6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2017-0092; FRL-9961-98-Region 9]

Approval and Promulgation of Air Quality Implementation Plans; Arizona; Regional Haze State and Federal Implementation Plans

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve a source-specific revision to the Arizona state implementation plan (SIP) that provides an alternative to Best Available Retrofit Technology (BART) for the Coronado Generating Station ("Coronado"), owned and operated by the Salt River Project Agricultural Improvement and Power District. The EPA proposes to find that the BART alternative for Coronado would provide greater reasonable progress toward natural visibility conditions than BART, in accordance with the requirements of the Clean Air Act and the EPA's Regional Haze Rule. In conjunction with this proposed approval, we propose to withdraw those portions of the federal implementation plan (FIP) that address BART for Coronado. We also propose to codify the removal of those portions of the Arizona SIP that have either been superseded by previously approved revisions to the Arizona SIP or would be superseded by final approval of the SIP revision for Coronado.

DATES: Written comments must be submitted on or before [**Insert date 45 days after date of publication in the Federal Register**]. Requests for public hearing must be received on or before **[Insert date 15 days after date of publication in the Federal Register].**

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R09-OAR-0092 at http://www.regulations.gov, or via email to Krishna Viswanathan at viswanathan.krishna@epa.gov. For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be removed or edited from Regulations.gov. For either manner of submission, the EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.* on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the "FOR FURTHER INFORMATION CONTACT" section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit http://www2.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION, CONTACT: Krishna Viswanathan, EPA, Region IX, Air Division, Air Planning Office, (520) 999-7880 or viswanathan.krishna@epa.gov.

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

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I. General Information

A. Definitions

For the purpose of this document, we are giving meaning to certain words or initials as follows:

- The initials *AAC* mean or refer to the Arizona Administrative Code.
- The initials *ADEQ* mean or refer to the Arizona Department of Environmental Quality.
- The words *Arizona* and *State* mean the State of Arizona.
- The word *Coronado* refers to the Coronado Generating Station.
- The initials *BART* mean or refer to Best Available Retrofit Technology.
- The initials *BOD* mean or refer to boiler operating day.
- The term *Class I area* refers to a mandatory Class I Federal area.[1]
- The initials *CAA* mean or refer to the Clean Air Act.
- The initials *CBI* mean or refer to Confidential Business Information.
- The words *EPA, we, us,* or *our* mean or refer to the United States Environmental Protection Agency.
- The initials *FIP* mean or refer to federal implementation plan.
- The initials *LNB* mean or refer to low-NOx burners.

[1] Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to mandatory Class I Federal areas. When we use the term "Class I area" in this action, we mean a "mandatory Class I Federal area."

- The initials *MACT* mean or refer to Maximum Available Control Technology.
- The initials *lb/MMBtu* mean or refer to pounds per million British thermal units.
- The initials *NAAQS* mean or refer to National Ambient Air Quality Standards.
- The initials *NSPS* mean or refer to Standards of Performance for New Stationary Sources.
- The initials NO_X mean or refer to nitrogen oxides.
- The initials *OFA* mean or refer to over fire air.
- The initials *PM* mean or refer to particulate patter, which is inclusive of PM_{10} (particulate matter less than or equal to 10 micrometers) and $PM_{2.5}$ (particulate matter less than or equal to 2.5 micrometers).
- The initials *SCR* mean or refer to selective catalytic reduction.
- The initials *SIP* mean or refer to state implementation plan.
- The initials SO_2 mean or refer to sulfur dioxide.
- The initials *SRP* mean or refer to the Salt River Project Agricultural Improvement and Power District.

B. Docket

The proposed action relies on documents, information, and data that are listed in the index on http://www.regulations.gov under docket number EPA-R09-OAR-2017-0092. Although listed in the index, some information is not publicly available (*e.g.*, CBI). Certain other material, such as copyrighted material, is publicly available only in hard copy form. Publicly available docket materials are available either electronically at http://www.regulations.gov or in hard copy at the Air Planning Office of the Air Division, AIR-2, EPA Region IX, 75 Hawthorne Street, San

Francisco, CA 94105. The EPA requests that you contact the individual listed in the FOR FURTHER INFORMATION CONTACT section to view the hard copy of the docket. You may view the hard copy of the docket Monday through Friday, 9- 5:00 PDT, excluding federal holidays.

C. Public Hearings

If anyone contacts the EPA by [**Insert date 15 days after publication in the Federal Register**] requesting to speak at a public hearing, the EPA will schedule a public hearing and announce the hearing in the **Federal Register**. Contact Krishna Viswanathan at (520) 999-7880 or Viswanathan.krishna@epa.gov to request a hearing or to find out if a hearing will be held.

II. Background

A. Summary of Statutory and Regulatory Requirements

Congress created a program for protecting visibility in the nation's national parks and wilderness areas in 1977 by adding section 169A to the CAA. This section of the CAA establishes as a national goal the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from man-made air pollution."[2] It also directs states to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources in order to address visibility impacts from these sources. Specifically, section 169A(b)(2)(A) of the CAA requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the national visibility goal, including a requirement that certain categories of existing major stationary sources built between 1962 and 1977 procure, install, and operate BART controls. These sources

[2] *See* CAA section 169B, 42 U.S.C. 7492.

are referred to as "BART-eligible" sources.[3] In the 1990 CAA Amendments, Congress amended the visibility provisions in the CAA to focus attention on the problem of regional haze, which is visibility impairment produced by a multitude of sources and activities located across a broad geographic area.[4] We promulgated the initial Regional Haze Rule in 1999[5] and updated it in 2017.[6] The CAA and the Regional Haze Rule require states to develop and implement SIPs to ensure reasonable progress toward improving visibility in mandatory class I Federal areas[7] by reducing emissions that cause or contribute to regional haze.[8] Under the Regional Haze Rule, states are directed to conduct BART determinations and establish emissions limitations for BART-eligible sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area.[9] In lieu of requiring source-specific BART controls, states also have the flexibility to adopt alternative measures, as long as the alternative provides greater reasonable progress towards natural visibility conditions than BART (*i.e.*, the alternative must be "better than BART").[10]

In addition to the visibility protection requirements of the CAA and the Regional Haze Rule, SIP revisions concerning regional haze are also subject to the general requirements of CAA section 110. In particular, they are subject to the requirement in CAA section 110(l) that SIP revisions must not "interfere with any applicable requirement concerning attainment and

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[3] 40 CFR 51.301.
[4] *See* CAA section 169B, 42 U.S.C. 7492.
[5] 64 FR 35714 (July 1, 1999).
[6] 82 FR 3078 (January 10, 2017).
[7] Areas designated as mandatory Class I federal areas consist of national parks exceeding 6000 acres, wilderness areas, and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a).
[8] *See generally* 40 CFR 51.308.
[9] 40 CFR 51.308(e).
[10] 40 CFR 51.308(e)(2) and (3).

reasonable further progress (as defined in [CAA § 171]), or any other applicable requirement of [the CAA]," as well as the requirement in CAA section 110(a)(2)(A) that SIPs must include enforceable emission limits.

B. History of FIP BART Determination

1. 2011 Arizona Regional Haze SIP and 2012 Arizona Regional Haze FIP

The Arizona Department of Environmental Quality (ADEQ) submitted a Regional Haze SIP ("Arizona Regional Haze SIP") to the EPA on February 28, 2011. The Arizona Regional Haze SIP included BART determinations for nitrogen oxides (NO_X), particulate matter less than or equal to 10 micrometers (PM_{10}), and sulfur dioxide (SO_2) for Units 1 and 2 at Coronado. In a final rule published on December 5, 2012, the EPA approved ADEQ's BART determinations for PM_{10} and SO_2, but disapproved ADEQ's determination for NO_X at Coronado.[11] We also found that the SIP lacked the requisite compliance schedules and requirements for equipment maintenance and operation, including monitoring, recordkeeping, and reporting requirements for BART for all pollutants. At the same time, we promulgated a FIP that included a plant-wide NO_X BART emission limit for Coronado of 0.065 pounds per million British thermal units (lb/MMBtu) based on a 30-boiler-operating-day (BOD) rolling average, which Salt River Project Agricultural Improvement and Power District (SRP) could meet by adding a low-load temperature control to its existing selective catalytic reduction (SCR) system on Unit 2 and nstalling an SCR system including a low-load temperature control system on Unit 1. The FIP also included compliance deadlines and requirements for equipment maintenance and operation, including monitoring, recordkeeping, and reporting, to ensure the enforceability of the BART

[11] 77 FR 72512 (December 5, 2012).

limits for SO_2, PM_{10}, and NO_X.

In addition, the FIP included two requirements that applied to all affected sources, including Coronado. First, we promulgated a work practice standard that requires that pollution control equipment be designed and capable of operating properly to minimize emissions during all expected operating conditions. Second, we incorporated by reference into the FIP certain provisions of the Arizona Adminsitrative Code (AAC) that establish an affirmative defense for excess emissions due to malfunctions. Please refer to the final rule published on December 5, 2012, for further information on the BART determinations and related FIP requirements.[12]

2. Petition for Reconsideration and Stay of Regional Haze FIP

The EPA received a petition from SRP on February 4, 2013, requesting partial reconsideration and an administrative stay of the final rule under section 307(d)(7)(B) of the CAA and section 705 of the Administrative Procedure Act.[13] EPA Region 9 sent a letter on April 9, 2013, to representatives of SRP granting partial reconsideration of the final rule for the Arizona Regional Haze FIP.[14] In particular, the EPA stated that we were granting reconsideration of the compliance methodology for NO_X emissions from Units 1 and 2 at Coronado and that we would issue a notice of proposed rulemaking seeking comment on an alternative compliance methodology. We also noted that, because we initially proposed different NO_X emission limits for the two units, we would seek comment on the appropriate emission limit for each of the units.

[12] *Id.*
[13] Petition of Salt River Project Agricultural Improvement and Power District for Partial Reconsideration and Stay of EPA's Final Rule: "Approval, Disapproval and Promulgation of Air Quality Implementation Plans; Arizona; Regional Haze State and Federal Implementation Plans" (February 4, 2013).
[14] Letters from Jared Blumenfeld, EPA, to Norman W. Fichthorn and Aaron Flynn, Hunton and Williams (April 9, 2013).

3. FIP Revision for Coronado

In response to the petition from SRP, we issued a final FIP revision on April 13, 2016, replacing the plant-wide compliance method with a unit-specific compliance method for determining compliance with the BART emission limits for NO_X from Units 1 and 2 at Coronado ("2016 BART Reconsideration").[15] While the plant-wide limit for NO_X emissions from Units 1 and 2 was previously established as 0.065 lb/MMBtu, through this FIP revision we set a unit-specific limit of 0.065 lb/MMBtu for Unit 1 and 0.080 lb/MMBtu for Unit 2, to be met by December 5, 2017. We also revised the work practice standard that applied to Coronado and removed the affirmative defense for malfunctions that was included in the FIP for Coronado.

4. Arizona Regional Haze SIP Revision for Coronado Generating Station

On December 15, 2016, ADEQ submitted a revision to the Arizona Regional Haze SIP ("Coronado SIP Revision") that provides an alternative to BART for Coronado ("Coronado BART Alternative").[16] The Coronado SIP Revision is the subject of this proposal.

III. The Coronado SIP Revision

A. Summary of the Coronado SIP Revision

The Coronado SIP Revision and BART Alternative consists of an interim operating strategy ("Interim Strategy"), which would be in effect from December 5, 2017 to December 31, 2025, and a final operating strategy ("Final Strategy"), which would take effect on January 1,

[15] 81 FR 21735 (April 13, 2016).

[16] Letter from Timothy S. Franquist, Director Air Quality Division, ADEQ, to Alexis Strauss, Action Regional Administrator, EPA Region 9 (December 15, 2016). The Coronado SIP Revision includes both the original version of the revision (dated July 19, 2016) that was proposed by ADEQ for public comment, and an addendum ("Addendum" dated November 10, 2016), in addition to various supporting materials. The Addendum documents changes to the Coronado BART Alternative since ADEQ's July 19, 2016 proposal. Unless otherwise specified, references in this document to the Coronado SIP Revision include both of these documents, as well as the other materials included in ADEQ's submittal.

2026. The requirements associated with the Interim and Final Strategies are shown in Table 1 and summarized briefly below.

1. Final Strategy

The Final Strategy in the Coronado SIP Revision requires installation of SCR on Unit 1 ("SCR Option") or the permanent cessation of operation of Unit 1 ("Shutdown Option") no later than December 31, 2025. SRP is required to notify ADEQ and the EPA of its selection by December 31, 2022. The Final Strategy includes two additional features: a SO_2 emission limit of 0.060 lb/MMBtu, calculated on a 30-BOD rolling average, which applies to Unit 2 (as well as Unit 1 if it continues operating), and an annual plant-wide SO_2 emissions cap of either 1,970 tons per year (tpy) if both units continue operating or 1,080 tpy if Unit 1 shuts down.

2. Interim Strategy

The Interim Strategy includes three different operating options (designated IS2, IS3, and IS4), each of which requires a period of seasonal curtailment (*i.e.*, temporary closure) for Unit 1. Each year, SRP must select and implement one of the three options, based on the NO_X emissions performance of Unit 1 and the SO_2 emissions performance of Units 1 and 2 in that year. In particular, by October 21 of each year, SRP must notify ADEQ and the EPA of its chosen option for that calendar year (and for January of the following year) and demonstrate that its NO_X and SO_2 emissions for that year (up to the date of the notification) have not already exceeded the limits associated with that option.[17] SRP then must comply with those limits for the remainder of the year (and for January of the following year) and curtail

[17] *See* Coronado SIP Revision, Appendix B, Permit No. 64169 as amended by Significant Revision to operating permit No. 63088 (December 14, 2016), Attachment E, condition D.1.

operation of Unit 1 for the time period required under that option.[18] In addition, under each option, the facility must comply with an annual plant-wide SO_2 emissions cap of 1,970 tpy effective in each year beginning in 2018.

Table 1 – Summary of Coronado BART Alternative Compared with 2014 Baseline and BART Control Strategy

Control Strategy		Unit 1 (lb/MMBtu) (30-BOD average)		Unit 2 (lb/MMBtu) (30-BOD average)		Annual Plant-Wide SO_2 Cap (tpy)	Unit 1 Curtailment Period
		NO_X	SO_2	NO_X	SO_2		
2014 Baseline[a]		0.320	0.080	0.080	0.080	N/A	N/A
BART Control Strategy[b]		0.065	0.080	0.080	0.080	N/A	N/A
Interim Strategy[c]	**IS2**	0.320	0.060	0.080	0.060	1,970	October 21-January 31
	IS3	0.320	0.050	0.080	0.050	1,970	November 21-January 20
	IS4	0.310	0.060	0.080	0.060	1,970	November 21-January 20
Interim Strategy Timeline		Notification date: October 21 of each year Operates December 5, 2017 to December 31, 2025					
Final Strategy	**SCR Installation**	0.065	0.060	0.080	0.060	1,970	N/A
	Shutdown	N/A	N/A	0.080	0.060	1,080	N/A
Final Strategy Timeline		Notification date: December 31, 2022 Shutdown or install & operate SCR: December 31, 2025					

[a] This scenario reflects the requirements of a 2008 consent decree (CD) between the United States and SRP, which include new wet flue gas desulfurization (FGD) and Low NO_X burners (LNB) with over fire air (OFA) on both units, and SCR on Unit 2. *See* United States v. Salt River Project Agricultural Improvement and Power District, Civil Action No. 2:08-cv-1479- JAT (D. Ariz.)(August 12, 2008).
[b] 2016 EPA BART Reconsideration for NO_x and 2010 ADEQ BART for SO_2.
[c] *See* Addendum, Page 3, Table 1.

ADEQ incorporated the revised emission limits, as well as associated compliance deadlines and monitoring, recordkeeping, and reporting requirements, as a permit revision to Coronado's existing Operating Permit, which was submitted as part of the Coronado SIP Revision ("Coronado Permit Revision").[19]

[18] As indicated in Table 1, the first curtailment and last curtailment periods would be shorter than the periods in between. Under all three interim strategies, the first curtailment period would begin December 5, 2017. Under all three interim strategies, the last curtailment period would end December 31, 2025.

[19] Coronado SIP Revision, Appendix B, Permit No. 64169 as amended by Significant Revision to operating permit

The Coronado SIP Revision also includes ADEQ's determination that the Coronado BART Alternative is "better than BART," based on a demonstration that it fulfills the requirements of 40 CFR 51.308(e)(2) for a BART alternative. More information regarding ADEQ's analysis is set forth below, along with the EPA's evaluation of the analysis.

B. The EPA's Evaluation of the Coronado BART Alternative.

The Regional Haze Rule requires that a SIP revision establishing a BART alternative include three elements, which are listed below. We have evaluated the Coronado BART Alternative with respect to each of the following elements:

- A demonstration that the emissions trading program or other alternative measure will achieve greater reasonable progress than would have resulted from the installation and operation of BART at all sources subject to BART in the State and covered by the alternative program.[20]
- A requirement that all necessary emissions reductions take place during the period of the first long-term strategy for regional haze.[21]
- A demonstration that the emissions reductions resulting from the alternative measure will be surplus to those reductions resulting from measures adopted to meet requirements of the CAA as of the baseline date of the SIP.[22]

1. Demonstration that the alternative measure will achieve greater reasonable progress.

Pursuant to 40 CFR 51.308(e)(2)(i), ADEQ must demonstrate that the alternative

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No. 63088 (December 14, 2016). The provisions implementing the BART Alternative are incorporated in Attachment E to the permit. Attachment E will become effective under State law on the date of the EPA's final action to approve Attachment E into the Arizona SIP and rescind the provisions of the Arizona Regional Haze FIP that apply to Coronado. *Id.* Attachment E, section I.A.

[20] 40 CFR 51.308(e)(2)(i).

[21] 40 CFR 51.308(e)(2)(iii).

[22] 40 CFR 51.308(e)(2)(iv).

measure will achieve greater reasonable progress than would have resulted from the installation and operation of BART at all sources subject to BART in the State and covered by the alternative program. For a source-specific BART alternative, the critical elements of this demonstration are:

- an analysis of BART and associated emission reductions[23]
- an analysis of projected emissions reductions achievable through the BART alternative[24]
- a determination that the alternative achieves greater reasonable progress than would be achieved through the installation and operation of BART[25]

We summarize ADEQ's submittal with respect to each of these elements and provide our evaluation of the submittal below.

a. Analysis of BART and associated emission reductions

Pursuant to 40 CFR 51.308(e)(2)(i)(C), the SIP must include an analysis of BART and associated emission reductions at Units 1 and 2. As noted above, ADEQ's BART analyses and determinations for Units 1 and 2 were included in the Arizona Regional Haze SIP. We approved ADEQ's BART determinations for PM_{10} and SO_2, but disapproved ADEQ's BART determination for NO_X and conducted our own BART analysis and determination for NO_X BART in the Arizona Regional Haze FIP. We later revised the NO_X emission limits for Units 1 and 2 in the 2016 BART Reconsideration.[26]

In the Coronado SIP Revision, ADEQ compared the BART Alternative both to ADEQ's

[23] 40 CFR 51.308(e)(2)(i)(C).
[24] 40 CFR 51.308(e)(2)(i)(D).
[25] 40 CFR 51.308(e)(2)(i)(E).
[26] 81 FR 21735 (April 13, 2016).

original BART determinations and to the EPA's BART determinations in the 2016 BART Reconsideration. For purposes of our evaluation, we consider BART for Coronado to consist of a combination of (1) ADEQ's BART determinations for PM_{10} and SO_2, which were approved into the applicable SIP, and (2) the EPA's BART determination for NO_X in the 2016 BART Reconsideration (collectively the "Coronado BART Control Strategy"). The emission limits comprising the Coronado BART Control Strategy are summarized in Table 2.

Table 2 - Coronado BART Control Strategy Emission Limits

Unit	Emission Limits (lb/MMBtu, averaged over a 30 boiler-operating-days)		
	NOx	**PM_{10}**	**SO_2**
Unit 1	0.065	0.030	0.080
Unit 2	0.080	0.030	0.080

In the Technical Support Document (TSD) included with the Coronado SIP Revision,[27] ADEQ calculated estimated annual emission reductions achievable with BART by comparing expected annual emissions under the Coronado BART Control Strategy with 2014 emissions ("2014 Baseline").[28] The results of these calculations are summarized in Table 3. As BART for PM_{10} and SO_2 reflected existing controls, no emissions reductions of PM_{10} and SO_2 are expected to result from BART, but significant reductions of NO_X are expected to result from implementation of BART.

Table 3 – Summary Of Emission Reductions Achievable With Coronado BART Control Strategy (tpy)

Operating Strategies	NO_X	SO2	PM_{10}	Total
2014 Baseline Emissions	6,506	2,651	994	10,151
Coronado BART Control Strategy Emissions	2,410	2,651	994	6,055

[27] Coronado SIP Revision (July 19, 2016), Appendix A, "Technical Support Document for Regional Haze State Implementation Plan Revision for the Salt River Project Coronado Generating Station."
[28] *Id.* section 4. As noted above, the 2014 Baseline emissions reflects the requirements of the 2008 CD between the United States and SRP, including new FGD and LNB with OFA on both units, and SCR on Unit 2.

Emission Reductions	4,096	0	0	4,096

We propose to find that ADEQ has met the requirement for an analysis of BART and associated emission reductions achievable at Coronado under 40 CFR 51.308(e)(2)(i)(C). We note that the Regional Haze Rule does not specify what baseline year should be used for calculating emission reductions under 40 CFR 51.308(e)(2)(i)(C).[29] However, because the purpose of calculating emission reductions achievable with BART is to compare these reductions to those achievable through the BART alternative,[30] it is important that a consistent baseline be used for both sets of calculations. In this instance, Arizona used the 2014 Baseline for both purposes, so we find that its approach was reasonable.

b. Analysis of projected emissions reductions achievable through the BART Alternative

In the Coronado SIP Revision TSD, ADEQ calculated emissions reductions achievable under the Interim Strategy by comparing estimated annual emissions under the Interim Strategy with 2014 Baseline emissions. In the Addendum to the Coronado SIP Revision, ADEQ also provided a summary of estimated annual emissions under the Final Strategy compared to 2014 Baseline emissions. The resulting emission reductions are shown in Table 4.

Table 4 – Summary of Emission Reductions Achievable with Coronado BART Alternative[a]

[29] As explained below, the baseline date for regional haze SIPs is 2002 and, pursuant to 40 CFR 51.308(e)(2)(iv), the emissions reductions resulting from the alternative measure must be surplus to those reductions required as of 2002. However, this provision does not determine what baseline should be used for purposes of calculating emission reductions achievable under 40 CFR 51.308(e)(2)(i)(C).

[30] *See*, *e.g.*, 71 FR 60612, 60615 (October 13, 2006)("Today's final rule revises section 51.308(e)(2) to make clear that the emissions reductions that could be achieved through implementation of the BART provisions at section 51.308(e)(1) serve as the benchmark against which States can compare an alternative program.")

Operating Strategies	NO_X	SO_2	PM	Total
Interim Strategy 2 (IS2)[b]				
2014 Baseline Emissions	6,506	2,651	994	10,151
Interim Strategy IS2 Emissions	5,053	2002	858	7913
Emission Reductions	1,453	649	136	2,238
Interim Strategy 3 (IS3)				
2014 Baseline Emissions	6,506	2,651	994	10,151
Interim Strategy IS3 Emissions	5,667	1,526	915	8,108
Emission Reductions	839	1,125	79	2,043
Interim Strategy 4 (IS4)				
2014 Baseline Emissions	6,506	2,651	994	10,151
Interim Strategy IS4 Emissions	5,533	1,831	915	8,279
Emission Reductions	973	820	79	1,872
Final Strategy (SCR Option)[c]				
2014 Baseline Emissions	6,506	2,651	994	10,151
Final Strategy – SCR Option	2,410	1,970	994	5,374
Emission Reductions	4,096	681	0	4,777
Final Strategy (Shutdown Option)[d]				
2014 Baseline Emissions	6,506	2,651	994	10,151
Final Strategy – Shutdown Option	1,366	1,080	512	2,958
Emission Reductions	5,140	1,571	482	7,193

[a] ADEQ assumed all scenarios would have the same average heat input rate and same percentage of the annualized utilization factor without curtailment. For the interim strategies, ADEQ adjusted the utilization factors to reflect the corresponding amount of Unit 1 curtailment required for each option. Since these are adjustments to the annual utilization rate for each year, they account for interim strategies that cross calendar years.
[b] Detailed emission calculations for the 2014 Baseline and Interim Strategy can be found in Tables 2, 3, and 4 of the Coronado Regional Haze SIP TSD (July 19, 2016).
[c] See, Coronado SIP Revision Addendum, Table 2 (November 19, 2016).
[d] *Id.*

We propose to find that ADEQ has met the requirement for an analysis of the projected emissions reductions achievable through the alternative measure under 40 CFR 51.308(e)(2)(i)(D). As explained in the previous section, Arizona appropriately used the 2014 Baseline for calculating emissions reductions achievable with the Coronado BART Strategy and emissions reductions achievable with the Coronado BART Alternative.

c. Determination that the alternative achieves greater reasonable progress than would be achieved through the installation and operation of BART.

Pursuant to 40 CFR 51.308(e)(2)(i)(E), the State must provide a determination under 40

CFR 51.308(e)(3) or otherwise based on the clear weight of evidence that the alternative achieves greater reasonable progress than BART. Two different tests for determining whether the alternative achieves greater reasonable progress than BART are outlined in 40 CFR 51.308(e)(3). If the distribution of emissions is not substantially different than under BART, and the alternative measure results in greater emission reductions, then the alternative measure may be deemed to achieve greater reasonable progress. If the distribution of emissions is significantly different, then the State must conduct dispersion modeling to determine differences in visibility between BART and the trading program for each impacted Class I area for the worst and best 20 percent days. The modeling would demonstrate "greater reasonable progress" if both of the following two criteria are met: (1) visibility does not decline in any Class I area; and (2) there is an overall improvement in visibility, determined by comparing the average differences between BART and the alternative over all affected Class I areas. This modeling test is sometimes referred to as the "two-prong test."

In the Coronado SIP Revision, ADEQ separately analyzed the three options under the Interim Strategy and the Final Strategy under 40 CFR 51.308(e)(3).[31]

i. BART Alternative Interim Strategy

ADEQ determined that the Interim Strategy will not necessarily achieve greater emissions reductions than the BART Control Strategy because, while each option under the Interim Strategy will result in greater reductions in SO_2 and PM_{10} than the BART Control Strategy, each option will also result in higher NO_X emissions. Therefore, ADEQ relied on the

[31] ADEQ also included a "Supplemental Analysis of IMPROVE Monitoring Data" that it considered relevant to the determination of whether the Coronado BART Alternative is better than BART. *See* Coronado SIP Revision (July 19, 2016) pages 9-10. However, because the State made a demonstration under 40 CFR 51.308(e)(3), rather than a "clear weight of evidence" demonstration under 40 CFR 51.308(e)(2)(i)(E), these monitoring data are not directly relevant and we have not considered them in our evaluation of the SIP.

results of air quality modeling (using the Comprehensive Air Quality Model with Extensions ("CAMx") model) performed by SRP's contractor, Ramboll Environ, to demonstrate that the Interim Strategy would result in "greater reasonable progress" under the two-prong test in 40 CFR 51.308(e)(3).[32] CAMx has a scientifically current treatment of chemistry to simulate the transformation of emissions into visibility-impairing particles of species such as ammonium nitrate and ammonium sulfate, and is often employed in large-scale modeling when many sources of pollution and/or long transport distances are involved. Photochemical grid models like CAMx include all emissions sources and have realistic representations of formation, transport, and removal processes of the particulate matter that causes visibility degradation.

The Coronado modeling followed a modeling protocol[33] that was reviewed by the EPA. The starting point for the modeling was modeling done as part of the Western Regional Air Partnership's West-side Jumpstart Air Quality Modeling Study ("WestJump"), which used a 2008 meteorology and emissions base case, and covered the entire western United States.[34] For the Coronado modeling work, Ramboll Environ reduced the modeling domain to an area within 300 kilometers of the facility and carried out a new model performance evaluation. The initial and boundary conditions for this domain were taken from WestJump modeling of sources for the entire western United States. For the two-prong test, an existing projected 2020 emissions database was used to estimate emissions of sources in Arizona (other than Coronado) and New Mexico. The 2020 emissions case is likely to be more representative of air quality conditions when the Coronado BART Control Strategy is implemented than the 2008 database. In the 2020

[32] Coronado SIP Revision (July 19, 2016), pages 6-8.
[33] "Draft Modeling Plan for Conducting Better-than-BART Analysis for the Coronado Generating Station using a Photochemical Grid Model – Revision#1", 06-35855A, Prepared for Salt River Project, Ramboll Environ US Corporation (August 2015).
[34] https://www.wrapair2.org/WestJumpAQMS.aspx .

modeling, the Coronado emissions were set to appropriate levels for the 2014 Baseline, the Coronado BART Control Strategy, and the various Interim Strategy options, as shown in Table 5. Emission factors for Coronado for the modeling are identical to the emissions limits for the Coronado BART Alternative described in Table 1, except that the Interim Strategy in the Coronado SIP revision includes a more stringent SO_2 emission limit of 0.060 lb/MMBtu for IS2 compared to the modeled value of 0.070 lb/MMBtu. In addition, the modeling does not reflect the plant-wide SO_2 emissions cap of 1,970 tpy included in the Coronado SIP revision.

Table 5. Emission Factors for SO_2 and NO_X and Curtailment Periods used to Model the 2014 Baseline, Coronado BART Control Strategy, and Interim Strategy at Coronado.

Control Strategy		Unit 1 (lb/MMBtu)		Unit 2 (lb/MMBtu)		Unit 1 Curtailment Period
		NO_X	SO_2	NOx	SO_2	
2014 Baseline		0.320	0.080	0.080	0.080	N/A
Coronado BART Control Strategy		0.065	0.080	0.080	0.080	N/A
Interim Strategy	**IS2**	0.320	0.070[b]	0.080	0.070[b]	October 21-January 31
	IS3	0.320	0.050	0.080	0.050	November 21-January 20
	IS4	0.310	0.060	0.080	0.060	November 21-January 20

[a] As noted above, this scenario reflects 2008 CD controls, which include new wet FGD and LNB with OFA on both units, and SCR on Unit 2.

[b] Although these emission factors were used for modeling, the final SIP submission adopted a lower SO_2 emission limit for IS2 for both Units 1 and 2 of 0.060 lb/MMBtu.

The CAMx-modeled concentrations for sulfate, nitrate, and other chemical species were tracked for Coronado using the CAMx Particulate Source Apportionment Technology (PSAT) Probing Tool, so that the concentrations and visibility impacts due to Coronado could be separated out from those due to the total of all modeled sources. PSAT provides air quality contributions from the emissions of Coronado in a single step and avoids the extra work needed in the simple subtraction approach, which would require additional modeling runs (with and without Coronado emissions) and a subtraction step to estimate the air quality contributions of Coronado emissions.

Ramboll Environ computed visibility impairment due to Coronado using the Interagency Monitoring of Protected Visual Environments (IMPROVE) equation,[35] following a procedure recommended by the Federal Land Managers.[36] Ramboll Environ then subtracted the deciview (dv)[37] visibility impairment due to natural background concentrations from the deciview impairment due to the sum of Coronado and natural background concentrations. This difference gives the visibility impact or "delta deciviews" solely due to Coronado. Thus, although the CAMx modeled concentrations realistically reflect the interactions of all sources, the Coronado visibility impacts were assessed relative to natural conditions, similar to the procedure followed in BART assessments.[38]

For the first prong of the modeling test, Ramboll Environ computed the difference between the delta deciviews for each Interim Strategy option and the delta deciviews for the 2014 Baseline for each Class I area. Ramboll Environ then averaged these differences over the best 20 percent of days, the worst 20 percent of days, and for the full year. The results are shown in Table 6 and Table 7. Based on these results, ADEQ concluded that that the Interim Strategy will result in improved visibility at all affected Class I areas compared with baseline conditions on the worst and best 20 percent of days and therefore meets the first prong of the modeling test

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[35] IMPROVE refers to a monitoring network and also to the equation used to convert monitored concentrations to visbility impacts. "Revised IMPROVE Algorithm for Estimating Light Extinction from Particle Speciation Data", IMPROVE technical subcommittee for algorithm review, January 2006, http://vista.cira.colostate.edu/Improve/gray-literature/

[36] Federal Land Managers' Air Quality Related Values Work Group (FLAG), Phase I Report—Revised, National Park Service, 2010

[37] The Regional Haze Rule establishes the deciview as the principal metric for measuring visibility. This visibility metric expresses uniform changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility expressed in deciviews is determined by using air quality measured or modeled concentrations to estimate light extinction using the IMPROVE, and then transforming the value of light extinction to deciviews using the logarithm function.

[38] *See* 40 CFR part 51, appendix Y section IV.D.5 ("Calculate the model results for each receptor as the change in deciviews compared against natural visibility conditions.")

in 40 CFR 51.308(e)(3).

Table 6: Prong 1 Test - Delta Deciview Differences of Visibility Conditions between Baseline and Interim Strategy (Baseline - Interim Strategy)

Class I Area	Average Best 20% Days			Average Worst 20% Days			Annual Average		
	IS2	IS3	IS4	IS2	IS3	IS4	IS2	IS3	IS4
Bandalier NM	0.0021	0.0021	0.0020	0.0043	0.0050	0.0043	0.0017	0.0024	0.0019
Bosque	0.0012	0.0016	0.0015	0.0011	0.0015	0.0013	0.0015	0.0023	0.0018
Chiricahua NM	0.0010	0.0014	0.0012	0.0001	0.0004	0.0003	0.0005	0.0009	0.0007
Chiricahua Wild	0.0011	0.0016	0.0014	0.0001	0.0004	0.0003	0.0006	0.0009	0.0007
Galiuro Wild	0.0012	0.0016	0.0013	0.0001	0.0004	0.0003	0.0004	0.0007	0.0006
Gila Wild	0.0040	0.0044	0.0040	0.0002	0.0007	0.0005	0.0023	0.0030	0.0025
Grand Canyon NP	0.00002	0.0001	0.00004	0.0003	0.0006	0.0004	0.0009	0.0012	0.0009
Mazatzal Wild	0.0032	0.0025	0.0028	0.0003	0.0008	0.0006	0.0008	0.0010	0.0008
Mesa Verde NP	0.0003	0.0004	0.0004	0.0015	0.0015	0.0011	0.0018	0.0022	0.0017
Mount Baldy Wild	0.0072	0.0069	0.0070	0.0033	0.0024	0.0017	0.0039	0.0042	0.0035
Petrified Forest NP	0.0021	0.0021	0.0020	0.0027	0.0034	0.0031	0.0078	0.0080	0.0068
Pine Mountain Wild	0.0023	0.0021	0.0023	0.0002	0.0007	0.0004	0.0008	0.0011	0.0009
Saguro NP	0.0004	0.0010	0.0007	0.0002	0.0003	0.0002	0.0004	0.0006	0.0004
San Pedro Parks Wild	0.0023	0.0022	0.0021	0.0040	0.0031	0.0025	0.0024	0.0032	0.0026
Sierra Ancha[a] Wild	-	-	-	-	-	-	0.0015	0.0017	0.0014
Superstition Wild	0.0058	0.0067	0.0060	0.0005	0.0004	0.0003	0.0012	0.0015	0.0013
Sycamore Canyon Wild	0.0003	0.0008	0.0004	0.0006	0.0008	0.0006	0.0007	0.0013	0.0009

[a]The IMPROVE visibility database has missing data for some key dates, so best and worst 20 percent of days could not be estimated for the Sierra Ancha area.

Table 7: Minimum Delta Deciview Differences Among Affected Class I Areas) between Interim Strategy and Baseline at Class I Areas (Baseline – Interim Strategy)[a]

Interim Operating Strategy	Average Best 20% Days		Average Worst 20% Days		Annual Average	
	Absolute (dv)	Relative	Absolute (dv)	Relative	Absolute (dv)	Relative
IS2	0.00002	3.65%	0.0001	7.30%	0.0004	13.75%
IS3	0.00010	11.55%	0.0003	13.67%	0.0006	18.73%
IS4	0.00004	6.06%	0.0002	9.86%	0.0004	15.36%

[a] Coronado SIP Revision (July 19, 2016), Table 2. The selection of the Class I area with the minimum value (least incremental benefit from the Alternative Strategy compared to BART) was based on the absolute deciview levels. The relative difference for that Class I area is shown for informational purposes also.

For the second prong of the modeling test, Ramboll Environ computed the difference between the delta deciviews for each Interim Strategy option and the delta deciviews for the Coronado BART Control Strategy. Ramboll Environ then compared the average differences

between the Coronado BART Control Strategy and the Interim Strategy over all affected Class I areas to ensure that there is an overall improvement in visibility. Based on these modeling results, as shown in Table 8, ADEQ concluded that the Interim Strategy also meets this prong, as these results indicate that the Interim Strategy would result in improved visibility, on average, across all Class I Areas, compared with the Coronado BART Control Strategy on the worst and best 20 percent of days.[39]

Table 8: Prong 2 Test - Delta Deciview Differences of Visibility Conditions between Coronado BART Control Strategy and Interim Strategy (BART-Interim Strategy)[a]

Class I Area	Average Best 20% Days			Average Worst 20% Days			Annual Average		
	IS2	IS3	IS4	IS2	IS3	IS4	IS2	IS3	IS4
Bandalier NM	0.0009	0.0009	0.0008	0.0011	0.0018	0.0011	-0.0001	0.0005	0.0001
Bosque	0.0001	0.0005	0.0003	0.0001	0.0006	0.0004	-0.0003	0.0004	-0.0001
Chiricahua NM	-0.0011	-0.0007	-0.0009	0.0000	0.0002	0.0001	-0.0002	0.0001	-0.0001
Chiricahua Wild	-0.0011	-0.0006	-0.0009	0.0000	0.0003	0.0001	-0.0002	0.0002	-0.0001
Galiuro Wild	0.0003	0.0006	0.0004	-0.0001	0.0002	0.0000	-0.0001	0.0002	0.0000
Gila Wild	0.0009	0.0013	0.0009	-0.0001	0.0003	0.0001	-0.0004	0.0003	-0.0002
Grand Canyon NP	-0.0001	-0.0001	-0.0001	-0.0003	0.0000	-0.0001	0.0003	0.0007	0.0004
Mazatzal Wild	-0.0009	-0.0015	-0.0012	-0.0004	0.0002	-0.0001	-0.0001	0.0001	-0.0001
Mesa Verde NP	0.0001	0.0002	0.0002	0.0008	0.0008	0.0003	0.0011	0.0016	0.0010
Mount Baldy Wild	0.0034	0.0030	0.0032	-0.0003	-0.0012	-0.0018	-0.0012	-0.0008	-0.0016
Petrified Forest NP	0.0015	0.0015	0.0013	-0.0004	0.0004	0.0000	0.0018	0.0020	0.0008
Pine Mountain Wild	-0.0007	-0.0009	-0.0007	0.0000	0.0004	0.0002	0.0001	0.0003	0.0001
Saguro NP	-0.0003	0.0003	0.0000	0.0000	0.0002	0.0001	0.0000	0.0003	0.0001
San Pedro Parks Wild	0.0003	0.0002	0.0002	0.0013	0.0004	-0.0002	-0.0003	0.0005	-0.0001
Sierra Ancha Wild[b]	-	-	-	-	-	-	0.0003	0.0005	0.0002
Superstition Wild	0.0018	0.0027	0.0020	-0.0001	-0.0001	-0.0003	0.0003	0.0006	0.0003
Sycamore Canyon Wild	-0.0013	-0.0008	-0.0012	0.0001	0.0003	0.0001	0.0002	0.0007	0.0004
Average	**0.0002**	**0.0004**	**0.0003**	**0.0001**	**0.0003**	**0.00001**	**0.0001**	**0.0005**	**0.0001**

[a] Coronado SIP Revision TSD Table 18.
[b] The IMPROVE visibility database has missing data for some key dates, so best and worst 20% of days could not be estimated for the Sierra Ancha area.

[39] Although not required under 40 CFR 51.308(e)(3), SRP and ADEQ included annual average modeling results, which also show a greater improvement in visibility on average across all affected Class I areas under the Interim Strategy.

We have reviewed the modeling analysis performed by Ramboll Environ and submitted by ADEQ and find that it supports ADEQ's determination that the Interim Strategy would achieve greater reasonable progress than BART under 40 CFR 51.308(e)(3). In particular, we have evaluated the Coronado modeling to confirm that, even though the numerical differences between the scenarios under the two-prong test are small, the results represent real visibility differences and not just the result of numerical artifacts or "noise" in the model results. As noted above, the modeling used the CAMx PSAT Probing Tool to track concentrations for sulfate, nitrate, and other chemical species in order to separate out visibility impacts due to Coronado from those of other modeled sources. This PSAT-based approach helps to avoids numerical artifacts in the model results, as compared to the simple subtraction approach, and thus provides assurance that the relatively small numerical values in the modeled differences represent real visibility differences.

In response to a request from the EPA, ADEQ submitted an additional analysis performed by Ramboll Environ to demonstrate that the modeled numerical differences represent real visibility improvements and are not just numerical artifacts.[40] This analysis presented spatial plots of the modeled numerical differences in delta deciviews, for days on which Coronado had the highest delta-deciview impacts at Superstition Wilderness and Mount Baldy Wilderness, the Class I areas for which Coronado had the highest delta deciview impacts on the best and worst 20 percent of days, respectively. There were plots for deciviews computed using all pollutant species, with separate plots for sulfate and nitrate individually, the chemical products of SO_2 and

[40] Coronado SIP Revision, Appendix D.5 Responsiveness Summary, Appendix A: Memorandum SRP Submitted to ADEQ Regarding Numerical Noise Issues Associated with CAMx Modeling: "To address the EPA comment regarding whether the CGS Better-than-BART CAMx analysis is influenced by numerical 'noise', Memorandum from Lynsey Parker and Ralph Morris, Ramboll Environ, September 22, 2016

NO_X precursor emissions, respectively. The plots display differences for each grid square of the modeling domain, color-coded by the magnitude of the delta deciview difference. If the differences between the modeled control scenarios were merely numerical artifacts or "noise," they would manifest as random dots of different colors on these plots. Instead, the plots show smoothly changing areas of color, as would be expected in the real atmosphere as conditions vary continuously over the area. In most cases there is a clearly distuiguishable "plume" from Coronado, representing the improvement from the Interim Strategy relative to the Coronado BART Control Strategy at locations where Coronado has an impact.

The only plot that shows numerical noise is for a day when an Interim Strategy option and the Coronado BART Control Strategy had the same emissions. For such days, modeled differences would be expected to be zero, except for the effect of numerical noise. This one plot shows some random variation in color in some locations, and also shows that the range of variation is very small, one millionth (10^{-6}) of a deciview or less, which suggests that the maximum numerical artifact is approximately 10^{-6} dv. The smallest deciview difference seen in the prong 2 test was 0.00001 (10^{-5}) dv,[41] which is ten times as large as the estimated 10^{-6} dv maximum numerical artifact. This analysis provides additional evidence that the two test prong results are not just the result of model "noise," but rather indicate actual visibility improvement under the Interim Strategy compared to the Coronado BART Control Strategy and no degradation relative to Baseline.

We also note that the modeling demonstration was done with a higher emission rate for SO_2 for both Units 1 and 2 for scenario IS2 and without the facility-wide SO_2 emissions cap that

[41] *See* Table 8, average across all Class I areas for average worst 20% days under IS4.

was included in the final SIP revision. When these restrictions on SO_2 emissions are considered, they will result in additional improvements in visibility under the Interim Strategy, as compared with the modeling results.

Finally, we note that 40 CFR 51.308(e)(3) does not specify a minimum delta deciview difference between the modeled scenarios that must be achieved in order for a BART alternative to be deemed to achieve greater reasonable progress than BART. Rather, it allows for a straight numerical test, regardless of the magnitude of the computed differences. Accordingly, given that the modeling results submitted by ADEQ show that the Interim Strategy will result in improved visibility at all affected Class I areas compared with 2014 Baseline Emissions (prong 1) and will result in improved visibility, on average, across all Class I areas, compared with the Coronado BART Control Strategy (prong 2), we propose to find that ADEQ has demonstrated that the Interim Strategy will achieve greater reasonable progress than BART under the two-prong modeling test in 40 CFR 51.308(e)(3).

ii. BART Alternative Final Strategy

With respect to the Final Strategy, ADEQ did not conduct modeling but did provide a summary of expected emissions under the Final Strategy, as compared with the Coronado BART Control Strategy, as shown in Table 9. ADEQ explained that emissions of NO_X and PM_{10} would be equivalent under the SCR Option and the Coronado BART Control Strategy, but emissions of SO_2 would be lower under the Final Strategy than under the Coronado BART Control Strategy. [42] The Shutdown Option would result in greater emission reductions for all three visibility-impairing pollutants (*i.e.*, SO_2, NO_X, and PM) compared with the Coronado BART Control

[42] Addendum to the Coronado SIP Revision, page 5, section 3.1.2.

Strategy.

Table 9 – Estimated Emissions for NO_X, PM, and SO_2 under the Coronado BART Control Strategy and the Final Strategy

Scenario	Unit	SO_2		NO_X		PM	
		Annual Emissions (tpy)	Combined Emissions of Unit 1 and Unit 2 (tpy)	Annual Emissions (tpy)	Combined Emissions of Unit 1 and Unit 2 (tpy)	Annual Emissions (tpy)	Combined Emissions of Unit 1 and Unit 2 (tpy)
Coronado BART Control Strategy	Unit 1	1,285	2,651	1,044	2,410	482	994
	Unit 2	1,366		1,366		512	
Final Strategy - SCR	Unit 1	964	1,970[a]	1,044	2,410	482	994
	Unit 2	1,025		1,366		512	
Final Strategy - Shutdown	Unit 1	0	1,080[a]	0	1,366	0	512
	Unit 2	1,025		1,366		512	

[a] annual emission cap

The emission reductions associated with the Final Strategy will occur after 2018, which, as explained below, is the deadline for achieving all necessary emissions reduction under a BART alternative. Therefore, the Final Strategy by itself clearly would not meet the requirements for a BART alternative. Nevertheless, in order to ensure that the Coronado BART Alternative as a whole will result in greater reasonable progress than BART, we have considered whether the Final Strategy, once it is implemented, will provide for ongoing visibility improvement, as compared with the BART Control Strategy. In particular, we have evaluated whether the Final Strategy meets both criteria of the greater-emissions-reduction test under 40 CFR 51.308(e)(3), *i.e.*, that the distribution of emissions under the alternative measure is not substantially different than under BART and that the alternative measure results in greater emission reductions than BART. Because all emissions under both the Coronado BART Control Strategy and the Final Strategy are from Coronado, it is clear that the distribution of emissions is not substantially different under the two strategies. Furthermore, because both the SCR Option and the Shutdown Option would provide for an aggregate reduction in visibility-impairing

pollutants and no increases in any single pollutant, as compared with the Coronado BART Control Strategy, we conclude that the Final Strategy will result in greater emission reductions than the Coronado BART Control Strategy. Therefore, we propose to find that implementation of the Final Strategy will ensure that the Coronado BART Alternative will continue to achieve greater reasonable progress than the BART Control Strategy after 2025.

In summary, we propose to find that ADEQ has demonstrated that the Interim Strategy will achieve greater reasonable progress than the Coronado BART Control Strategy through 2025 and that the Final Strategy will ensure greater reasonable progress after 2025. Therefore, we propose to find that ADEQ properly determined under 40 CFR 51.308(e)(2)(i)(E) that the Coronado BART Alternative will achieve greater reasonable progress than would be achieved through the installation and operation of BART at Coronado.

2. Requirement that all necessary emission reductions take place during period of first long-term strategy.

Pursuant to 40 CFR 51.308(e)(2)(iii), the State must ensure that all necessary emission reductions take place during the period of the first long-term strategy for regional haze, *i.e.*, by December 31, 2018. The Regional Haze Rule further provides that, to meet this requirement, the State must provide a detailed description of the alternative measure, including schedules for implementation, the emission reductions required by the program, all necessary administrative and technical procedures for implementing the program, rules for accounting and monitoring emissions, and procedures for enforcement.[43]

As noted above, the Coronado SIP Revision incorporates the Coronado Permit Revision,

[43] 40 CFR 51.308(e)(2)(iii).

which includes conditions implementing both the Interim and Final Strategies. In addition to the emission limitations for NO_X, PM_{10}, and SO_2 listed in Table 1 above, the Coronado Permit Revision includes compliance dates, operation and maintenance requirements, and monitoring, recordkeeping, and reporting requirements.

The compliance date for the Interim Strategy in the Coronado Permit Revision is December 5, 2017. Accordingly, the Coronado SIP Revision ensures that all emission reductions associated with the Interim Strategy will occur by December 31, 2018 and, as explained before, those emissions reductions by themselves are sufficient to ensure greater reasonable progress under the two-prong modeling test under 40 CFR 51.308(e)(3). While the compliance dates for the Final Strategy in the Coronado Permit Revision are later than December 31, 2018, the Final Strategy and its associated emission reductions are not necessary to demonstrate that the Coronado BART Alternative will achieve greater reasonable progress than BART during the period of the first long-term strategy. Rather, as stated before, the Final Strategy and its associated emissions reductions will ensure that the Coronado BART Alternative will continue to achieve greater reasonable progress than the BART Control Strategy after 2025.Therefore, we propose to find that the Coronado SIP Revision will ensure that all necessary emission reductions take place during the period of the first long-term strategy and therefore meets the requirements of 40 CFR 51.308(e)(2)(iii).

3. Demonstration that emissions reductions from alternative measure will be surplus.

Pursuant to 40 CFR 51.308(e)(2)(iv), the SIP must demonstrate that the emissions reductions resulting from the alternative measure will be surplus to those reductions resulting from measures adopted to meet requirements of the CAA as of the baseline date of the SIP. The

baseline date for regional haze SIPs is 2002.[44] As noted by ADEQ, all of the emission reductions required by the Coronado BART Alternative are surplus to reductions resulting from measures applicable to Coronado as of 2002.[45] Therefore, we propose to find that the Coronado BART Alternative complies with 40 CFR 51.308(e)(2)(iv).

In sum, we propose to find that the Coronado BART Alternative meets all of the applicable requirements of 40 CFR 51.308(e)(2).

C. The EPA's Evaluation of Other Applicable Requirements

1. Enforceable Emission Limits

CAA section 110(a)(2)(A) requires SIPs to include enforceable emissions limitations as necessary or appropriate to meet the applicable requirements of the CAA. In order to be considered enforceable, emission limits must include associated monitoring, recordkeeping, and reporting requirements. In addition, the CAA and the EPA's implementing regulations expressly require SIPs to include regulatory requirements related to monitoring, recordkeeping, and reporting for applicable emissions limitations.[46] We have reviewed the Coronado Permit Revision and found that it includes the appropriate NO_X, SO_2, and PM_{10} emission limits for the BART Alternative, as well as the associated monitoring, recordkeeping, and reporting requirements.[47] Therefore, we propose to find that the Coronado SIP Revision meets the requirements of the CAA and the EPA's implementing regulations for enforceable emission

[44] See Memorandum from Lydia Wegman and Peter Tsirigotis, 2002 Base Year Emission Inventory SIP Planning: 8-hr Ozone, PM2.5, and Regional Haze Programs, November 8, 2002. https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20021118_wegman_2002_base_year_emission_sip_planning.pdf
[45] *Id.*, page 9, section 2.3.5.
[46] *See, e.g.*, CAA section 110(a)(2)(F) and 40 CFR 51.212(c).
[47] The spreadsheet titled "FIP Requirement comparison.xlsx" in the docket for this action compares the requirements for Coronado in the Arizona Regional Haze FIP and the parallel requirements in the Coronado Permit Revision.

limitations.

2. Non-interference with Applicable Requirements

The CAA requires that any revision to an implementation plan shall not be approved by the Administrator if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (RFP) or any other applicable requirement of the CAA.[48] The EPA has promulgated health-based standards, known as the national ambient air quality standards (NAAQS), for six common pollutants: PM, ozone, carbon monoxide (CO), SO_2, nitrogen dioxide (NO_2), and lead (Pb). Using a process that considers air quality data and other factors, the EPA designates an area as "nonattainment" if the area does not meet the NAAQS or contributes to violations of a NAAQS in a nearby area. RFP, as defined in section 171 of the CAA, is related to attainment of the NAAQS and means annual incremental reductions in emissions of the relevant air pollutant(s) for the purpose of ensuring timely attainment of the applicable NAAQS.

The Coronado SIP Revision includes a demonstration of "non-interference" under CAA section 110(l).[49] In particular, ADEQ considered whether the Coronado SIP Revision would interfere with any applicable requirement concerning attainment or RFP, or any other applicable requirement of the CAA. A summary of ADEQ's analysis and our evaluation of that analysis follows.

a. Demonstration of Non-interference with NAAQS Attainment and RFP Requirements

ADEQ noted that Coronado is located near St. Johns, Arizona in Apache County, which is designated as "in attainment," "unclassifiable/attainment," or "unclassifiable" for the

[48] CAA Section 110(l), 42 U.S.C. 7410(l).
[49] Coronado SIP Revision (July 19, 2016) pages 10-15 and Addendum pages 6-7.

following NAAQS: CO, Pb, NO_2, ozone (2008 NAAQS), $PM_{2.5}$ (1997, 2006, and 2012 NAAQS), PM_{10}, and SO_2 (1971 NAAQS). ADEQ also noted that it has recommended an attainment/unclassifiable designation for this area for the 2010 SO_2 NAAQS, but the area has not yet been designated. The state has also recommended an attainment/unclassifiable designation as part of the ongoing designations process for the 2015 ozone NAAQS, but the area does not have a final designation.[50] ADEQ's demonstration of non-interference with attainment focused on the NAAQS for $PM_{2.5}$, PM_{10}, SO_2, NO_2, and ozone because ambient levels of these pollutants are affected by emissions of PM_{10}, SO_2, and/or NO_X, which are the pollutants of concern from Coronado.

With repect to the $PM_{2.5}$ and PM_{10} NAAQS, ADEQ noted that the curtailment periods under the Interim Strategy would result in additional $PM_{2.5}$ and PM_{10} reductions beyond those currently required in the Arizona Regional Haze SIP. With respect to the Final Strategy, ADEQ explained that, while the Shutdown Option would significantly reduce facility-wide PM emissions compared to the Coronado BART Control Strategy, the SCR Option would result in increases in emissions of sulfuric acid mist (H_2SO_4) and thus emissions of PM_{10} and primary $PM_{2.5}$ once the SCR is installed. Nonetheless, citing the TSD for the Coronado Permit Revision, ADEQ explained that "the dispersion modeling analysis indicates that these emissions increases will comply with the NAAQS for PM_{10} and $PM_{2.5}$" and that "both options would achieve significant emission reductions of SO_2 and NO_X …, which is an effective strategy for reducing secondary $PM_{2.5}$ formation." Given that no nonattainment or maintenance SIPs rely on emission

[50] Coronado SIP Revision (July 19, 2016), Table 5, page 12. ADEQ has also recommended that Apache County be designated as attainment/unclassifiable for the 2015 ozone NAAQS. *See* Letter from Douglas Ducey, Arizona, to Alexis Strauss, EPA (September 27, 2016).

reductions at Coronado to ensure continued attainment of the PM_{10} and $PM_{2.5}$ NAAQS, ADEQ concluded that the Coronado BART Alternative will not result in any interference with attainment or maintenance of the PM_{10} and $PM_{2.5}$ NAAQS or with RFP requirements for these NAAQS.

We concur with ADEQ's demonstration of non-interference with the PM_{10} and $PM_{2.5}$ NAAQS attainment, maintenance, and RFP requirements. The area where Coronado is located is designated unclassifiable/attainment or unclassifiable for each of the PM_{10} and $PM_{2.5}$ NAAQS, so there are no nonattainment or maintenance SIPs or FIPs that rely on emission reductions at Coronado to ensure attainment of the PM_{10} and $PM_{2.5}$ NAAQS. Under the Interim Strategy and the Shutdown Option of the Final Strategy, the Coronado BART Alternative will result in greater reductions of PM_{10} and $PM_{2.5}$ than would otherwise be required under the applicable implementation plan for Arizona (including both the PM_{10} emission limits for Coronado in the approved Arizona Regional Haze SIP and the associated monitoring, recordkeeping and reporting requirements in the Arizona Regional Haze FIP). While the SCR Option under the Final Strategy would allow for a small increase (compared to existing SIP and FIP requirements) in emissions of PM_{10} and primary $PM_{2.5}$ when the SCR is installed, we find that ADEQ has demonstrated that these increases will not result in any interference with attainment or maintenance of the PM_{10} and $PM_{2.5}$ NAAQS or with RFP requirements for these NAAQS.

With respect to the SO_2 NAAQS, ADEQ determined that all options under the Interim Strategy and the Final Strategy would result in SO_2 emissions that are equal to or lower than allowed under the Arizona Regional Haze SIP. Given that no nonattainment or maintenance SIPs rely on emission reductions at Coronado to ensure continued attainment of the SO_2 NAAQS, ADEQ concluded that the Coronado BART Alternative will not result in any interference with

attainment or maintenance of the SO_2 NAAQS or with RFP requirements.

We concur with ADEQ's demonstration of non-interference with the SO_2 NAAQS attainment, maintenance, and RFP requirements. The area where Coronado is located has not yet been designated under the 2010 SO_2 NAAQS, so there are no nonattainment or maintenance SIPs or FIPs that rely on emission reductions at Coronado to ensure attainment of the SO_2 NAAQS. Furthermore, during both the Interim Strategy and the Final Strategy, implementation of the Coronado BART Alternative will result in greater SO_2 reductions than would otherwise be required under the applicable implementation plan for Arizona (including both the SO_2 emission limits for Coronado in the approved Arizona Regional Haze SIP and the associated monitoring, recordkeeping and reporting requirements in the Arizona Regional Haze FIP). Therefore, it is clear that the implementation of the Coronado BART Alternative will not result in any interference with attainment or maintenance of the SO_2 NAAQS or with RFP requirements for the SO_2 NAAQS.

With respect to the NO_2 and ozone NAAQS, ADEQ noted that both the Interim Strategy and the Final Strategy would require additional NO_X reductions beyond those required in the Arizona Regional Haze SIP, but that the Interim Strategy would require fewer NO_X reductions than the Arizona Regional Haze FIP. Nonetheless, ADEQ explained that Apache County does not rely on the Arizona Regional Haze FIP to ensure continued attainment of the NO_2 and ozone NAAQS or to meet any RFP requirements and that facility-wide emissions of NO_X at Coronado will continue to be reduced under the Coronado BART Alternative compared to current levels. Therefore, ADEQ concluded that the BART Alternative will not result in any interference with attainment or maintenance of the NO_2 or ozone NAAQS or with RFP requirements for these NAAQS.

We concur with ADEQ's demonstration of non-interference with the NO_2 and ozone NAAQS attainment, maintenance, and RFP requirements. Coronado is located in an area that is designated unclassifiable/attainment for the NO_2 NAAQS and the 2008 ozone NAAQS and has not yet been designated for the 2015 ozone NAAQS, so there are no nonattainment or maintenance SIPs or FIPs that rely on emission limitations at Coronado to satisfy any attainment or RFP requirements for ozone or NO_2. Acordingly, while the Coronado SIP Revision requires fewer NO_X reductions than the Arizona Regional Haze FIP between December 5, 2017 and December 31, 2025, these additional reductions are not necessary for purposes of attainment and maintenance of the NAAQS or for RFP.

In summary, because the Coronado SIP Revision will require equivalent or lower emissions of NO_X, PM and SO_2 for all future years, compared to the emission levels currently allowed under the applicable implementation plan (including both the Arizona Regional Haze SIP and the Arizona Regional Haze FIP), in an area that is designated in attainment, unclassifiable/attainment, or unclassifiable, or has not yet been designated for all NAAQS, we propose to find that the Coronado SIP Revision would not interfere with any applicable requirements concerning attainment or RFP.

b. Demonstration of Non-interference with Other CAA Requirements

ADEQ explained that the following "other applicable requirements" are potentially relevant to the Coronado SIP Revision:

- Regional Haze under sections 169A and 169B of the CAA
- Prevention of Significant Deterioration (PSD)
- Maximum Achievable Control Technology (MACT) for Air Toxics
- New Source Performance Standards (NSPS)

With respect to PSD, ADEQ referred to the TSD for the Coronado Permit Revision,[51] which provides ADEQ's best available control technology determination for H_2SO_4, PM_{10}, and $PM_{2.5}$, as well as NAAQS and PSD increment modeling for PM_{10} and $PM_{2.5}$. We concur with ADEQ that the documentation for the Coronado Permit Revision establishes that the Coronado SIP Revision would not interefere with the PSD requirements of the CAA. Furthermore, implementation of the Coronado BART Alternative would not affect compliance with the applicable MACT or NSPS requirements. Therefore, we propose to find that the Coronado SIP Revision would not interfere with these requirements.

With respect to Regional Haze requirements, ADEQ noted that during implementation of both the Interim Strategy and the Final Strategy, the Coronado BART Alternative will result in greater reasonable progress towards natural visibility conditions than the Coronado BART Control Strategy. For the reasons explained above, we agree that ADEQ has demonstrated that the Coronado BART Alternative would result in greater reasonable progress than the Coronado BART Control Strategy. Therefore, we propose to find that the Coronado SIP Revision would not interfere with the visibility protection requirements of the CAA.

Finally, although not expressly addressed by the State in its submittal, we have considered whether the curtailment requirements under the Interim Strategy in the Coronado SIP Revision would interefere with the requirements of CAA section 123 concerning dispersion techniques. Section 123 provides that the degree of emission limitation required by a SIP may not be affected by "any other dispersion technique," which is defined to include "intermittent or supplemental control of air pollutants varying with atmospheric conditions."[52] The EPA's

[51] Coronado Permit Revision, Appendix C.
[52] 42 U.S.C. 7423(a) and (b).

implementing regulations for CAA section 123 define "intermittent control system" as "a dispersion technique which varies the rate at which pollutants are emitted to the atmosphere according to meteorological conditions and/or ambient concentrations of the pollutant, in order to prevent ground-level concentrations in excess of applicable ambient air quality standards."[53] The curtailment periods in the Interim Strategy do not allow for varied emission rates according to meteorological conditions and/or ambient concentrations of the pollutant. Rather, the curtailment period for each year is selected based on recent and expected emission control performance, regardless of meteorological conditions and ambient pollutant concentrations. In addition, the curtailment periods are not intended to prevent violations of ambient air quality standards. Therefore, we propose to find the curtailment requirements comply with CAA Section 123.

In summary, we propose to find that that the Coronado SIP Revision would not interfere with any applicable requirements of the CAA.

IV. The EPA's Proposed Action

For the reasons described above, the EPA proposes to approve the Coronado SIP Revision into the Arizona SIP. Because this approval would fill the gap in the Arizona Regional Haze SIP left by the EPA's prior partial disapproval with respect to Coronado, we also propose to withdraw the provisions of the Arizona Regional Haze FIP that apply to Coronado. Finally, we are proposing revisions to 40 CFR part 52 to codify the removal of those portions of the Arizona Regional Haze SIP that have either been superseded by previously approved revisions to the Arizona SIP or would be superseded by final approval of the Coronado SIP Revision.

[53] 40 CFR 51.100(nn).

V. Environmental Justice Considerations

As explained above, the Coronado SIP Revision will result in reduced emissions of both SO_2 and PM_{10} compared to the existing Arizona Regional Haze SIP and FIP requirements. While the Coronado SIP Revision will result in fewer NO_X reductions than the Arizona Regional Haze FIP would have required between 2018 and 2025, it will ensure that NO_X emissions remain at or below current levels until 2025, after which it will require NO_X emissions reductions equivalent to or greater than would have been required under the Arizona Regional Haze FIP. Furthermore, Coronado is located in area that is designated attainment, unclassifiable/attainment, or unclassifiable, or has not yet been designated for each of the current NAAQS. Therefore, the EPA believes that this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations.

VI. Incorporation by Reference

In this rule, the EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is proposing to incorporate by reference the state permit provisions described in the proposed amendments to 40 CFR part 52 set forth below. The EPA has made, and will continue to make, this document available electronically through www.regulations.gov and in hard copy at U.S. Environmental Protection Agency, Region IX, AIR-2, 75 Hawthorne Street, San Francisco, CA, 94105-3901.

VII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at http://www2.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. This rule applies to only a single facility and is therefore not a rule of general applicability.

B. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA. This rule applies to only a single facility. Therefore, its recordkeeping and reporting provisions do not constitute a "collection of information" as defined under 44 U.S.C. 3502(3) and 5 CFR 1320.3(c).

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. Firms primarily engaged in the generation, transmission, and/or distribution of electric energy for sale are small if, including affiliates, the total electric output for the preceding fiscal year did not exceed 4 million megawatt hours. The owner of facility affected by this rule, SRP, exceeds this threshold.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments.

E. Executive Order 13132: Federalism

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

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

This action does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on any Indian tribes, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes. 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 regulatory actions that concern 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. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk.

H. Executive Order 13211: Actions Concerning Regulations 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

This rulemaking does not involve technical standards. The EPA is not revising any technical standards or imposing any new technical standards in this action.

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

The EPA believes that this action does not have disproportionately high and adverse

human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). The documentation for this decision is contained in section V above.

K. Determination Under Section 307(d)

Pursuant to CAA section 307(d)(1)(B), the EPA proposes to determine that this action is subject to the provisions of section 307(d). Section 307(d) establishes procedural requirements specific to certain rulemaking actions under the CAA. Pursuant to CAA section 307(d)(1)(B), the withdrawal of the provisions of the Arizona Regional Haze FIP that apply to Coronado is subject to the requirements of CAA section 307(d), as it constitutes a revision to a FIP under CAA section 110(c). Furthermore, CAA section 307(d)(1)(V) provides that the provisions of section 307(d) apply to "such other actions as the Administrator may determine." The EPA proposes that the provisions of 307(d) apply to the EPA's action on the Coronado SIP revision.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide, Visibility.

AUTHORITY: 42 U.S.C. 7401 et seq.

Dated: April 20, 2017.

Alexis Strauss,
Acting Regional Administrator,
EPA Region IX.

For the reasons set forth in the preamble, the EPA proposes to amend 40 CFR part 52 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. Section 52.120 is amended by:

a. Adding in paragraph (d), under the table heading "EPA-Approved Source-Specific Requirements" an entry for "Coronado Generating Station" after the entry for "Cholla Power Plant;"

b. Adding in paragraph (e), under the table heading "Table 1–EPA-Approved Non-Regulatory and Quasi-Regulatory Measures" an entry for "Arizona State Implementation Plan Revision to the Arizona Regional Haze Plan for the Salt River Project Coronado Generating Station, excluding Appendix B" after the entry for "Arizona State Implementation Plan Revision to the Arizona Regional Haze Plan for Arizona Public Service Cholla Generating Station".

The additions read as follows:

§52.120 Identification of plan.

* * * * *

(d) * * *

EPA-Approved Source Specific Requirements

Name of source	Order/permit No.	Effective date	EPA approval date	Explanation
Arizona Department of Environmental Quality				
*******				
Coronado Generating	Permit #64169 (as amended by	December 14,	[**INSERT DATE OF**	Permit issued by Arizona

Station	Significant Revision #63088) Cover Page and Attachment "E": BART Alternatives	2016	**PUBLICATION OF FINAL RULE], [INSERT FEDERAL REGISTER CITATION OF FINAL RULE**]	Department of Environmental Quality. Submitted on December 15, 2016.
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* * * * *

(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)				
*******				
Arizona State Implementation Plan Revision to the Arizona Regional Haze Plan for the Salt River Project Coronado Generating Station, excluding Appendix B	Source-Specific	December 15, 2016	[**INSERT DATE OF PUBLICATION OF FINAL RULE], [INSERT FEDERAL REGISTER CITATION OF FINAL RULE**]	BART Alternative for Coronado Generating Station adopted December 14, 2016.
*******				

[1] Table 1 is divided into three parts: Clean Air Act Section 110(a)(2) State Implementation Plan Elements (excluding Part D Elements and Plans), Part D Elements and Plans (other than for the Metropolitan Phoenix or Tucson Areas), and Part D Elements and Plans for the Metropolitan Phoenix and Tucson Areas.

* * * * *

3. Section 52.145 is amended by:

a. Removing and reserving paragraph (e)(1).

b. Removing paragraphs (e)(2)(iii) through (vi).

c. Removing and reserving paragraph (f).

[FR Doc. 2017-08543 Filed: 4/26/2017 8:45 am; Publication Date: 4/27/2017]