As discussed in Responses A.3 and C.4, the EPA's citations to guidance documents were intended to provide further context on what is generally considered to be a reasonable approach to fulfill the statutory and regulatory requirements. We acknowledge that the suggestions in those guidance documents are not binding, but are generally assumed to be reasonable. States can deviate from the suggestions within EPA guidance documents. However, they must do so in a reasonable way, accompanied by sufficient justification. The Plan did not do so for the reasons described in our proposal and elsewhere in this document.

Comment D.6. TEP asserts that ADEQ's analysis of SCR and SNCR reasonably approximated emissions limits achievable at SGS Units 1 and 2. TEP explains that the emissions rate used in the analysis was unit-specific, and that ADEQ considered baseline NO_x emissions, inlet concentrations, and the frequency of startup/shutdown cycles at SGS Units 1 and 2. TEP reiterates that ADEQ explained that a higher number of startup/shutdown cycles results in higher average NO_x emissions rates with SCR, and that SGS Units 1 and 2 experience a higher frequency of startup/shutdown cycles than average EGUs.

TEP further disagrees that SGS Units 1 and 2 are able to achieve an emissions rate of 0.05 lb/MMBtu. TEP notes that ADEQ further explained in its response to public comments that it was inappropriate to use an annual emissions limit of 0.05 lb/MMBtu because the CAMPD database only contains three comparable units, out of fifty-eight units, which are operating below this emissions limit in 2019–2021. The CAMPD database shows that approximately 20% of the units achieved emissions below 0.06 lb/MMBtu in 2019–2021, which ADEQ believed was a reasonable estimate of the rate achievable with SCR for SGS Units 1 and 2. TEP also notes that based on their extensive industry experience, vendors will not guarantee a rate of 0.05 lb/MMBtu due to concerns about degradation over time.

TEP also states that even if ADEQ adopted the EPA's preferred emissions rate of 0.05 lb/MMBtu, ADEQ's analysis of control measures for SGS Units 1 and 2 would remain substantially the same. Table 3 of TEP's comment letter provides the updated cost-effectiveness

value using a 0.05 lb/MMBtu rate for SGS Units 1 and 2, assuming a 4.75 percent interest rate and a remaining useful life of 30 years.

Response D.6. We do not agree that ADEQ's analysis of SCR and SNCR reasonably approximated emissions limits achievable at SGS Units 1 and 2. Our proposed rule acknowledged the startup/shutdown considerations noted by ADEQ.¹³³ However, the proposed rule also explains that ADEQ has not demonstrated why these startup/shutdown considerations would be significant enough at SGS Units 1 and 2 on an annual average basis, which is the averaging period used to calculate ton/year emissions reductions for cost effectiveness calculations, to preclude them from achieving this emissions reduction level with SCR. As discussed in more detail in Response B.4, we would consider it appropriate for an emissions limitation established on a shorter averaging period to have a higher value to account for startup/shutdown emissions, which have a greater effect on overall unit emissions rates over shorter averaging periods.

We also disagree with TEP that ADEQ's review of emissions rates for other tangentially fired coal units in CAMPD should be determinative of the SCR emissions rate achievable for the SGS units. We do not necessarily consider the inventory of unit emissions data in CAMPD to be representative of what is achievable with SCR technology because units whose emissions are included in CAMPD have been required to install SCR as a result of a variety of regulatory programs. Not all of these programs may have fully considered technological factors in establishing emissions requirements or allowable emissions limits, which would have the effect of elevating reported emissions rates. For example, several units in the eastern U.S. have installed SCR but have not been required to operate in a manner that fully accounts for periods of startup operations,¹³⁴ while other units may only operate their SCR systems seasonally.¹³⁵ Other SCR systems may have been required by a Consent Decree, which involves a

¹³³ 89 FR 47398, 47428.

¹³⁴ 87 FR 31798 (May 25, 2022) and Docket Item EPA–R03–OAR–2022–0347–0059 for further details.

¹³⁵ Docket Items EPA–HQ–OAR–2021–0668–0115 and EPA–HQ–OAR–2021–0668–0096 examine ozone season data from several mid-atlantic states and identifies best performing months for several units. An examination of operating data on a monthly or daily basis over the course of a calendar year indicates that several units, such as Pleasants Power Station 1 and 2 (WV), Conemaugh 2 (PA), and DB Wilson W1 (KY) operate at much lower NO_x emission rates during ozone season months.

¹²⁷ Control Cost Manual, Section 4, Chapter 2 Selective Catalytic Reduction (June 2019), section, 2.4.2 Total Annual Costs, Indirect costs, available at https://www.epa.gov/sites/default/files/2017-12/documents/scrcostmanualchapter7thedition_2016revisions2017.pdf.

¹²⁸ Id. at page 87 of 107 (PDF document pagination), (“a representative value of the equipment life for SCR at power plants can be considered as 30 years”).

¹²⁹ Id., Appendix C, p. 219 (“The estimated life for SCR and SNCR were set at 30 and 20 years respectively to match current EPA guidance for these control technologies on utility boilers.”) The commenter's citation to page 146 of the Plan appears to be in error, as there is no such page in the main body of the Plan, and page 146 of Appendix C discusses the Willcox compressor station.

¹³⁰ Control Cost Manual, Section 4, Chapters 1 and 2, available at <https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-reports-and-guidance-air-pollution>.

¹³¹ 2022 Arizona Regional Haze Plan, Chapter 8.3.2.

¹³² Id.

negotiated settlement in which allowable emissions limits may be established as part of injunctive relief, and may not necessarily be representative of SCR technical capabilities. Therefore, we find that ADEQ's analysis of other tangentially fired coal units in CAMPD is not determinative of the SCR emissions rate achievable for the SGS units.

Finally, though we appreciate the summary provided in Table 3 of the comment letter, the analysis is new information not included in the Plan. This information would need to be part of a SIP revision subject to review by the public and FLMs in order for the EPA to consider it as part of the long-term strategy.

Comment D.7. TEP asserts that ADEQ reasonably determined that SO₂ emissions limits were an appropriate and equivalent control measure compared to SDA upgrades. TEP notes that while the EPA suggests that TEP should also be required to install the SDA upgrades in addition to the mass-based limits, the EPA does not explain why SDA upgrades would achieve emissions reductions beyond the mass-based limits adopted by TEP, which are equivalent to SDA upgrades.

Further, TEP states that the selection of emissions limits is consistent with the CAA and is entitled to deference. First, TEP reasons that the CAA does not require the installation of specific control technologies, and that the EPA has recognized in the 2019 Guidance that mass-based limits may be a reasonable alternative to specific control technologies, particularly where fixed capital costs are high, so long as such limits do not enable a source to cease operating an existing control technology. Second, TEP asserts that the emissions limits are equally or more protective than control technologies because the total SO₂ emitted cannot exceed the caps, and whether one or both units is operating is irrelevant, and because it provides the flexibility for greater total emissions reductions to occur, should TEP ultimately retire SGS Unit 1 in 2027. The commenter specifies that if TEP elects to achieve compliance with the proposed caps by shutting down Unit 1, it is projected to reduce SO₂ emissions by 2,982 tpy and achieve significant reductions in NO_x and PM emissions, whereas the installation of SDA upgrades at both units is projected to reduce SO₂ emissions by 2,122 tpy. Third, TEP asserts that the emissions limits are consistent with EPA precedent. TEP listed previous examples of EPA-approved mass-based emissions limits, such as the Hawaii Regional Haze FIP for three Hawaiian

Electric facilities¹³⁶ and the Regional Haze FIP for PCC.¹³⁷

Response D.7. We disagree with TEP's assertions that the selection of mass-based SO₂ emissions limits for SGS Units 1 and 2 was reasonable for the reasons described in Section IV.E.2.c.iii of our proposal,¹³⁸ and Response B.8 of this document.

We also disagree with TEP's assertion that the EPA did not explain why SDA upgrades would achieve emissions reductions beyond the mass-based limits adopted by ADEQ. As stated in the proposed rule,¹³⁹ because the limits are set across two units and the ton per day (tpd) limit is based on a 30-calendar-day average (rather than a 30-day-boiler-operating day average),¹⁴⁰ they would not meaningfully constrain the emissions from one unit during periods when the other unit is not operating. In particular, the annual SO₂ cap of 3,739 tpy is significantly higher than ADEQ's projected 2028 SO₂ emissions for either Unit 1 or Unit 2 (2,869 and 2,982 tpy, respectively)¹⁴¹ and nearly double each unit's recent emissions (1,980 and 1,988 tpy respectively on average 2021–2023).¹⁴² Accordingly, if TEP shuts down SGS Unit 1 by 2028, as it has stated it intends to do,¹⁴³ Unit 2 would be able to emit 3,739 tpy SO₂ in 2028, nearly double what it emitted on average in 2021–2023 and significantly *more* than the 2,982 tpy it is projected to emit in the absence of a cap and closure of Unit 1. In contrast, a lb/MMBtu limit representing SDA upgrades on each unit would ensure emissions from Unit 2 would be reduced by approximately 1/3 from recent emissions levels (*i.e.*, a reduction of roughly 663 tpy) even if Unit 1 ceases operation. Therefore, under the scenario projected by TEP to occur in 2028 (*i.e.*, closure of SGS Unit 1), implementation of SDA upgrades at Unit 2 would achieve significant emissions reductions beyond the mass-based limits adopted by ADEQ.

¹³⁶ 77 FR 61478 (October 9, 2012).

¹³⁷ 79 FR 52420.

¹³⁸ 89 FR 47398, 47430–47431.

¹³⁹ *Id.*

¹⁴⁰ A limit based on boiler operating days would effectively exclude days with zero emissions from the calculation of the 30-day average whereas a limit based on calendar days does not.

¹⁴¹ Plan, appendix C, p. 213, Table 83.

¹⁴² Emissions information can be publicly accessed through the EPA Clean Air Markets Program data, available at <https://campd.epa.gov/>.

¹⁴³ As part of its preferred alternative in its 2023 Integrated Resources Plan, p. 56, TEP states that "Initially, the units will alternate idling between spring and fall (both seasons include the adjacent winter months). TEP plans to transition Unit 1 to summer-only operations prior to full retirement at the end of 2027."

We also note that, if SGS Unit 1 does not close and both units continue operation at roughly the same level as 2021–2023, a lb/MMBtu limit representing SDA upgrades on each unit would ensure emissions from both Unit 1 and Unit 2 would be reduced by approximately 1/3 (*i.e.*, a reduction of roughly 1,323 tpy based on 2021–2023 emissions), whereas ADEQ's annual cap of 3,739 tpy would only ensure reductions of 229 tpy (*i.e.*, compared to total 2021–2023 annual average emissions of 3,968). Therefore, we expect that lb/MMBtu limits representing SDA upgrades on each unit would achieve significantly greater emissions reductions than the two-unit mass-based limits adopted by ADEQ.

For similar reasons, we also do not agree with TEP's statements that "the proposed form of the limit is potentially more environmentally protective than the installation of controls because it provides the flexibility for greater total emission reductions to occur, should TEP ultimately retire SGS Unit 1 in 2027" and that "[r]equiring the use of air pollution control technology at each unit individually would foreclose a *more* environmentally beneficial compliance option." Specifically, TEP incorrectly cites Table 83 as supporting its assertion that if it "elects to achieve compliance with the proposed caps by shutting down Unit 1, it is projected to reduce SO₂ emissions by 2,982 tpy and also to achieve significant reductions in NO_x and PM emissions." This mischaracterizes the content of Table 83, which reflects ADEQ's *baseline* projection of emissions at the TEP units, based on emissions and throughput data for 2016, 2018 and 2019.¹⁴⁴ These values were the starting point for ADEQ's four-factor analysis and do not represent the projected emissions of these units following implementation of the emissions caps and/or the closure of Unit 1. No such projection is included in the Plan. However, as noted in the preceding paragraph, if TEP shuts down SGS Unit 1 by 2028, as it has stated it intends to do, Unit 2 could emit as much as 3,739 tpy SO₂ in 2028, nearly double what it emitted on average in 2021–2023 and significantly more than the 2,982 tpy it is projected to emit in the absence of a cap and closure of Unit 1.

Third, in response to TEP's claim about EPA precedent, both FIP actions cited by TEP apply to first planning period requirements and thus preceded the 2017 revisions to the RHR, which added 40 CFR 51.308(f). Please see Response B.8 for more information

¹⁴⁴ Plan, Appendix C, pp. 212.

about PCC. The other precedent cited by ADEQ, a cap on the Hawaiian Electric sources, was not based solely on a determination that a particular control measure was necessary to make reasonable progress under the four statutory factors. Rather, the cap was intended primarily to ensure that no degradation in visibility conditions would occur at the affected Class I area during the first or subsequent planning periods, as required under the RHR.¹⁴⁵ This was based on circumstances that were specific to Hawaii in the first planning period, namely, that no photochemical modeling had been performed for Hawaii's Class I areas and the EPA set the RPGs for these areas based on island-specific emissions inventories.¹⁴⁶ None of these circumstances apply to Arizona generally, or to SGS Units 1 and 2 specifically, in the second regional haze planning period and thus are inappropriate to rely upon.

Comment D.8. TEP comments that ADEQ reasonably rejected additional control measures based on the four factors. For remaining useful life specifically, TEP indicates that a 20-year remaining useful life is more appropriate for SGS Units 1 and 2 because the shutdowns are publicly documented in the 2023 IRP. TEP cites the 2021 Clarifications Memo as stating, "reasonable bases for projecting that future emissions will be significantly different than past emissions are enforceable requirements and energy efficiency, renewable energy, or other similar programs, where there is a documented commitment to participate and a verifiable basis for quantifying changes in future emissions."¹⁴⁷ TEP noted that consistent with this guidance, TEP's planned retirement of these units significantly shortens the remaining useful life of any controls and projected emissions reductions, and a 20-year remaining useful life is a reasonable, conservative basis to analyze cost-effectiveness of additional controls.

Response D.8. We disagree that 20 years is a reasonable remaining useful life for SGS Units 1 and 2. The portion of the 2021 Clarifications Memo cited by TEP concerns setting emissions limits for control measures found necessary to make reasonable progress, not remaining useful life. Therefore, this

¹⁴⁵ 77 FR 31692, 31712 (May 29, 2012) ("without further control, emissions of SO₂ on the Big Island are projected to increase by nearly 4% between 2005 and 2018. Therefore, additional, federally enforceable SO₂ reductions are needed on the Big Island to ensure reasonable progress.")

¹⁴⁶ Id. at 31708.

¹⁴⁷ 2021 Clarifications Memo, p. 12.

citation does not support TEP's assertion. Additionally, the 2019 Guidance and Clarifications Memo clearly indicate that, under the RHR, where a shutdown date is used to shorten a source's remaining useful life as part of a reasonable progress determination, an enforceable requirement to shutdown must be included in the SIP and/or be federally enforceable.¹⁴⁸ The potential shutdowns of SGS Units 1 and 2 are not federally enforceable. Therefore, they cannot be relied upon to shorten the remaining useful life of these units. In the absence of an enforceable requirement for SGS Units 1 and 2 to retire, we do not agree that a 20-year remaining useful life is reasonable.

Comment D.9. TEP comments that ADEQ reasonably rejected additional control measures in part by considering incremental costs. TEP noted that ADEQ determined incremental costs for additional controls would range from \$9,400–13,500/ton, and that even the low end of this range exceeded similar incremental costs that the EPA determined to be excessive for sources in Arizona as part of the 2014 BART FIP.¹⁴⁹

TEP further states that ADEQ reasonably considered incremental cost-effectiveness where the cost impacts were not clear due to uncertainty in the remaining useful life of the additional controls. Citing *American Corn Growers Association vs. EPA*, TEP states that it is reasonable for a state to consider incremental visibility improvements and other incremental metrics to inform its assessment of whether a particular control is "too costly . . . for a particular source."¹⁵⁰ TEP notes that such an assessment does not give "controlling weight" to the cost factor, but rather considers whether, on balance, it would be unreasonable to require installation of a control, consistent with the language of CAA section 169A.

Lastly, TEP asserts that ADEQ reasonably compared the costs of and emissions reductions achievable with wet FGD and circulating dry scrubbers (CDS) to the costs of and emissions reductions achievable with SDA upgrades, even where such upgrades were not required to be installed. The commenter argues that ADEQ reasonably used SDA upgrades as a proxy for its mass-based emissions

¹⁴⁸ 2019 Guidance, p. 34 (citing 40 CFR 51.308(f)(2)); Clarifications Memo, p. 10.

¹⁴⁹ 79 FR 9318, 9341, Table 24 (rejecting DSI based on incremental costs of \$8,576/ton compared to lower sulfur fuel blend).

¹⁵⁰ *American Corn Growers Association v. EPA*, 291 F.3d 1, 6–7 (D.C. Cir. 2002).

limits, since these limits were developed based on equivalence with SDA upgrades and the EPA's approach for Hawaiian Electric.

Response D.9. We disagree that ADEQ's use of incremental cost effectiveness was reasonable for the reasons explained in Section IV.E.2.C.IX of our proposal¹⁵¹ and Response B.6 of this document. We also note that, while the commenter refers to "similar incremental costs that the EPA determined to be excessive for sources in Arizona as part of the 2014 BART FIP," the accompanying citation refers to only a single source, *i.e.*, Nelson Lime Kiln, which is the same source cited by ADEQ in the Plan.

We also find that the commenter's citation to *American Corn Growers* is inapposite. That decision concerned the EPA's interpretation of the BART provisions of the CAA and turned on the fact that the CAA includes the "the degree in improvement in visibility that would be expected at each Class I area as a result of imposing BART" as one of five factors to be considered in BART determinations.¹⁵² In contrast, the Act does not mandate visibility improvement as one of the four factors to be considered in determining reasonable progress.¹⁵³ As discussed in Response B.7, ADEQ indicated in its Response to Comments that it did not consider this factor in its determinations.¹⁵⁴ Furthermore, even if ADEQ did consider visibility improvement in making control determinations for SO₂ at SGS Units 1 and 2,¹⁵⁵ it is evident that ADEQ did not consider *incremental* visibility improvement associated with Wet FGD compared to SDA upgrades. Rather, ADEQ considered only "a hypothetical SO₂ emission reduction of 3,236 tpy, which is approximately equivalent to 0.08 lb/MMBtu for SGS Units 1 and 2."¹⁵⁶ This level of reductions does not correspond either to SDA upgrades or wet FGD, so ADEQ could not possibly have considered the incremental visibility benefit between the levels of control. Accordingly, *American Corn Growers* has no bearing on our assessment of whether ADEQ's approach to its four factor analyses and

¹⁵¹ 89 FR 47398, 47429.

¹⁵² Id. (interpreting CAA section 169A(g)(2)).

¹⁵³ CAA 169A(g)(1).

¹⁵⁴ 2022 Arizona Regional Haze Plan, Appendix K, p. 9.

¹⁵⁵ See 2022 Arizona Regional Haze Plan, Appendix C, p. 234 ("small visibility benefits associated with the modeled SO₂ controls supports the determination that CDS and wet FGD control options are not necessary to make reasonable progress towards natural visibility at Class I areas during this implementation period").

¹⁵⁶ Id.

determinations for SGS Units 1 and 2 were reasonable.

In addition, we also disagree that there is uncertainty in the remaining useful life of SGS Units 1 and 2, because the potential shutdowns at these units are not federally enforceable. See Response D.8.

Finally, we disagree that ADEQ reasonably used SDA upgrades as a proxy for its mass-based emissions limits. See Responses B.8 and D.7.

Comment D.10. TEP states that the EPA incorrectly implies that ADEQ based its control determinations on visibility benefits, when ADEQ stated otherwise in its SIP submission.¹⁵⁷

Second, TEP notes that any consideration of visibility would be consistent with recent EPA actions on regional haze and the text of the statute. Citing the EPA's recent proposed action on the Georgia Regional Haze SIP, TEP states that the EPA emphasized incremental visibility improvements and that "Georgia is also not contributing to visibility impairment at any Class I areas above the URP."¹⁵⁸ TEP claims that because Arizona has similarly de minimis contributions to visibility impairment at Class I areas,¹⁵⁹ the EPA cannot apply inconsistent criteria to its review of SIP submissions by different states. Finally, citing *Loper Bright Enterprises v. Raimondo*, 144 S. Ct. 2244, 2263 (2024), TEP argues that "EPA's suggestion that visibility should play little-to-no role in a state's assessment of reasonable progress is unreasonable and counter to the text of the statute."

Response D.10. Regarding whether ADEQ considered visibility benefits, in its control determinations, please see Response B.7.

We disagree that the EPA is applying inconsistent criteria to review of SIP submissions by different states. As explained in Response D.2, in the section of the Georgia action cited by the commenter, the EPA considered overall trends in visibility impairment in evaluating the reasonableness of Georgia's source selection methodology. This is entirely different from weighing the potential visibility benefits of specific controls at specific units, which is what the commenter appears to be advocating for. Additionally, the quoted section of the Georgia proposal simply states as a fact that Georgia is not contributing to visibility impairment at any Class I areas above the URP. That

information is not used and should not be used as a "safe harbor" argument to exclude contributing sources from a four-factor analysis and potentially including cost-effective controls in the long-term strategy.

Moreover, we do not agree that Arizona has de minimis contributions to visibility impairment at Class I areas. In support of this assertion, TEP cites Table 21 on page 47432 of the proposal. This table shows Baseline Conditions, Adjusted URP and 2028 RPGs at Arizona's Class I areas. However, the table provides no indication of which sources contribute to visibility impairment at these Class I areas, or whether these sources are located in Arizona or elsewhere. This table also does not address any Class I areas outside of Arizona. Furthermore, there is no other information in the Plan that suggests that emissions from Arizona have de minimis contributions to visibility impairment at all potentially affected Class I areas. Therefore, we do not agree that the EPA is applying inconsistent criteria to review of SIP submissions by different states.

Finally, we disagree that we suggested that "visibility should play little-to-no role in a state's assessment of reasonable progress." Rather, we stated that "[w]hether a particular visibility impact is meaningful should be assessed in context and cannot be used to undermine the four statutory factors that are to be analyzed in order to determine what measures are necessary for reasonable progress."¹⁶⁰ Applying these considerations to ADEQ's discussion of visibility benefits at SGS Units 1 and 2, we found that "[i]n the absence of any opportunities for larger emissions reductions and corresponding visibility benefits, we find that ADEQ's reliance on 'small' visibility benefits as an additional justification for not adopting more stringent controls at these units is not persuasive."¹⁶¹ Therefore, we do not agree with the commenter's characterization of our proposal.

Comment D.11. TEP asserts that ADEQ appropriately incorporated "on-the-way" measures in assessing baseline conditions at IGS Unit 3. TEP cites the 2021 Clarifications Memo and states that the EPA has explicitly recognized "on-the-way" measures that "have not yet been implemented and the associated emissions reductions have not yet occurred as of the SIP submission date," and that the EPA indicated that these measures may impact a state's choice of baseline for a

four-factor analysis at a particular source ("reasonable bases for projecting that future emissions will be significantly different than past emissions are enforceable requirements and energy efficiency, renewable energy, or other similar programs, where there is a documented commitment to participate and a verifiable basis for quantifying changes in future emissions").¹⁶² TEP claims that the operational conditions at IGS Unit 3 have been incorporated in an enforceable permit, and will become effective upon approval of Arizona's SIP submission. TEP also claims that it has a documented commitment to complying with these limits by requesting these permit limits.

Response D.11. TEP mischaracterizes the contents of the 2021 Clarifications Memo. The first section of the memo cited by the commenter, entitled "On-the-Way" Measures and Shutdowns, states that "on-the-way measures . . . are necessary to make reasonable progress and must be included in a SIP."¹⁶³ In this case, because the IGS Unit 3 limits have not taken effect under State law, their inclusion as part of the SIP revision is not meaningful, and they are not an appropriate basis for modifying the baseline control scenario for a four-factor analysis.

The second portion of the 2021 Clarifications Memo cited by TEP concerns setting emissions limits for control measures that have been found necessary to make reasonable progress. It is not relevant to the question of the extent to which existing measures may be considered as part of the baseline for a control analysis. Regarding this latter question, the 2019 Guidance states that:

Enforceable requirements are one reasonable basis for projecting a change in operating parameters and thus emissions; energy efficiency, renewable energy, or other such programs where there is a documented commitment to participate and a verifiable basis for quantifying any change in future emissions due to operational changes may be another. A state considering using assumptions about future operating parameters that are significantly different than historical operating parameters should consult with its EPA Regional office.¹⁶⁴

Again, the emissions limits at IGS Unit 3 are not enforceable by the State or the EPA unless and until the resulting reasonable progress determination is approved into the SIP. Moreover, the permit conditions that would implement the caps were adopted specifically to meet regional

¹⁵⁷ 2022 Arizona Regional Haze Plan, Appendix K at 9 (explaining that visibility information "was not considered in the Department's emission control measure determination").

¹⁵⁸ Citing 89 FR 47481, 47498.

¹⁵⁹ 89 FR 47398, 47432, Table 21.

¹⁶⁰ 89 FR 47398, 47430 (citing 40 CFR 51.308(f)(2)(i)).

¹⁶¹ Id.

¹⁶² 2021 Clarifications Memo, pp. 10, 12.

¹⁶³ Id. p. 10.

¹⁶⁴ 2019 Guidance p. 29 (emphases added).

haze requirements and were not part of “energy efficiency, renewable energy, or other such programs.”¹⁶⁵ Therefore, we find that they are not a reasonable basis for projecting a change in operating parameters.

Comment D.12. TEP asserts that ADEQ reasonably evaluated additional control measures using a four-factor analysis for IGS Unit 3 based on excessive costs. TEP explains that each of the NO_x controls available for IGS Unit 3 exceed Arizona’s cost threshold of \$6,500/ton, and ADEQ therefore determined that no additional controls were reasonable for the second planning period. TEP also noted that while the average cost of installing combustion control retrofits at IGS Unit 3 was only \$230/ton above ADEQ’s \$6,500/ton threshold, the RHR does not prevent states from implementing “bright line” cost-effectiveness thresholds when considering additional control measures.

Response D.12. We partly agree with this comment. We agree that the NO_x controls analyzed for IGS Unit 3 exceed the cost threshold of \$6,500, when the emissions limits in the permit (which are not yet in effect) are considered as part of the baseline control scenario. However, as described in section IV.E.2.c.iii of our proposal, and Response D.11, we do not agree that these limits are an appropriate basis for modifying the baseline control scenario for a four-factor analysis. We also agree the RHR does not prevent states from implementing “bright line” cost-effectiveness thresholds, but we find that ADEQ did not do so in a reasonable or consistent manner in the Plan, as discussed in Response D.4.

E. Comment Letter From SRP

Sections I (“Introduction”), II (“Background”), III (“SRP Facilities Subject to the Proposed Rule”) and IV (“EPA Has Appropriately Proposed Approval of Several Aspects of Arizona’s Regional Haze SIP”) of SRP’s comment letter either provide background information or are supportive and therefore do not require a response. We respond to sections V–XI of SRP’s comment letter below.

Comment E.1. SRP comments that the proposed rule is vague and deprives the public of an adequate opportunity for comment. Citing *American Iron & Steel*

Institute v. EPA, SRP notes that the EPA is obligated to provide the public with information sufficient to facilitate public comment on the proposal, and that it is not clear which grounds for the proposed partial disapproval of the SIP submission apply to which sources. SRP provides a few examples of allegedly vague language in the proposed rule, for example, noting “some” of Arizona’s four-factor analyses were affected in a few instances. SRP asserts that because it is not clear which aspects of the EPA’s analysis apply to which facilities, the public cannot reasonably evaluate the grounds for the proposed disapproval actions, and therefore the EPA needs to issue a new proposed rule that provides additional necessary detail in support of the proposed actions.

Response E.1. We disagree with this comment. In *American Iron & Steel Institute*,¹⁶⁶ the court denied, in part, review of an EPA interim final rule due to a lack of proper notice. However, as described in Response A.1, we do not agree that the proposed rule deprives the public of an adequate opportunity for comment.

We also note that, in acting on the 2022 Arizona Regional Haze Plan, the EPA is not issuing new requirements applicable to any emissions sources. Rather, this final partial disapproval establishes a two-year deadline for the EPA to promulgate a FIP to address the relevant requirements under CAA section 110(c), unless the EPA approves a subsequent SIP submission that meets these requirements. Accordingly, Arizona can develop and submit a SIP revision addressing the disapproved elements of the Plan. Both the state’s adoption of that SIP revision and the EPA’s subsequent action on that SIP revision would be subject to public notice and comment requirements.¹⁶⁷ Similarly, if the EPA does not fully approve a SIP submission addressing the disapproved elements of the Plan, any FIP promulgated by the EPA would be subject to public notice and comment. Accordingly, there will be ample additional opportunities for the public, including potentially regulated entities, to engage in the rulemaking process before any additional requirements take effect.

Comment E.2. SRP asserts that the EPA should approve Arizona’s determination that Coronado Generating Station and SGS Unit 4 are effectively controlled because they are consistent with the law and EPA guidance. SRP

states that the 2019 Guidance indicates that sources that have recently installed effective controls are the prime example of sources that do not require evaluation during the current planning period. Specifically, SRP notes that the 2019 Guidance states that BART-eligible units that installed and began operating controls to meet BART emissions limits for the first implementation period, including sources that installed controls to comply with a better-than-BART alternative, may be considered to be effectively controlled.

For Coronado, SRP states that the source is subject to a better-than-BART alternative that the EPA approved in October 2017, and that there have been no intervening changes in technology since that time. SRP states that Coronado will also install new controls (SCR) to comply with the BART alternative by January 2026.¹⁶⁸ SRP noted that the first planning period regional haze SIP submission for Coronado also includes two additional requirements for SO₂: an SO₂ emissions limit of 0.060 lb/MMBtu, calculated on a 30-boiler-operating-day rolling average and an annual plant-wide SO₂ emissions cap of 1,970 tons per year.

SRP further asserts that SGS Unit 4 is similarly well-controlled. ADEQ determined that Unit 4’s existing controls of combustion controls (LNB+OFA) and SCR is the most effective control technology available for NO_x for coal fired EGUs, and thus, no further analysis for other control technologies was needed. For SO₂, Unit 4 is equipped with SDA systems subject to the MATS rule and has been achieving an SO₂ emissions rate over the most recent five years ranging from 0.076 to 0.10 lb/MMBtu on an annual basis. For PM, Unit 4 is equipped with a baghouse, which ADEQ found to have the highest PM control efficiency of any PM control considered for Unit 4.

Response E.2. Regarding Coronado Generating Station, we agree that the source was subject to a better-than-BART alternative. However, we note that the commenter mischaracterizes the contents of the 2019 Guidance regarding effective control determinations for BART-eligible sources. The relevant portion of the Guidance includes as an example of potentially effective controls, “BART-eligible units that *installed and began operating controls to meet BART emission limits* for the first implementation period, *on a*

¹⁶⁵ See, e.g., 2022 Arizona Regional Haze Plan, Appendix C, p. 197 (describing TEP’s submittal of permit application for NO_x caps in response to ADEQ’s initial regional haze control determination); Appendix G, p. 58 (“The purpose of the proposed SIP and significant permit revision is to support ADEQ’s forthcoming periodic comprehensive regional haze SIP submittal to EPA.”).

¹⁶⁶ See 568 F.2d 284 (3d Cir.1977), cert. denied, 435 U.S. 914, 98 S.Ct. 1467, 55 L.Ed.2d 505 (1978).

¹⁶⁷ See CAA section 110(l), 40 CFR 40 CFR 51.102, and 5 U.S.C. 553.

¹⁶⁸ SRP cited in the comment letter, but we note that the correct citation is 82 FR 46903 (October 10, 2017).

*pollutant-specific basis.*¹⁶⁹ The Guidance further explains that:

Although the Regional Haze Rule anticipates the re-assessment of BART-eligible sources under the reasonable progress Rule provisions, if a source installed and is currently operating controls to meet BART emission limits, it may be unlikely that there will be further available reasonable controls for such sources. *However, states may not categorically exclude all BART-eligible sources, or all sources that installed BART controls, as candidates for selection for analysis of control measures.*

The associated footnote clarifies that this consideration is not applicable to BART-subject units for which the BART requirement was met in whole or in part by emissions reductions at other units as part of a better-than-BART alternative or trading program.¹⁷⁰

As discussed in our proposal and Response B.3 of this document, ADEQ excluded all units that installed BART (or better-than-BART) controls between 2014 and 2028 for any pollutant. We therefore disagree that Arizona followed the 2019 Guidance in evaluating effective controls because it categorically excluded all such units without considering whether the unit in question installed effective controls for NO_x, SO₂ and PM₁₀, or whether the BART requirement was met in part by reductions at other units as part of a better-than-BART alternative.

Regarding SGS Unit 4, see Response D.2.

Comment E.3. SRP states that the EPA's assumed emissions rate for SCR controls of 0.05 lb/MMBtu is not feasible at coal-fired EGUs. SRP asserts that the EPA cannot assume all coal-fired units are capable of the same efficiencies following pollution control installation or that these controls incur the same costs for each unit nationwide, irrespective of the local conditions and operations impacting individual units. SRP further notes that the EPA's conclusion that all SCR retrofitted units can uniformly meet a NO_x emissions limit of 0.05 lb/MMBtu without proper evaluation and consideration of individual units is arbitrary and capricious and may unlawfully impose limits on EGUs that are unachievable. SRP further points out that the cited Srivastava et al. study notes units that achieved NO_x emissions rates between 0.04 and 0.07 lb/10⁶ Btu, and that this range illustrates the variability associated with SCR-controlled coal-fired unit NO_x emissions rates and the

importance of considering unit-specific factors when identifying a controlled emissions rate.

Citing Appendix K of the Plan, SRP further asserts that ADEQ specifically addressed unit-specific considerations when setting the SGS Unit 1 and 2 NO_x emissions rates by reviewing CAMPD data. By assuming an SCR controlled NO_x emissions rate of 0.06 lb/MMBtu, ADEQ is assuming that SGS Units 1 and 2 will achieve a controlled emissions rate within the top 21 percent of tangentially-fired EGUs. SRP indicates that without acknowledging ADEQ's evaluation, the EPA states that ADEQ did not provide adequate justification and unreasonably assumes an emissions rate within the top 5 percent of SCR controlled tangentially-fired EGUs is appropriate for the SGS Unit 1 and 2. SRP concludes that while the state made reasonable conclusions as to the emissions rates achievable by SCR at specific facilities, the EPA has not.

Response E.3. We disagree that the EPA has assumed that all coal-fired units are capable of the same efficiencies following pollution control installation or that these controls incur the same costs for each unit. As described in Responses B.4 and D.6, we have considered unit-specific factors in evaluating the emissions rates achievable with SCR at SGS Units 1 and 2, and we are not aware of any assertions that SGS specifically cannot achieve 0.050 lb/MMBtu when operating with SCR during periods of normal operation. Therefore, we find that ADEQ should have considered a controlled NO_x emissions rate of 0.050 lb/MMBtu for SGS Units 1 and 2 when operating with SCR during periods of normal operation. As further explained in Response B.4, this does not mean that 0.050 lb/MMBtu would be an appropriate 30-BOD limit for these units, but rather that it should be considered as annual emissions rate for purposes of the control cost analysis.

Comment E.4. SRP comments that it is not necessary to include control requirements for Coronado Generating Station in Arizona's Regional Haze SIP. SRP states that under CAA section 169A, a state (or the EPA) may only require a long-term strategy to include those control measures that are found to be necessary to make reasonable progress through the evaluation of the four statutory reasonable progress factors. SRP claims that the EPA's position that in the absence of a four-factor analysis supporting new controls, existing controls should generally be deemed necessary to make reasonable progress and be included in the regional haze SIP is not a valid reading of the

CAA's visibility provisions. Further, SRP claims that the CAA framework ties reasonable progress controls to the four-factor analysis, and does not leave room for the EPA's presumption that existing controls must be included in a SIP even whenever a four-factor analysis failed to identify new controls that should be implemented. Such existing controls may only be deemed necessary components of a regional haze SIP if a four-factor analysis independently identifies such controls as necessary for reasonable progress.

SRP further cites both the 2021 Clarifications Memo ("There may be other cases where, after having conducted robust source selection and rigorous analysis of the four factors, states have not identified any new measures that are reasonable to require for a source. In such cases, states will have to address whether the source's existing measures are necessary to make reasonable progress") and 2019 Guidance: ("[i]f a state determines that an in-place emission control at a source is a measure that is necessary to make reasonable progress and there is not already an enforceable emission limit corresponding to that control in the SIP, the state is required to adopt emission limits based on those controls as part of its long-term strategy in the SIP via the regional haze second planning period plan submission"). SRP claims that the EPA therefore acknowledged that there should be no presumption that existing measures are needed for reasonable progress.

Lastly, SRP states that Coronado Generating Station is already subject to a source-specific SIP revision that was designed to implement the better-than-BART alternative during the first planning period of the regional haze program. SRP asserts that because these requirements are already binding and enforceable, there is no need for any additional action to address Coronado.

Response E.4. First, we disagree that existing controls being necessary for reasonable progress does not have a basis in the statute for two reasons. First, under CAA 169A(a)(1), the national visibility goal is generally separated into two parts: (1) the prevention of any future, and (2) the remedying of any existing anthropogenic visibility impairment. As noted in the proposed rule,¹⁷¹ and in response B.1, continued implementation of the source's existing measures is generally necessary to prevent future emissions increases and thus necessary

¹⁶⁹ See 2019 Guidance, p. 25 (emphasis added).

¹⁷⁰ Id., n. 54.

¹⁷¹ 89 FR 47398, 47404.

to make reasonable progress towards the national goal.

Second, control measures used to fulfill a CAA requirement must be in the SIP.¹⁷² In this instance, in order to make reasonable progress toward the national goal, the CAA requires every regional haze SIP to contain “such emission limits, schedules of compliance, and other measures as may be necessary for reasonable progress.”¹⁷³ The CAA also requires each regional haze SIP submission to include a long-term strategy “for making reasonable progress toward meeting the national goal.”¹⁷⁴ Finally, reasonable progress is defined in the CAA as a consideration of the four factors outlined in CAA 169A(g)(1). If the State opts to avoid conducting the required consideration of the four statutory factors on a source or group of sources based solely on the source’s existing measures, then, in order to fulfill its long-term strategy requirements, those existing measures must also be in the SIP, or else the state must demonstrate that the existing measures are not necessary to make reasonable progress. This ensures that this source’s contribution to visibility impairment will not increase, and also ensures that all measures being relied upon to fulfill the regional haze requirements are in the SIP. Therefore, if Arizona is relying on existing measures to avoid the statutorily required four factor analysis, then those existing measures must be in the SIP and thus a part of its long-term strategy for the second planning period, unless the State demonstrates that they are not necessary to make reasonable progress.

Additionally, we disagree that the EPA’s guidance documents acknowledged that there should be no presumption that existing measures are needed for reasonable progress. The 2021 Clarifications Memo is clear that, under the CAA and the RHR, “when the outcome of a four-factor analysis is that no new measures are reasonable for a source, the source’s existing measures are generally needed to prevent future visibility impairment (i.e., to prevent future emission increases) and thus necessary to make reasonable progress.”¹⁷⁵ ADEQ did not provide this analysis of whether existing measures are necessary to make reasonable progress.

Finally, while we agree that Coronado Generating Station is already subject to

a source-specific SIP that was designed to implement a better-than-BART alternative for the first implementation period, we do not agree that this automatically means, without further justification, that there is no need for any additional action to Coronado in the second implementation period for the reasons described in E.2.

Comment E.5. SRP asserts that the EPA should approve Arizona’s control determinations and four-factor analyses with respect to cost-effectiveness thresholds, incremental costs, compliance with the Control Cost Manual, and consideration of visibility.

First, regarding cost-effectiveness thresholds, SRP indicates that Arizona’s cost-effectiveness threshold of \$6,500/ton is reasonable and should be approved, along with the control determinations the state made in reliance on that threshold. SRP noted other examples of cost-effectiveness thresholds in other states (Georgia and Arkansas) that are lower than the values Arizona adopted. SRP also cites the EPA’s recent proposal for Missouri that cites a \$6,060 to \$7,600/ton threshold from the Central Regional Air Planning Association and Texas BART FIP threshold range of \$5,300/ton to \$6,500/ton that is consistent with the \$6,500/ton threshold adopted by Arizona. Therefore, SRP concludes that ADEQ’s threshold is reasonable and represents a conservatively high threshold from a historical perspective.

Second, regarding incremental costs, SRP asserts that the EPA provided no rationale for finding ADEQ’s approach unreasonable, and that it was appropriate to only consider incremental costs if a simple dollar-per-ton analysis suggests a control might be cost-effective in the absence of more nuanced information. SRP notes that suggesting that states cannot reasonably take incremental costs into account to reject control requirements far exceeds the EPA’s statutory authority, citing the court decision in *American Corn Growers Association vs. EPA* as stating that “[t]he Haze Rule calls for states to play the lead role in designing and implementing regional haze program to clear the air in national parks and wilderness areas.” SRP further states that the EPA states that Arizona considered only a single BART determination in finding that incremental costs of \$9,400–13,500/ton were excessive, but this value is in line with past EPA actions finding incremental costs excessive.¹⁷⁶

Third, regarding compliance with the Control Cost Manual, SRP states that the EPA did not provide enough information for the public to tell what it considers to be the full range of the deviations from the Cost Control Manual, except for some of the State’s remaining useful life values. SRP asserts that the EPA’s rules specifically allow for deviations from the Manual’s methodology and sample calculations and values whenever site-specific information is more accurate.

Lastly, regarding consideration of visibility, SRP asserts that the EPA appears to place inappropriate limits on Arizona’s consideration of visibility impacts as part of its assessment of reasonable progress, and that the State took visibility into account as additional confirmation that controls were not reasonable. SRP also states that the EPA has provided no context or analysis for stating that visibility impacts must be assessed in context to determine if they are truly meaningful and justify expensive control requirements. SRP points out that Table 10–5 of the 2022 Arizona Regional Haze Plan shows that natural visibility is projected to occur at all statewide sites between 2028 and 2056, well ahead 2064 natural conditions. SRP concludes that Arizona appropriately determined that controls were not reasonable for SGS when visibility is rapidly improving, costs are over or very near a reasonable cost threshold, and where visibility improvements from potential controls would be relatively small.

Response E.5. The EPA disagrees with this comment for a number of reasons. First, with respect to cost-effectiveness thresholds, the EPA clarifies that we are not disapproving Arizona’s average cost-effectiveness threshold specifically, but rather, finds that the State inconsistently applied the threshold and did not adequately justify how this approach resulted in a reasonable set of control measures in the long-term strategy for the second planning period. We also note that the fact that other states have applied lower or similar thresholds does not automatically make Arizona’s threshold reasonable. For further explanation on this point, see Response D.4.

Second, with respect to incremental costs, contrary to the commenter’s assertion, our proposed rule did not suggest that Arizona cannot consider incremental costs. However, we reiterate that, if a state chooses to consider incremental costs, it must do so in a reasonable and consistent manner and

¹⁷² See *Committee for a Better Arvin v. EPA*, 786 F.3d 1169, 1175–77 (9th Cir. 2015).

¹⁷³ CAA 169A(b)(2).

¹⁷⁴ CAA 169A(b)(2)(B).

¹⁷⁵ 2021 Clarifications Memo, pp. 8–9 (emphasis added).

¹⁷⁶ See, e.g., 79 FR 9318, 9342 (rejecting controls based on incremental costs of \$8,803 and \$8,576/ton); 76 FR 80754, 80756 (December 27, 2011)

(rejecting controls based on incremental costs of \$5,367/ton).

that Arizona did not do so in the Plan. See Responses B.6, B.8, and D.9.

Third, with respect to compliance with the Control Cost Manual, we note that, in addition to discussing remaining useful life values, we cited an example of where the State used an interest rate that was above the then-current prime rate without adequate documentation.¹⁷⁷ While we agree with the commenter that States can deviate from the Cost Control Manual's methodology and sample calculations and values whenever site-specific information is more accurate, ADEQ did not provide such relevant site-specific documentation. In situations where an enforceable shutdown date does not exist, the remaining useful life of a control under consideration should be the full period of the useful life of that control as recommended by the EPA's Control Cost Manual.¹⁷⁸ See Responses A.1 and C.4.

With respect to consideration of visibility, we disagree that the EPA has provided no context or analysis for stating that visibility impacts must be assessed in context. On the contrary, in our proposed notice, we explained why the evaluation and control of smaller and better-controlled sources in Arizona may be necessary to achieve the national goal.¹⁷⁹ However, we also noted that SGS specifically is by far the largest emissions source analyzed by ADEQ in the 2022 Arizona Regional Haze Plan and ADEQ found that Units 3 and 4, as well as Units 1 and 2 for PM₁₀, were effectively controlled, leaving only NO_x and SO₂ at Units 1 and 2 as providing an opportunity for further control at this source.¹⁸⁰ In addition, we cited to portions of the 2019 Guidance and Clarifications Memo that provide additional recommendations to states that visibility improvements could reasonably be considered in conjunction with a four-factor analysis. To the extent that the commenter is arguing that the EPA should have provided our own analysis of visibility impacts, we disagree. The EPA's role in reviewing SIP submittals is to assess their compliance with applicable requirements, not to address those requirements ourselves, as we would be obligated to do in a FIP.

Regarding Table 10–5, we note that this table is based on Arizona's RPGs, and that contrary to SRP's suggestion, ADEQ did not cite or discuss this table or otherwise reference its RPGs in making its control determinations. Furthermore, as explained in our proposal "[b]ecause RPGs are the modeled result of the measures in states' long-term strategies (as well as other measures required under the CAA), they cannot be determined before states have conducted their four-factor analyses and determined the control measures that are necessary to make reasonable progress."¹⁸¹ Accordingly, we do not agree that Arizona did or should have considered the information in Table 10–5 in making its control determinations. We also note that the commenter mischaracterizes the contents of this table, insofar as the "projected date of natural visibility for SYCA" is 2089, which is well after 2064. See also response C.5.

In sum, we disagree that Arizona appropriately determined that controls were not reasonable for SGS for the reasons described in this response, elsewhere in this document and in our proposal.

Comment E.6. SRP claims that the EPA improperly asserts that Arizona's SIP must require installation of specific control technologies, specifically with regards to SDA upgrades at SGS Units 1 and 2. SRP states that the regional haze program has not been used to impose requirements to install and operate specific technologies, and that some states have made use of emissions caps rather than emissions rates and other creative tools to address regional haze requirements, including Coronado Generating Station during the first planning period.

Response E.6. We agree with the commenter that ADEQ was not obligated to require installation of a particular control. However, the State is obligated to set emissions limitations or establish other measures corresponding to the controls that it determined to be necessary to make reasonable progress.¹⁸² See also Response B.8 where we note issues with ADEQ's

provided rationale in justifying the mass-based emissions caps at SGS and IGS. Finally, we note that the example of Coronado Generating Station was under the better-than-BART provisions of 40 CFR 51.308(e)(2), rather than the provisions of 40 CFR 51.308(f), which govern regional haze plans for the second implementation period.

Comment E.7. SRP comments that the EPA's disapproval of 40 CFR 51.308(f)(3)(ii) for the Sycamore Canyon monitor fails to acknowledge or address critical monitoring deficiencies. SRP noted that ADEQ's determination that monitor irregularities should preclude the site from 40 CFR 51.308(f)(3)(ii)(A) requirements, and that the EPA cannot ignore the issues. SRP states that ADEQ has shown that the site would have experienced drastic visibility improvements if not for the impact of PM, and that the increases of coarse mass and soil that occurred after the monitor was relocated in 2015 shows that the increasing trends of dust at the monitor originate from local sources. SRP further notes that the current monitor location is not within the Class I area, so it is unreasonable to assume the local dust impacts experienced at the monitor result in visibility degradation within the Class I area. SRP asserts that the EPA's current disapproval deprives the public of an adequate opportunity to comment as the EPA fails to discuss the monitoring irregularities at the monitor. SRP claims that the EPA's disapproval of 40 CFR 51.308(f)(3)(ii) is arbitrary and capricious because the action ignores the facts presented by ADEQ, ADEQ's recommendation that the SYCA monitor should not be used for long-term progress analysis, and instead relies on questionable monitoring data without any discussion of its merits.

Response E.7. Please see Response B.9.

Further, we do not agree that we ignored ADEQ's monitoring analysis. On the contrary, we specifically acknowledged this analysis in our proposal.¹⁸³ However, we found this analysis was insufficient to meet the requirements of 40 CFR 51.308(f)(3)(ii)(A), given the flaws in ADEQ's long-term strategy.

We also disagree with the commenter's assertion that ADEQ determined that monitor irregularities should preclude the site from 40 CFR 51.308(f)(3)(ii)(A) requirements. Rather, ADEQ asserted that the Plan complied

¹⁸¹ Id. at 47405.

¹⁸² CAA 169A(b)(2) ("... each applicable implementation plan for a State . . . which may reasonably be anticipated to cause or contribute to any impairment of visibility . . . [must] contain such emissions limits, schedules of compliance and other measures as may be necessary to make reasonable progress[.]"); 40 CFR 51.308(f)(2) ("Each State must submit a long-term strategy that addresses regional haze visibility impairment . . . the long-term strategy must include the enforceable emissions limitations . . . that are necessary to make reasonable progress."); see also 2021 Clarifications Memo, pp. 8–9.

¹⁸³ See 89 FR 47398, 47433 ("ADEQ provided a discussion in its submission that explains how the monitor was relocated in 2015 and experienced increases in soil and coarse mass extinction.")

¹⁷⁷ 89 FR 47398, 47429.

¹⁷⁸ 2019 Guidance, pp. 33–34. See also 40 CFR 51.308(f)(2)(iii) ("The State must document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects").

¹⁷⁹ 89 FR 47398, 47430.

¹⁸⁰ Id.

with these requirements.¹⁸⁴ We do not agree with this assertion for the reasons stated in our proposal and Response B.9 of this document. ADEQ also noted that it will continue to monitor and investigate the source of coarse mass impacts at the monitor site during subsequent progress reports and periodic comprehensive Regional Haze SIP revisions.¹⁸⁵ We will work with ADEQ and other stakeholders on the consideration of this issue in the development of future SIP revisions.

F. Community Sign-On Letter

The Community Sign-On Letter is supportive with three suggestions for improvement. The supportive portions of the letter do not require a response.

Comment F.1. The commenter requests that the EPA confirm the polluting facilities that ADEQ improperly excluded from analysis in the state's plan.

Response F.1. Please see Response A.1, which describes the EPA's approach to reviewing the Plan generally and source selection specifically.

Comment F.2. The commenter requests that the EPA confirm the specific errors in each of the selected source's review of pollution controls.

Response F.2. We have explained the bases for our partial disapproval with respect to 40 CFR 51.308(f)(2) in our proposal and elsewhere in this document. Therefore, the EPA's disapproval of 51.308(f)(2) is justified.

Comment F.3. The commenter requests that the EPA consider the equity and environmental justice impacts of the state's plan and maximize the environmental justice co-benefits of haze pollution reduction opportunities.

Response F.3. The regional haze statutory provisions do not explicitly address considerations of environmental justice, and neither do the regulatory requirements of the second planning period in 40 CFR 51.308(f), (g), and (i). As explained in "EPA Legal Tools to Advance Environmental Justice,"¹⁸⁶ the CAA provides states with the discretion to consider environmental justice in developing rules and measures related to regional haze. While a State may consider environmental justice under

the reasonable progress factors, neither the statute nor the RHR requires states to conduct an environmental justice analysis for the EPA to approve a SIP submission. Furthermore, the CAA and applicable implementing regulations neither prohibit nor require such an evaluation of environmental justice with regard to a regional haze SIP submission. The EPA is not identifying environmental justice as a basis for its decision to partially approve and partially disapprove Arizona's SIP revision.

G. Comment Letter From NPCA et al.

Sections I ("Background") and II ("EPA's Proposed Rule Correctly Disapproves ADEQ's Approach To Source Selection, Four-Factor Analyses, Control Determinations, and Reasonable Progress Goals") of the NPCA et al.'s comment letter either provide background information or are supportive and therefore do not require a response. We respond to sections III–VI of the NPCA et al.'s comment letter below.

Comment G.1. NPCA et al. request the EPA to be more specific about the point sources of concern. First, the commenter states that in the final rule, the EPA should list the sources that ADEQ improperly screened out and failed to conduct a four-factor reasonable progress analysis for, namely Apache Unit 3, Cholla Units 1, 3–4, Coronado, ASARCO Hayden Smelter, Lhoist-Nelson Lime Plant, Apache Nitrogen, Freeport-McMoRan Miami Smelter.

Second, the commenter states that the EPA should list each point source for which the EPA is disapproving ADEQ's control determinations, namely SGS Units 1 and 2 NO_x and SO₂ analyses, SGS 3 and 4 SO₂ analyses, IGS 3 and 4 NO_x analyses, Williams Compressor Station NO_x analysis, Wilcox Compressor Station NO_x analysis, Drake Cement Plant NO_x and SO₂ analyses, and Phoenix Cement-Clarkdale Plant, NO_x and PM₁₀ analyses.

Response G.1. See Response A.1. The EPA is disapproving long-term strategy as a whole. Any subsequent SIP revision developed by the State, or FIP developed by EPA, will need to establish a long-term strategy in accordance with the regulatory requirements. 40 CFR 51.308(f)(2).

Comment G.2. NPCA et al. comment that the EPA must consider the equity and environmental justice impacts of its action on Arizona's Regional Haze SIP. The commenter indicates that the EPA guidance documents direct states to consider the broader environmental implications of their regional haze plans, by requiring an analysis of the

"non-air quality environmental impacts of compliance," including environmental justice, and that meaningful outreach and engagement to environmental justice communities is crucial. NPCA et al. request ADEQ and the EPA to conduct meaningful outreach, substantively incorporate equity and environmental justice into the SIP revision and the supporting technical documents, such as preparing maps that detail the location of environmental justice communities in Arizona and the location of nearby visibility-impairing sources. The commenters specify that a number of visibility-impairing sources in Arizona are located near vulnerable communities, yet ADEQ did not conduct a four-factor analysis for many of these sources.

Response G.2. See Response F.3. NPCA et al. provided additional demographic information for communities near several sources in Arizona. Without agreeing with the particular relevance or accuracy of this information, the EPA acknowledges the demographic information provided as part of the comment. As discussed in our proposal and in this document, the EPA has evaluated Arizona's SIP submission against the statutory and regulatory regional haze requirements and determined that it has not satisfied certain minimum requirements.

Comment G.3. NPCA et al. note that the EPA must disapprove ADEQ's adjustments to the URP glidepath for each Class I area. The commenter asserts that the EPA can only approve these URP glidepath adjustments if it determines ADEQ used "scientifically valid data and methods" per 40 CFR 51.308(f)(1)(vi)(B), and they request the EPA to disapprove ADEQ's URP glidepath adjustments for two reasons.

First, NPCA et al. state that the EPA incorrectly suggests that ADEQ's adjustments were de minimis and had no effect on whether the RPGs for each Class I area are above or below the URP glidepath. However, ADEQ's decision to adjust the default URP glidepaths significantly affected whether the RPG for several Class I areas are above or below the glidepath, such as Chiricahua Wilderness, Saguaro National Park, and Superstition Wilderness.

Second, NPCA et al. state that the EPA's determination that ADEQ's glidepath adjustments used scientifically valid data and methods is unsound given that the EPA previously expressed concerns with these data and methods. The commenter further states that the EPA highlighted substantial problems in its 2019 Modeling

¹⁸⁴ Plan p. 106 ("In accordance with 40 CFR 51.308(f)(3)(ii)(A), Arizona has provided robust documentation in support of the state's source selection criteria and reasonable progress determinations for selecting measures for inclusion in its long-term strategy.")

¹⁸⁶ See EPA Legal Tools to Advance Environmental Justice, May 2022, available at www.epa.gov/system/files/documents/2022-05/EJ%20Legal%20Tools%20May%202022%20FINAL.pdf at 35–36.

Technical Support Document (TSD)¹⁸⁷ with available data and methods for adjusting Class I glidepaths based on both international and prescribed wildland fire emissions, including international emissions data from just a single year,¹⁸⁸ and uncertainty in many of the calculations and modeling and ambient data.¹⁸⁹

Response G.3. As noted in our proposal and in our response to Comment C.5, being on or below the URP does not relieve a state from considering the four statutory factors to determine what level of control is needed to achieve reasonable progress.¹⁹⁰ The URP is used in later steps of the reasonable progress analysis for informational purposes and to provide a non-enforceable benchmark against which to assess a Class I area's rate of visibility improvement. Achieving the URP does not mean that a Class I area is making "reasonable progress" and does not relieve a state from using the four statutory factors to determine what level of control is needed to achieve such progress.¹⁹¹

We also find that the specific points raised by NPCA are overstated, and we therefore disagree that we should disapprove ADEQ's glidepath adjustments. First, the EPA's proposal stated, "[t]he choice of adjustment option made no difference in whether the RPG for each area was above or below its URP glidepath,"¹⁹² not that an adjustment, in general, made no difference. That is, the glidepath adjustment results were nearly the same between the option that adjusted for international anthropogenic impacts alone, and the option that adjusted for international impacts together with wildland prescribed fire impacts. The commenter is correct that for several Class I areas, the adjustment itself does make a difference in the assessment of whether projected visibility impacts are above or below the glidepath. Our assessment of the URP and RPGs took that into account, as noted in our proposal.¹⁹³ If the adjustment were

rejected altogether, that would strengthen the case for the need for the State to make a "robust demonstration" that there are no reasonable additional emissions reduction measures, although in this case that need is already established because Sycamore Canyon Wilderness impacts are above its glidepath with or without adjustment.¹⁹⁴

Second, the EPA disagrees that the glidepath adjustments were not based on scientifically valid data and methods. The 2019 Modeling TSD acknowledges various limitations and uncertainties in various model inputs and calculation approaches, which is always the case in modeling. That acknowledgement was not intended as an assertion by the EPA that its own data and methods were scientifically invalid. Similarly, it was not intended that a glidepath adjustment made using the same or similar methods would not be based on scientifically valid data and methods. Rather, the data and methods used were the best available to the EPA at the time of the modeling in that TSD, and presented as a reasonable and valid approach for glidepath adjustment that states could consider in developing their SIPs, without precluding the use of better data and methods that a state might develop. The EPA's specific statement about "uncertainty in many of the calculations and modeling and ambient data" was in the context of alternative approaches to adjusting the glidepath, for which the 2019 Modeling TSD provided five,¹⁹⁵ including the default. Those approaches differed in whether international impacts and prescribed fire should be combined with the baseline model run on an absolute or relative basis (*i.e.*, simply added in or applied as a percent difference), and whether natural conditions should be estimated from monitored data or from modeling. There is not one clearly best approach that would be most appropriate for all Class I areas in the country, but the EPA chose one as the default and provided a range of adjustment results. For Arizona Class I areas, the glidepath adjustment in the default approach was nearly the same as the maximum among the approaches examined, except for the Grand Canyon and Sycamore Canyon Wilderness, where it gave closer to the minimum adjustment among the approaches considered.¹⁹⁶ As noted in the EPA's proposal, the WRAP results used by ADEQ were fairly close to default

approach values estimated by the EPA and were determined to be based on scientifically valid data and methods.¹⁹⁷ The EPA does not find any reason, and the commenters do not provide any additional reasons to determine otherwise.

Comment G.4. NPCA et al. indicate that the EPA must disapprove additional aspects of ADEQ's source selection process, noting that ADEQ's Q/d threshold of 10 is arbitrarily high, ADEQ should not have eliminated the totality of "effectively-controlled" process emissions from its Q/d analysis, and ADEQ's "de minimis point source process determination" is arbitrary and capricious.

Response G.4. As explained in our proposal and the 2021 Clarifications Memo, the RHR does not require states to consider controls for all sources, all source categories, or any or all sources in a particular source category.¹⁹⁸ Rather, the states have discretion to choose any source selection methodology or threshold that is reasonable, but the choices they make must be explained and should be designed to result in a set of sources which capture a meaningful portion of the state's total contribution to visibility impairment. To this end, 40 CFR 51.308(f)(2)(i) requires that a state's SIP submission must include "a description of the criteria it used to determine which sources or groups of sources it evaluated." The technical basis for source selection, which may include methods for quantifying potential visibility impacts such as emissions divided by distance metrics, trajectory analyses, residence time analyses, and/or photochemical modeling, must also be appropriately documented, as required by 40 CFR 51.308(f)(2)(iii).

Overall, in this particular instance, the EPA finds that that many aspects of ADEQ's source selection process, such as its focus on sulfate, nitrate, and coarse mass and its use of a Q/d value of 10 for point sources, were reasonable and adequately explained and documented. However, we also find that ADEQ did not provide an adequate justification for screening out certain sources and units from conducting a four-factor analysis on the basis that they are "effectively controlled" as part of its source selection process.¹⁹⁹ As the

¹⁸⁷ Memorandum from Richard A. Wayland, Director, Air Quality Assessment Division, EPA, to Regional Air Division Directors, Subject: "Availability of Modeling Data and Associated Technical Support Document for the EPA's Updated 2028 Visibility Air Quality Modeling," September 19, 2019, available at <https://www.epa.gov/visibility/technical-support-document-epas-updated-2028-regional-haze-modeling>.

¹⁸⁸ 2019 Modeling TSD, p. 37.

¹⁸⁹ 2019 Modeling TSD, p. 67.

¹⁹⁰ 89 FR 47398, 47402, n. 52.

¹⁹¹ See, e.g., 82 FR 3078, 3093 and 89 FR 47398, 47402, n. 52.

¹⁹² 89 FR 47398, 47411 (emphasis added).

¹⁹³ 89 FR 47398, 47432–47433.

¹⁹⁴ 2022 Arizona Regional Haze Plan, p. D–24 and Figure D–39.

¹⁹⁵ 2019 modeling TSD, p. 55.

¹⁹⁶ 2019 modeling TSD, p. 56, Table 5–2.

¹⁹⁷ 89 FR 47398, 47411.

¹⁹⁸ 89 FR 47398, 47403; 2021 Clarifications Memo, Sections 2 and 2.1.

¹⁹⁹ See 40 CFR 51.308(f)(2)(i) (" . . . The State must include in its implementation plan a description of the criteria used to determine which sources or groups of sources it evaluated and how the four factors were taken into consideration

EPA has previously stated, “[s]ource selection is a critical step in states’ analytical processes. All subsequent determinations of what constitutes reasonable progress flow from states’ initial decisions regarding the universe of pollutants and sources they will consider for the second planning period.”²⁰⁰ Therefore, Arizona’s source selection methodology, including unjustified effectively controlled determinations, supports the EPA’s determination that Arizona’s long-term strategy did not include all measures necessary to make reasonable progress. Therefore, EPA’s disapproval of 40 CFR 51.308(f)(2), as a whole, is reasonable.

Comment G.5. NPCA et al. state that ADEQ’s average cost-effectiveness threshold is too low, and requests the EPA to further clarify that ADEQ’s \$6,500 per ton cost threshold is too low and unreasonably excludes cost-effective control measures.

Response G.5. While the EPA is not disapproving ADEQ’s cost threshold, we nonetheless find that the State did not apply this threshold in a consistent and reasonable manner, as described in our proposal²⁰¹ and Response D.4 of this document.

Comment G.6. NPCA et al. comment that the EPA must promptly issue a Regional Haze FIP for Arizona. The commenter recommends that to provide sufficient time for sources to implement control measures before the second implementation period ends in 2028, the EPA should issue a proposed FIP in 2024 and finalize the FIP by the end of 2025.

Response G.6. Disapproving a SIP submission establishes a two-year deadline for the EPA to promulgate a FIP to address the relevant requirements under CAA section 110(c), unless the EPA approves a subsequent SIP submission that meets these requirements. The EPA is not proposing a FIP for the disapproved requirements of the 2022 Arizona Regional Haze Plan at this time.

III. Final Action

Under CAA section 110(k)(3), and based on the evaluation and rationale presented in the proposed rule and this final rule, the EPA is partially approving and partially disapproving the 2022 Arizona Regional Haze Plan. Specifically, the EPA is approving the elements of the 2022 Arizona Regional Haze Plan related to requirements contained in 40 CFR 51.308(f)(1), (f)(4)–

(6), and (g)(1)–(5). The EPA is disapproving the elements of the 2022 Arizona Regional Haze Plan related to requirements contained in 40 CFR 51.308(f)(2), (f)(3), and (i)(2)–(4). Further, the EPA is disapproving the interstate transport requirements of CAA section 110(a)(2)(D)(i)(II) prong 4 (visibility) for the 2018 Ozone I–SIP submittal and 2015 PM_{2.5} I–SIP submittal.

Under section 179(a) of the CAA, final disapproval of a submittal that addresses a requirement of part D, title I of the CAA or is required in response to a finding of substantial inadequacy as described in CAA section 110(k)(5) starts a sanctions clock. Arizona’s 2022 Regional Haze Plan, 2018 Ozone I–SIP submittal, and 2015 PM_{2.5} I–SIP submittal were not submitted to meet any of these requirements. Therefore, the disapprovals noted in section III.B will not trigger any offset or highway sanctions clocks. Disapproving a SIP submission also establishes a two-year deadline for the EPA to promulgate a FIP to address the relevant requirements under CAA section 110(c), unless the EPA approves a subsequent SIP submission that meets these requirements. We anticipate that any SIP or FIP that remedies the disapprovals with respect to Regional Haze requirements, would also, in conjunction with the existing Arizona Regional Haze FIP, remedy the disapproval for the interstate transport visibility requirement of CAA section 110(a)(2)(D)(i)(II) for the 2018 Ozone I–SIP submittal and 2015 PM_{2.5} I–SIP submittal.

IV. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA’s role is to review state choices, and approve those choices if they meet the minimum criteria of the Act. Accordingly, this final action partially approves and partially disapproves state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law.

Additional information about these statutes and Executive orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

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

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review.

B. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA because this action does not impose additional requirements beyond those imposed by state law.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities beyond those imposed by state law.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. This action does not impose additional requirements beyond those imposed by state law. Accordingly, no additional costs to State, local, or Tribal governments, or to the private sector, will result from this action.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Coordination With Indian Tribal Governments

This action does not have Tribal implications, as specified in Executive Order 13175, because the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction, and will not impose substantial direct costs on Tribal governments or preempt Tribal law. Thus, Executive Order 13175 does not apply to this action.

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

The EPA interprets Executive Order 13045 as applying only to those

in selecting the measures for inclusion in its long-term strategy”).

²⁰⁰ 2021 Clarifications Memo, p. 3.

²⁰¹ 89 FR 47398, 47429.

regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2–202 of the Executive Order. Therefore, this action is not subject to Executive Order 13045 because it merely partially approves and partially disapproves state law as meeting federal requirements. Furthermore, the EPA’s Policy on Children’s Health does not apply to this action.

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

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

Section 12(d) of the NTTAA directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. The EPA believes that this action is not subject to the requirements of section 12(d) of the NTTAA because application of those requirements would be inconsistent with the CAA.

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

Executive Order 12898 (Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, Feb. 16, 1994) directs Federal agencies to identify and address “disproportionately high and adverse human health or environmental effects” of their actions on communities with environmental justice (EJ) concerns to

the greatest extent practicable and permitted by law. Executive Order 14096 (Revitalizing Our Nation’s Commitment to Environmental Justice for All, 88 FR 25251, April 26, 2023) builds on and supplements E.O. 12898 and defines EJ as, among other things, “the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, or Tribal affiliation, or disability in agency decision-making and other Federal activities that affect human health and the environment.”

The State did not evaluate EJ considerations as part of its SIP submittal; the CAA and applicable implementing regulations neither prohibit nor require such an evaluation. EPA did not perform an EJ analysis and did not consider EJ in this action. Due to the nature of the action being taken here, this action is expected to have a neutral to positive impact on the air quality of the affected area. Consideration of EJ is not required as part of this action, and there is no information in the record inconsistent with the stated goal of E.O. 12898/14096 of achieving EJ for communities with EJ concerns.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

L. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by February 18, 2025. 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 section 307(b)(2)).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur Oxides, Volatile organic compounds.

Dated: December 10, 2024.

Martha Guzman Aceves,
Regional Administrator, Region IX.

For the reasons stated in the preamble, the EPA amends chapter I, title 40 of the Code of Federal Regulations as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

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

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

Subpart D—Arizona

- 2. In § 52.120(e), amend Table 1 by adding an entry for “State Implementation Plan Revision: Regional Haze Program (2018–2028)” before the entry for “Arizona State Implementation Plan Revision under Clean Air Act Section 110(a)(1) and (2); Implementation of the 2008 Lead National Ambient Air Quality Standards, excluding the appendices.”

The addition reads as follows:

§ 52.120 Identification of plan.

* * * * *

(e) * * *

TABLE 1—EPA-APPROVED NON-REGULATORY AND QUASI-REGULATORY MEASURES

[Excluding certain resolutions and statutes, which are listed in tables 2 and 3, respectively]¹

Name of SIP provision	Applicable geographic or nonattainment area or title/subject	State submittal date	EPA approval date	Explanation
The State of Arizona Air Pollution Control Implementation Plan Clean Air Act Section 110(a)(2) State Implementation Plan Elements (Excluding Part D Elements and Plans)				

*	*	*	*	*
State Implementation Plan Revision: Regional Haze Program (2018–2028), excluding Chapters 2, 6.1, 6.2, 6.3, 7, 8, 9, and 10 and Appendices B, C, D, E, F, G, H, I, J, and L.	State-wide	August 15, 2022	January 17, 2025.	*

TABLE 1—EPA-APPROVED NON-REGULATORY AND QUASI-REGULATORY MEASURES—Continued
 [Excluding certain resolutions and statutes, which are listed in tables 2 and 3, respectively]¹

Name of SIP provision	Applicable geographic or nonattainment area or title/subject	State submittal date	EPA approval date	Explanation
<p>* * * * *</p> <p>■ 3. Section 52.145 is amended by adding paragraph (o) to read as follows:</p>	<p>ACTION: Final rule.</p>			<p>number: (202) 564–4016; e-mail address: lloyd.tyler@epa.gov.</p>
<p>§ 52.145 Visibility protection.</p> <p>* * * * *</p>	<p>SUMMARY: The Environmental Protection Agency (EPA or the Agency) is amending the new chemicals procedural regulations under the Toxic Substances Control Act (TSCA). These amendments align the regulatory text with the amendments to TSCA’s new chemicals review provisions contained in the Frank R. Lautenberg Chemical Safety for the 21st Century Act, enacted on June 22, 2016, will improve the efficiency of EPA’s review processes, and update the regulations based on existing policies and experience implementing the New Chemicals Program. This final rule includes amendments that will increase the quality of information initially submitted in new chemicals notices and improve the Agency’s processes for timely, effective completion of individual risk assessments and the new chemicals review process overall. EPA is also finalizing several amendments to the regulations for low volume exemptions (LVEs) and low release and exposure exemptions (LoREXs), which will require EPA approval of an exemption notice prior to commencement of manufacture, make per- and polyfluoroalkyl substances (PFAS) categorically ineligible for these exemptions, and provide that certain persistent, bioaccumulative, toxic (PBT) chemical substances are ineligible for these exemptions.</p>			<p><i>For general information contact:</i> The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554–1404; e-mail address: TSCA-Hotline@epa.gov.</p>
<p>(o) <i>Disapproval.</i> On August 15, 2022, the Arizona Department of Environmental Quality submitted the “State Implementation Plan Revision: Regional Haze Program (2018–2028).”</p>				<p>SUPPLEMENTARY INFORMATION:</p>
<p>(1) The following portions of the “State Implementation Plan Revision: Regional Haze Program (2018–2028)” are disapproved because they do not meet the applicable requirements of Clean Air Act sections 169A and 169B and the Regional Haze Rule in 40 CFR 51.301 through 51.308.</p>				<p>I. Executive Summary</p>
<p>(i) Chapters 2, 6.1, 6.2, 6.3, 7, 8, 9, and 10;</p>				<p><i>A. Does this action apply to me?</i></p>
<p>(ii) Appendices B, C, D, E, F, G, H, I, J, and L.</p>				<p>You may be potentially affected by this action if you intend to manufacture a new chemical substance, or manufacture or process a chemical substance for a significant new use. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:</p>
<p>■ 4. Section 52.147 is amended by adding paragraph (f) to read as follows:</p>				<ul style="list-style-type: none"> • Chemical Manufacturers (NAICS code 325). • Petroleum and Coal Products (NAICS code 324). • Merchant Wholesalers, Nondurable Goods (NAICS code 424).
<p>§ 52.147 Interstate transport.</p> <p>* * * * *</p>	<p>DATES: This final rule is effective January 17, 2025.</p>			<p>This list details the types of entities that EPA is aware could potentially be regulated by this action. Other types of entities not listed could also be regulated. To determine whether your entity is regulated by this action, you should carefully examine the applicability criteria found in 40 CFR 720.22, 721.5, 723.50, and 725.1. If you have questions regarding the applicability of this action, please consult the technical person listed under FOR FURTHER INFORMATION CONTACT.</p>
<p>(f) <i>Disapproval.</i> The SIPs submitted on December 11, 2015 and September 24, 2018 do not meet the requirements of Clean Air Act section 110(a)(2)(D)(i)(II) (interfere with measures in any other state to protect visibility, only) for the 2012 PM_{2.5} NAAQS and the 2015 ozone NAAQS, respectively.</p>	<p>ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA–HQ–OPPT–2022–0902, is available online at https://www.regulations.gov. Additional instructions for visiting the docket, along with more information about dockets generally, is available at https://www.epa.gov/dockets.</p>			<p><i>B. What is the Agency’s authority for taking this action?</i></p>
<p>[FR Doc. 2024–29508 Filed 12–17–24; 8:45 am] BILLING CODE 6560–50–P</p>	<p>FOR FURTHER INFORMATION CONTACT: <i>For technical information contact:</i> Tyler Lloyd, New Chemicals Division (7405M), Office of Pollution Prevention and Toxics, Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460–0001; telephone</p>			<p>EPA is promulgating this rule pursuant to its authority in TSCA section 5 (15 U.S.C. 2604). Section 5(a)(1) of the Toxic Substances Control Act (TSCA), 15 U.S.C. 2604(a)(1), as amended by the Frank R. Lautenberg Chemical Safety for the 21st Century Act of 2016 (Pub. L. 114–182) (herein referred to as the “2016 Lautenberg</p>
<p>ENVIRONMENTAL PROTECTION AGENCY</p>				
<p>40 CFR Parts 68, 372, 703, 720, 721, 723, 725, and 761</p>				
<p>[EPA–HQ–OPPT–2022–0902; FRL–7906–02–OCSPP]</p>				
<p>RIN 2070–AK65</p>				
<p>Updates to New Chemicals Regulations Under the Toxic Substances Control Act (TSCA)</p>				
<p>AGENCY: Environmental Protection Agency (EPA).</p>				