



**6560-50-P**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R09-OAR-2015-0165; FRL-9944-68-Region 9]**

**Promulgation of Air Quality Implementation Plans; Arizona; Regional Haze Federal Implementation Plan; Reconsideration**

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

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is revising portions of the Arizona Regional Haze Federal Implementation Plan (FIP) applicable to the Coronado Generating Station (Coronado) and the Cholla Power Plant (Cholla). In response to a petition for reconsideration from the Salt River Project Agricultural Improvement and Power District (SRP), the owner and operator of Coronado, we are replacing a plant-wide compliance method with a unit-specific compliance method for determining compliance with the best available retrofit technology (BART) emission limits for nitrogen oxides (NO<sub>x</sub>) from Units 1 and 2 at Coronado. While the plant-wide limit for NO<sub>x</sub> emissions from Units 1 and 2 was established as 0.065 lb/MMBtu, we are now setting a unit-specific limit of 0.065 lb/MMBtu for Unit 1 and 0.080 lb/MMBtu for Unit 2. In addition, we are revising the work practice standard in the FIP for Coronado. Finally, we are removing the affirmative defense for malfunctions, which applied to both Coronado and

Cholla.

**DATES:** *Effective date:* This rule will be effective [**Insert date 30 days after the date of publication in the Federal Register**].

**ADDRESSES:** The EPA has established a docket for this action under Docket ID No. EPA–R09–OAR–2015-0165. All documents in the docket are listed on the <http://www.regulations.gov> web site. 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 electronically through <http://www.regulations.gov>.

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

Table of Contents

I. Definitions

II. Background

III. Proposed Action

IV. Public Comments and EPA Responses

V. Final Action

VI. Environmental Justice Considerations

## VII. Statutory and Executive Order Reviews

### I. 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 initials *AMPD* mean or refer to Air Markets Program Data.
- The words *Arizona* and *State* mean the State of Arizona.
- The initials *CAM* mean or refer to Compliance Assurance Monitoring.
- The word *Cholla* refers to the Cholla Power Plant.
- 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 initials *CAA* mean or refer to the Clean Air Act.
- The initials *CBI* mean or refer to Confidential Business Information.
- The initials *EGU* mean or refer to Electric Generating Unit.
- 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-NO<sub>x</sub> burners.
- The initials *MMBtu* mean or refer to million British thermal units.
- The initials *MOT* mean or refer to minimum operating temperature.

- The initials *MW* mean or refer to megawatts.
- The initials *NAAQS* mean or refer to National Ambient Air Quality Standards.
- The initials *NESHAP* mean or refer to National Emission Standards for Hazardous Air Pollutants.
- The initials *NSPS* mean or refer to Standards of Performance for New Stationary Sources.
- The initials *NO<sub>x</sub>* mean or refer to nitrogen oxides.
- The initials *OFA* mean or refer to over fire air.
- The initials *RHR* mean or refer to the EPA’s Regional Haze Rule.
- The initials *RMB* mean or refer to RMB Consulting and Research.
- The initials *S&L* mean or refer to Sargent & Lundy.
- The initials *SCR* mean or refer to Selective Catalytic Reduction.
- The initials *SIP* mean or refer to State Implementation Plan.
- The initials *SRP* mean or refer to the Salt River Project Agricultural Improvement and Power District.
- The initials *SSM* mean or refer to startup, shutdown, and malfunction.
- The initials *UPL* mean or refer to Upper Prediction Limit.

## **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 Clean Air Act (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.”<sup>1</sup> 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 State Implementation Plans (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 best available retrofit technology (BART) controls. These sources are referred to as “BART-eligible” sources.<sup>2</sup> 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.<sup>3</sup> We promulgated the Regional Haze Rule (RHR) in 1999, which requires states to develop and implement SIPs to ensure reasonable progress toward improving visibility in mandatory Class I Federal areas<sup>4</sup> by reducing emissions that cause or contribute to regional haze.<sup>5</sup> Under the RHR, states are directed to conduct BART determinations for BART-eligible sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area.<sup>6</sup>

### *B. History of BART Determination for Coronado Generating Station*

The Arizona Department of Environmental Quality (ADEQ) submitted a Regional Haze SIP (“Arizona Regional Haze SIP”) under Section 308 of the RHR to EPA Region 9 on February

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<sup>1</sup> 42 U.S.C. 7491(a)(1).

<sup>2</sup> 40 CFR 51.301.

<sup>3</sup> See CAA section 169B, 42 U.S.C. 7492.

<sup>4</sup> 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). When we use the term “Class I area” in this action, we mean a “mandatory Class I Federal area.”

<sup>5</sup> See generally 40 CFR 51.308.

<sup>6</sup> 40 CFR 51.308(e).

28, 2011. The Arizona Regional Haze SIP included BART determinations for NO<sub>x</sub>, particulate matter (PM), and sulfur dioxide (SO<sub>2</sub>) for Units 1 and 2 at Coronado. We proposed on July 20, 2012, to approve ADEQ's BART determinations for PM and SO<sub>2</sub>, but to disapprove its determination for NO<sub>x</sub> at Coronado.<sup>7</sup> In the same notice, we also proposed a FIP that included a NO<sub>x</sub> BART emission limit of 0.050 lb/MMBtu for Unit 1 and 0.080 lb/MMBtu for Unit 2 based on a 30-boiler-operating-day (BOD) rolling average.<sup>8</sup> These limits correspond to the use of Selective Catalytic Reduction (SCR) and low-NO<sub>x</sub> burners (LNB) with over fire air (OFA) to reduce NO<sub>x</sub> emissions. We noted that a consent decree between SRP and the EPA required the installation of SCR and compliance with a NO<sub>x</sub> emission limit of 0.080 lb/MMBtu (30-BOD rolling average) at Coronado Unit 2 by June 1, 2014. In its comments on our proposal, SRP asserted that a NO<sub>x</sub> emission rate of 0.050 lb/MMBtu was not achievable at either of the Coronado units, due to their startup/shutdown operating profile. In support of this assertion, SRP submitted reports by two consultants, Sargent & Lundy (S&L) and RMB Consulting and Research (RMB), which indicated that the Coronado units could achieve a 30-BOD rolling average emission rate in the range of 0.053 to 0.072 lb/MMBtu per unit.<sup>9</sup> The S&L report also examined potential measures to improve the performance of the current SCR design for Unit 2, including installation of a "low load temperature control system," (i.e., steam reheat) which would allow the SCR system to operate during periods of low load.

In the final Arizona Regional Haze FIP, we set a plant-wide NO<sub>x</sub> emission limit for Coronado of 0.065 lb/MMBtu on a 30-BOD rolling average, which SRP could meet by installing

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<sup>7</sup> 77 FR 42834.

<sup>8</sup> Boiler-operating day is defined as "a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit." 40 CFR 52.145(f)(2).

<sup>9</sup> 77 FR 72555.

a low-load temperature control system on Unit 2 and an SCR system including a low-load temperature control system on Unit 1.<sup>10</sup> We structured the compliance determination method for this limit such that, when one of the two units was not operating, its emissions from the preceding 30 boiler operating days would continue to be included in the two-unit average. Please refer to our final rule published on December 5, 2012, for further information on the BART determinations and compliance methodology.

In addition, we included in the FIP two additional requirements that apply 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.<sup>11</sup> Second, we incorporated by reference into the FIP certain provisions of the Arizona Administrative Code (AAC) that establish an affirmative defense for excess emissions due to malfunctions.

### *C. Petition for Reconsideration and Stay*

We received a petition from SRP on February 4, 2013, requesting partial reconsideration and administrative stay of our final rule under section 307(d)(7)(B) of the CAA and section 705 of the Administrative Procedure Act.<sup>12</sup> EPA Region 9 sent a letter on April 9, 2013, to representatives of SRP informing the company that we were granting partial reconsideration of the final rule for the Arizona Regional Haze FIP.<sup>13</sup> In particular, we stated that we were granting reconsideration of the compliance method for NO<sub>x</sub> emissions from Units 1 and 2 at Coronado

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<sup>10</sup> *Id.*

<sup>11</sup> *Id.* (codified at 40 CFR 52.145(f)(10)).

<sup>12</sup> 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).

<sup>13</sup> Letters from Jared Blumenfeld, EPA, to Norman W. Fichthorn and Aaron Flynn, Hunton and Williams (April 9, 2013).

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<sub>x</sub> emission limits for the two units, we would seek comment on the appropriate emission limit for each of the units.

### **III. Proposed Action**

On March 31, 2015, the EPA proposed action on reconsideration of the compliance method and NO<sub>x</sub> emissions limits for Coronado in the Arizona Regional Haze FIP.<sup>14</sup> In particular, we proposed a unit-specific compliance method and separate numerical emission limits for NO<sub>x</sub> at Coronado Units 1 and 2. We also proposed to revise the work practice requirement that applies to Coronado and to remove the affirmative defense for malfunctions that is currently included in the FIP for Coronado and Cholla.<sup>15</sup> Finally, we proposed to determine that these revisions to the FIP would comply with CAA section 110(l).

#### *A. Proposed Compliance Method for Unit-Specific Emission Limits*

We proposed to set a separate rolling 30-BOD lb/MMBtu limit for each of the two Coronado Units, based on the following compliance method:

The 30-day rolling average NO<sub>x</sub> emission rate for each unit shall be calculated in accordance with the following procedure: First, sum the total pounds of NO<sub>x</sub> emitted from the unit during the current boiler operating day and the previous twenty-nine (29) boiler-operating days; second, sum the total heat input to the unit in MMBtu during the current boiler operating day and the previous twenty-nine (29) boiler-operating days; and third, divide the total number of pounds of NO<sub>x</sub> emitted during the thirty (30) boiler-operating days by the total heat input during the thirty (30) boiler-operating days. A new 30-day rolling average NO<sub>x</sub> emission rate shall be calculated for each new boiler operating day. Each 30-day rolling

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<sup>14</sup> 80 FR 17010 (March 31, 2015).

<sup>15</sup> The Cholla Power Plant (also known as the Cholla Generating Station) is operated by the by Arizona Public Service Company (APS). APS owns Cholla Units 1 -3, while PacifiCorp owns Unit 4.

average NO<sub>x</sub> emission rate shall include all emissions that occur during all periods within any boiler operating day, including emissions from startup, shutdown, and malfunction.

We proposed that this method would replace the plant-wide method promulgated in the final rule at 40 CFR 52.145(f)(5)(B)(ii), but that all other compliance-related requirements, including the monitoring, recordkeeping, and reporting requirements, would remain as promulgated.

## *B. Proposed Emission Limits for Coronado Units 1 and 2*

### *1. Proposed Emission Limit for Coronado Unit 1*

In developing a proposed emission limit for Unit 1, we considered information and analyses provided by SRP, including two reports prepared by S&L and RMB concerning the achievability of various NO<sub>x</sub> emission limits at Coronado Unit 1, as well as emission data for Unit 1 as reported to the Air Markets Program Data (AMPD) system.<sup>16</sup> The 2013 S&L Report presented modeling results intended to predict NO<sub>x</sub> emissions from Unit 1 under various operating scenarios.<sup>17</sup> The 2013 RMB Report applied an "upper prediction limit" (UPL) technique to the results of the S&L report in order to account for "the impact of measurement uncertainty and other process variation."<sup>18</sup>

In our evaluation of the 2013 S&L report, we found that the scenarios examined by S&L were realistic depictions of load profile scenarios historically experienced by the Coronado units. In particular, we found that S&L's scenario 5c, which consists of low-load cycling operations (with SCR and steam reheat assumed) and three cold startups within a 30-day period was a reasonable

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<sup>16</sup> 80 FR 17013-17016.

<sup>17</sup> Letter from Kelly J. Barr, SRP, to Deborah Jordan, EPA (November 18, 2013), Attachment 1, Sargent and Lundy LLC Report SL-011754, Salt River Project Coronado Generating Station Unit 1 SCR NO<sub>x</sub> Emissions Modeling (November 14, 2013) ("2013 S&L Report").

<sup>18</sup> *Id.* Attachment 2, Technical Memorandum from RMB to SRP, NO<sub>x</sub> Limits Compliance Monitoring Consideration on Coronado Unit 1 (October 28, 2013) ("2013 RMB Report") at 1.

and conservative representation of expected future operations at Coronado Unit 1, in light of the number of startup events that have historically occurred and SRP's expectation that the Coronado units will experience greater periods of operation in load-following service or nonoperation in the future. Accordingly, we proposed to find that an emission rate of 0.065 lb/MMBtu, which corresponds to S&L's scenario 5c, was a reasonable estimate of average SCR performance for Unit 1.

We were unable to evaluate fully the RMB Report because it lacked documentation regarding many of its components. In addition, we found that the data set for NO<sub>x</sub> emissions from Coronado Unit 1 “is much more extensive, represents continuous data collected over a long period of time, and covers a wider range of unit operations” relative to the data sets for which the EPA has previously employed a UPL analysis.<sup>19</sup> This better dataset means that use of the UPL analysis method is not necessary and use of the actual data from the unit is more representative. Accordingly, we proposed to find that the use of the UPL method was not appropriate for setting an emission limit for Coronado Unit 1. We also proposed to find that it was not necessary to raise the numerical emission limit in order to provide an additional compliance margin due to the conservative assumptions in the 2013 S&L Report.

Based on these proposed findings, we proposed to set an emission limit for Coronado Unit 1 of 0.065 lb/MMBtu on a rolling 30-BOD basis. Please refer to our proposal for more information concerning the 2013 S&L and RMB Reports, our evaluation of those reports, and the basis for our proposed emission limit for Unit 1.

## *2. Proposed Emission Limit for Coronado Unit 2*

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<sup>19</sup> 80 FR 17016.

In proposing an emission limit for Coronado Unit 2, we considered information provided by SRP concerning Unit 2's design parameters and the installation of a low-load temperature control system for Unit 2. We found that this information supported SRP's assertion that the emission limit in the Consent Decree of 0.080 lb/MMBtu represents BART for Unit 2. In particular, we noted that "the fact that SRP has already installed a low-load temperature-control system at this unit in order to meet the 0.080 lb/MMBtu limit suggests that a lower limit would not be achievable on a 30-BOD basis."<sup>20</sup> Therefore, we proposed to set a unit-specific NO<sub>x</sub> limit for Unit 2 of 0.080 lb/MMBtu on a rolling 30-BOD basis.

#### *C. Proposed Revision to Work Practice Standard*

In addition to the revisions to the continuously applicable numeric emission limits for each unit, we proposed to revise the work practice standard at 40 CFR 52.145(f)(10) to require continuous operation of pollution control equipment at each unit at all times the unit is in service "in a manner consistent with technological limitations, manufacturer's specifications, and good engineering and good air pollution control practices for minimizing emissions."<sup>21</sup>

#### *D. Proposed Removal of Affirmative Defense for Malfunctions*

As noted in our proposal, the Arizona Regional Haze FIP incorporates by reference certain provisions of the ACC that establish an affirmative defense that sources may seek to assert in an enforcement action for violations that result from excess emissions due to malfunctions.<sup>22</sup> Subsequent to the EPA's promulgation of the FIP, the United States Court of

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<sup>20</sup> *Id.*

<sup>21</sup> Although the preamble referred to this work practice standard specifically in relation to the SCR on Unit 2, the proposed regulatory text applied to all controls devices on both units, which was the intended effect of the proposed revision.

<sup>22</sup> See 40 CFR 52.145(f)(11) (incorporating by reference AAC R-18-2-101, paragraph 65; AAC R18-2-310, sections

Appeals for the D.C. Circuit ruled that CAA sections 113 and 304 prohibit the inclusion of affirmative defense provisions in the EPA's regulations imposing emission limits on sources.<sup>23</sup> We explained that the logic of the court's decision applies to the promulgation of a FIP, and precludes the EPA from including an affirmative defense provision in a FIP. In addition, we noted that the EPA had proposed to find AAC R18-2-310(B) and AAC R18-2-310(C) substantially inadequate to meet CAA requirements and to issue a SIP call with respect to these provisions ("SSM SIP Call").<sup>24</sup> Therefore, we proposed to remove the affirmative defense for malfunctions from the Arizona Regional Haze FIP.

#### *E. Non-interference with Applicable Requirements*

The final element of our proposed action on reconsideration was an analysis of whether the proposed revisions to the FIP would interfere with any applicable requirement concerning attainment, reasonable further progress, or any other applicable requirement of the CAA.<sup>25</sup> We explained that the proposed revision to the FIP would allow for an increase in NO<sub>x</sub> emissions of 233 tons per year (tpy) compared to the existing FIP, but that this increase represented less than one percent of the projected total NO<sub>x</sub> emission reductions required under the FIP. We also noted that Coronado is located in an area that is designated as Unclassifiable/Attainment for all of the current National Ambient Air Quality Standards (NAAQS). We proposed to find that a revision to the BART emission limits for NO<sub>x</sub> would not interfere with attainment or reasonable further progress for any air quality standard. We also proposed to find that the revisions would not interfere with the applicable requirements of the National Emission Standards for Hazardous

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(A), (B), (D) and (E); and AAC R18-2-310.01).

<sup>23</sup> See *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir. 2014).

<sup>24</sup> 79 FR 55920, 55947 (September 17, 2014).

<sup>25</sup> 80 FR 17017-17018.

Air Pollutants (NESHAP), Standards of Performance for New Stationary Sources (NSPS), or Compliance Assurance Monitoring (CAM) requirements. Finally, we explained that, while the proposed revisions would alter the specific emission limits that constitute BART for NO<sub>x</sub> at Coronado, the effect of the proposed changes on visibility and overall NO<sub>x</sub> emissions reductions under the FIP would be very small. Therefore, we proposed to find that the proposed revisions would not interfere with any applicable requirement of the CAA.

#### **IV. Public Comments and EPA Responses**

Our proposed action provided a 45-day public comment period. During this period, we received two comment letters: one from Earthjustice on behalf of National Parks Conservation Association and Sierra Club and one from SRP. In addition, after the close of the comment period, we received a comment letter from the Eastern Arizona Counties Organization (ECO).<sup>26</sup> The significant comments and our responses are summarized below.

##### *A. Comments on Proposed Compliance Method for Unit-Specific Emission Limits*

*Comment:* SRP expressed support for the proposed compliance method.

*Response:* We acknowledge SRP's support for the proposed compliance method. We are finalizing the compliance method as proposed.

##### *B. Comments on Proposed Emission Limits for Coronado Units 1 and 2*

###### *1. General Comments on Proposed Emission Limits for Coronado Units 1 and 2*

*Comment:* Earthjustice noted that the proposed emission limits are based on an approach that is “wholly dependent on many assumptions” and expressed concern over several elements of

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<sup>26</sup> The ECO letter was dated April 28, 2015, but was not transmitted to the EPA until June 1, 2015.

the S&L analysis. First, the commenter objected to breaking up a continuous load profile into ill-defined “modes.” Second, the commenter asserted that the EPA should not have accepted S&L’s scenarios, as listed in Table 2 of the proposal, specifically citing a lack of support for NO<sub>x</sub> rates used by S&L for the various modes of operation. The commenter noted that the EPA indicated only that the emission rates are “reasonable and generally consistent” with data reported to the Air Markets Program Data (AMPD). The commenter indicated that it could not find support for some of the assumed rates in the record. Third, Earthjustice stated that there were insufficient data on how many and what combinations of the operation modes can actually occur in a given future 30-day period. Finally, the commenter argued that the EPA (or the permit-issuing authority) should set separate limits for each scenario and asserted that, in the absence of such limits “this bottom-up approach is clearly open for abuse whereby the limit is set by making up a worst case assumption that may or may not occur – or may occur, but with very low frequency – allowing the operator to have a high NO<sub>x</sub> limit at all times.” Earthjustice further asserted that “inclusion of startup, shutdown, and malfunctions cannot be an excuse to obtain a high emission limit simply by assuming a ‘worst case’ future scenario with several of these modes – regardless of the low frequency of such a scenario.”

*Response:* We partially agree with this comment. With regard to the information supporting the assumptions made in the S&L analysis, we have requested and received additional documentation from SRP. The full details are included as a spreadsheet in the docket of this final rule.<sup>27</sup> To summarize, SRP examined historical operating data from startup and shutdown events over a period extending from 2009 to 2012 and identified multiple cold starts, warm starts, and

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<sup>27</sup> See spreadsheet “Startup & Shutdown Data.xls”

shutdowns. The listed modes reflect actual events and operating modes from Unit 1 and 2's history and the emission rates associated with these events.

We are cognizant of the commenter's concern that accounting for operating events and conditions that occur relatively infrequently could result in an emission limit that is higher than what would be warranted based solely on normal, steady-state operations. Such a limit provides a larger compliance margin during periods of normal, steady-state operations, when these operating events and conditions are not occurring. However, we disagree with the commenter's argument that separate limits for each mode of operation or load profile are needed. We recognize that the EPA's SSM SIP Policy as of 2015 contemplates the potential use of ". . . special, alternative emission limitations that apply during startup or shutdown if the source cannot meet the otherwise applicable emission limitation. . ."<sup>28</sup> The EPA's SSM SIP Policy as of 2015 reflects the EPA's interpretation of the CAA to allow continuous emission limitations in SIPs that are composed of, for instance, (i) specific numerical limits that apply during most of the operations at the affected source, and (ii) other specific numerical limits that apply during modes of operation such as startup and shutdown. This policy thus contemplates that the "otherwise applicable" numerical limit might be based on steady-state operation, which reflects the best degree of emission control during that mode of operation. The 2015 SSM Policy recommends seven factors that would be relevant to developing an alternative numerical limit for specific modes of operation, if that were appropriate.

The commenter is suggesting that the FIP should take this approach for Coronado. We acknowledge that in general this approach would be consistent with our 2015 SSM SIP Policy,

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<sup>28</sup> 80 FR 33840, 33980 (June 11, 2015).

but our SSM Policy also contemplates the use of a single appropriately set numerical limit with a relatively long averaging period that is a weighted average of the levels of emission control during steady-state operation, startup, and shutdown. The EPA notes, however, that the averaging period for an emission limitation must be appropriate for the type of SIP provision at issue, e.g., a 30 day averaging period appropriate for purposes of Regional Haze could be inappropriate in an attainment plan for a 24-hour NAAQS. In this instance, Coronado Unit 1 *can* meet the applicable emission limitation imposed in this FIP, precisely because that limitation accounts for emissions from startup and shutdown. Therefore, an alternative emission limit for startup and shutdown is not necessary or appropriate in this instance.<sup>29</sup> Furthermore, the FIP's approach of setting a single continuously applicable BART emission limit that applies during all modes of operation is consistent with the CAA, the RHR and the BART Guidelines. We are not aware of any instance of BART being implemented through separate emission limits that apply to different modes of operation.

*Comment:* In addition to the assumptions noted in the previous comment, Earthjustice also asserted that the assumptions regarding the design and operation of the low-load temperature control system are unsupported. Earthjustice quoted the following passage from the EPA's proposal:

As described in the S&L report, periods of low load operation generally consist of operation between loads of 138 MW to 270 MW (operation above 270 MW can be considered "high" load). Broadly speaking, the temperature in the SCR system will fall below 599 degrees F during these periods of low load operation, which is

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<sup>29</sup> Excess emissions from malfunctions events are, by definition, unforeseeable and extremely variable, and therefore generally cannot be specifically accounted for within an emission limit. Sources are required to meet the normally applicable emission limits during malfunctions. Regulators may elect to exercise enforcement discretion in such circumstances, and sources retain the ability to assert any legal or equitable defenses to liability or remedies that they may have in an enforcement proceedings, consistent with CAA sections 113 and 304.

the minimum temperature required for effective NO<sub>x</sub> control. A low load temperature control system increases the temperature at the SCR inlet in order to maintain 599 degrees F, allowing operation of the SCR system during periods of low load. Without this control system, the Coronado Unit 2 SCR system will not operate during periods of low load.

The commenter asserted that these are “critical and unsupported assumptions.” Specifically, the commenter stated that “the minimum operating temperature (MOT) is a function of SCR catalyst design and parameters such as the sulfur content of the fuel,” and that neither the proposal nor the S&L analysis explained why the MOT is assumed to be 599 degrees F for the SCRs at Units 1 and 2. The commenter noted that the record contains no documentation regarding SCR design from the actual designer of the Unit 2 SCR. The commenter also asserted that the correspondence between MOT and unit load (i.e., that the 599 degrees F MOT corresponds to unit load of 270 MW) is not supported.

*Response:* We agree with this comment and have requested and received additional documentation from SRP regarding these issues. Included in the docket is a functional description of the Unit 2 SCR system prepared by Riley Power.<sup>30</sup> It indicates that the Unit 2 SCR was designed for a catalyst MOT of 599 degrees F. Also included in the docket is a record of Unit 2’s gross load and air preheater temperature readings over an 18-month period from January 2011 to July 2012. As indicated in the spreadsheet and chart attached to this documentation, the majority of these data point to an air preheater temperature of 599 degrees F being achieved at a gross load of 270 MW.

## *2. Comments on Proposed Emission Limits for Coronado Unit 1*

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<sup>30</sup> See 1.1.1 SCR Reactor.pdf, Unit 2 Temperature vs. Load PI Data.xlsx, and e-mail from Barbara Sprungl, SRP, to Eugene Chen, EPA, regarding SCR MOT (February 19, 2016). .

*Comment:* Earthjustice commented that the proposed emission limit of 0.065 lb/MMBtu was based on Scenario 5c of the S&L analysis, as listed in Table 2 of the proposed rule, which corresponds to a 30-day period of continuous low-load cycling with three cold startup events. The commenter noted that the EPA did not identify a historical 30-day period that corresponded to this scenario. The commenter further asserted that it had “examined Unit 1 hourly operating data for a three year time period, 2012-2014, from AMPD and found no instances of scenario 5c or even 5b – i.e., two or three cold-starts along with significant low load cycling.” The commenter concluded that the highest NO<sub>x</sub> limit that could be supported by S&L’s analysis was Scenario 5a, i.e., 0.0550 lb/MMBtu. Accordingly the commenter requested that the EPA “either fully support Scenario 5c or accept the NO<sub>x</sub> limit associated with 5a – 0.0550 lb/MMBtu.”

*Response:* We partially agree with this comment. As we stated in our proposed rule, the particular scenario that the proposed emission limit of 0.065 lb/MMBtu is based upon, Scenario 5c of the S&L analysis, includes unit operating conditions (30 days of continuous low-load cycling and three cold startup events) that have not historically occurred in a single 30 BOD period. We disagree with the commenter’s assertion, however, that an emission limit of 0.055 lb/MMBtu would be the appropriate emission limit.

The commenter noted that it was unable to identify a 30-day period with two or three cold starts along with significant low-load cycling at Unit 1 during the period from 2012-2014. We reviewed operating data beyond the most recent 3-year period and found three 30-day periods with multiple startup events.<sup>31</sup> As indicated in AMPD data and the information provided by SRP in its April 24, 2014, letter, Unit 1 has experienced 30-day periods that included two cold

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<sup>31</sup> See November 2011, April 2011, July 2009 in “Coronado NO<sub>x</sub> Emission Data (daily).”

starts, as well as one cold start with multiple warm starts (approximately three to six). In general, the total amount of NO<sub>x</sub> emissions from a warm startup is smaller than a cold startup, in large part due to the longer duration of cold startup events. In this case, the total amount of NO<sub>x</sub> generated by the actual historical operating scenario of one cold startup and multiple warm startups (approximately three to six) is similar to the total amount that would be generated under Scenario 5c (i.e., three cold startups), and supports the use of three cold startups as a conservative assumption concerning future operations at Unit 1.

Similarly, the commenter asserted that it had not identified a 30-day period of significant low-load cycling at Unit 1 during the period from 2012-2014. We agree that historical operations at the Coronado units do not reflect 30 consecutive days of low-load cycling operations. As noted in our proposed rule, this assumption is based on SRP's expectation that the Coronado units will experience greater periods of low-load cycling operation in the future, as well as nonoperation, given the expanded role of renewable energy and reduced reliance on fossil fuels in electricity generation. More recent data from the first 9 months of 2015 indicate increased low-load cycling operations and startup events relative to historical patterns.<sup>32</sup> At most, however, this represents 3 to 5 days of continuous low-load cycling, not 30. Therefore, 30 days of low-load cycling is likely to be an overestimate of the number of low-load cycling days that will be exhibited in future operations at Unit 1.

In sum, based upon historical operations, particularly the modest amount of low-load cycling operations engaged in by the Coronado units, Scenario 5c (i.e., an operating scenario of three cold startups and 30 days of low-load cycling), represents an upper-end estimate of low-

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<sup>32</sup> See spreadsheet Coronado 2015-09 (hourly).xls.

load Unit 1 operations and startups at Unit 1. However, for the reasons described in response to comments from SRP below, we do not agree with Earthjustice that a rolling 30-BOD limit of 0.065 lb/MMBtu for Unit 1, which is based upon Scenario 5c, is insufficiently stringent.

*Comment:* SRP asserted that the EPA’s statement that an additional compliance margin was not appropriate for Coronado Unit 1, given the conservative nature of the assumptions in the S&L analysis, was inconsistent with the EPA’s acknowledgment that S&L’s analysis provided a reasonable estimate of average SCR performance. The commenter argued that “an emission limit that reflects ‘average’ SCR performance – even coupled with a 30-day averaging period – does not adequately account for performance on either end of the spectrum – minimum emissions as well as maximum emissions” and that the EPA “must establish a BART emission limit that SRP can comply with at all times (i.e., a limit that is closer to the maximum emissions that can be anticipated).”

*Response:* We disagree with this comment. The commenter is correct, in literal terms, that an “average” emission rate of 0.065 lb/MMBtu is not the same as the maximum emission rate, and an emission limit based on an “average” emission rate will not account for all possible expected emission profiles. We do not agree, however, that this demonstrates that the proposed limit does not adequately account for the expected emissions on the upper end of the Unit 1’s operating spectrum. Although the proposed limit of 0.065 lb/MMBtu is based upon an average emission rate, it represents the average emission rate of a very conservative operating scenario. As described in previous responses to comments, the specific set of circumstances that form the basis for the proposed limit have not historically occurred at either of the Coronado units.<sup>33</sup>

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<sup>33</sup> Specifically, three cold startup events and 30 days of low-load cycling operations.

Although SRP has provided information indicating that it expects the Coronado units to be engaged in expanded amounts of load-following service,<sup>34</sup> it has provided no evidence that the units are likely to continuously operate at low-load cycling.<sup>35</sup> Given the conservative nature of these assumptions, we consider the proposed rolling 30-BOD emission limit of 0.065 lb/MMBtu to account adequately for the operations of Unit 1 and, as explained further below, to address sources of uncertainty in SRP's emission analysis that may not have been accounted for in the S&L analysis.

*Comment:* SRP expressed agreement with the EPA's finding that S&L's analysis produced a reasonable estimate of average SCR performance for Unit 1, but asserted that the S&L report was "inadequate to determine an emission limit that SRP can meet on a continuous basis" because it only addressed variability due to changes in load and "failed to address other factors that can and do affect emission rates." SRP indicated that it had submitted evidence, including the 2013 RMB Report showing that "the 30-day average emissions rates from comparable units (i.e., same furnace design, comparable size, equipped with SCR) regularly exceed the proposed SRP limit of 0.065 lb/MMbtu." Specifically, SRP asserted that "the RMB analysis plainly shows that emissions from Unit 1 reasonably should be expected to exceed the proposed 0.065 lb/MMbtu emission limit, even with a 30-day averaging period." The commenter argued that "failing to address the impact that process and measurement variability can have on the reported emissions would be inconsistent with how EPA has handled the issue in other rulemakings." Based on the 2013 RMB Report and an additional memo from RMB enclosed

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<sup>34</sup> See Letter from Kelly Barr, SRP, to Deborah Jordan, EPA (April 28, 2014).

<sup>35</sup> One of the assumptions underlying Scenario 5c is low-load cycling for 30 days, which, for purposes of developing a rolling 30-BOD limit, represents continuous operation at low-load cycling.

with the comment letter,<sup>36</sup> the commenter concluded that “a value of 0.080 lb/MMBtu is a reasonable estimate of the lowest achievable BART NO<sub>x</sub> limit for Unit 1.”

SRP also commented that RMB provided a UPL statistical analysis “merely as a check against its primary analysis, which is analytical assessment of years of available emissions data from comparable units.” The commenter noted that:

In its analytical assessment, RMB simply determined the 99<sup>th</sup> percentile value of hundreds of 30-day average emission rates that it was able to calculate from the available emission data. There was no need to rely on a statistical tool such as the UPL to predict what the 99<sup>th</sup> percentile would be because there are adequate data to calculate that value directly.

The commenter concluded that the UPL was in fact not appropriate because the 99<sup>th</sup> percentile emissions rate could be analytically derived.

*Response:* We disagree with this comment. There are two separate issues arising from the RMB report: the NO<sub>x</sub> emission rates achieved by comparable SCR-equipped units<sup>37</sup> and the variability derived from the RMB report (and inclusion of an appropriate compliance margin).<sup>38</sup> With regard to the former issue, although similar SCR-equipped units examined by RMB exhibited NO<sub>x</sub> emission rates that were routinely above 0.065 lb/MMBtu, we disagree that this represents clear evidence that Unit 1 will exceed the proposed 30-BOD limit of 0.065 lb/MMBtu. While the units selected by RMB for review had similar design characteristics to Coronado Unit 1, the analysis did not examine one crucial variable: the design emission rate of the SCR systems. For example, S&L stated that the design target of the Pleasant Prairie Unit 1 SCR was

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<sup>36</sup> Technical Memorandum from RMB to SRP, Comments on Proposed Revisions to the Regional Haze Federal Implementation Plan for Arizona (May 15, 2015).

<sup>37</sup> See Table 4 in 2013 RMB Report. To summarize, the mean NO<sub>x</sub> emission rates of the similar SCR-equipped units identified by RMB range from 0.063 to 0.092 lb/MMBtu.

<sup>38</sup> See 2013 RMB Report starting at page 7. To summarize, RMB’s analysis asserts that a 15% upward adjustment is appropriate, followed by an additional upward rounding to the next numerical interval, which represents an additional 10%.

0.050 lb/MMBtu. By contrast, the stated design target of the Coronado Unit 1 SCR is 0.030 lb/MMBtu.<sup>39</sup> Because the SCR on the Coronado Unit 1 is designed to achieve a lower NO<sub>x</sub> emission rate, we do not consider the fact the actual NO<sub>x</sub> emission rates of these other SCR-equipped units exceed 0.065 lb/MMBtu to be directly relevant to Coronado Unit 1's ability to meet a rolling 30-BOD limit of 0.065 lb/MMBtu.

With regard to the variability derived by the RMB report, we agree that measurement and process variability should be accounted for in establishing an emission limit that is achievable, and that incorporates an appropriate compliance margin. The UPL methodology would be one way to account for the possible impact of process and measurement variability. As explained in our proposed rule, however, we do not believe it is necessary or appropriate to use the UPL methodology in this instance, given the size and scope of the data set available. The commenter provided no assertions or arguments that contradict our finding that use of the UPL methodology is inappropriate in this instance. Indeed, the commenter actually acknowledges that use of the UPL is not appropriate in this instance given the available data.

For similar reasons, we disagree with SRP's suggestion that we should simply have used the 99<sup>th</sup> percentile emissions rate. As with UPL analyses, the EPA has previously used the 99<sup>th</sup> percentile (described in some contexts as the 99<sup>th</sup> confidence level) when establishing emission limits for entire source categories based on emission data set collected from a subset of the sources in each category. In such cases, it is appropriate to take additional measures, such as use of the 99<sup>th</sup> confidence level, to address concerns about variations not captured or accounted for in the development of the data set. In this instance, by contrast, the proposed 0.065 lb/MMBtu

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<sup>39</sup> See Table 1 in 2013 S&L Report.

emission limit was developed from emission data from the specific unit in question—either from CEMS data collected from Unit 1 or from SCR vendor estimates developed specifically for Unit 1. Although we recognize that this does not eliminate all concerns regarding variability and uncertainty, we do not consider the measures proposed by the commenter to be appropriate in this instance given the substantially site-specific nature of the data underlying the proposed emission limit. Moreover, neither S&L nor RMB calculated a 99<sup>th</sup> percentile emission rate for Coronado Unit 1 based on the use of SCR. Accordingly, we do not agree that use of the 99<sup>th</sup> percentile emissions is necessary to account for process and measurement variability.

More broadly, while we have not explicitly quantified a portion of the compliance margin specifically to account for process and measurement variability (e.g., the additional 15-25 percent proposed by the commenter), we consider the conservative nature of the operating assumptions underlying the 0.065 lb/MMBtu limit to be sufficient to account for this variability. As noted in previous responses, 0.065 lb/MMBtu is based on operating assumptions that have not historically occurred for either of the Coronado units and that have not been demonstrated to be likely to occur on a regular basis in the future. In addition, 0.065 lb/MMBtu is based on an assumption of a steady-state full load emission rate of 0.040 lb/MMBtu, which is 0.01 lb/MMBtu higher than the performance guarantee of the SCR system of 0.030 lb/MMBtu.<sup>40</sup> As noted in the S&L report, this increase above the performance guarantee is intended to account for variations that will occur with actual controlled emissions.<sup>41</sup> We consider the conservatism built into this assumption and the previously described assumptions concerning startups and low-load cycling

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<sup>40</sup> 2013 S&L Report Table 1.

to be sufficient to account for process and measurement variability and provide an adequate compliance margin.

Accordingly, we are finalizing a rolling 30-BOD NO<sub>x</sub> emission limit of 0.065 lb/MMBtu for Coronado Unit 1, as proposed.

### *3. Comments on Proposed Emission Limits for Coronado Unit 2*

*Comment:* SRP expressed support for the EPA’s proposed emission limit of 0.080 lb/MMbtu for Coronado Unit 2. SRP noted that it had already installed SCR and a low-load temperature control system on Unit 2 and that it was unable to meet an emission limit lower than the 0.080 lb/MMbtu limit in the Consent Decree. SRP also expressed support for the proposed work practice standard and additional language addressing operation using the low-load temperature control system.

*Response:* We acknowledge SRP’s support. We wish to clarify that the revised work practice standard applies to both Coronado units, as does the analogous language in Coronado’s existing Title V Permit.<sup>42</sup>

*Comment:* Earthjustice stated that it had examined emission data for Unit 2 from the APMD for the period following installation of SCR (i.e., roughly June 1 to December 31, 2014). The commenter provided a table of hourly reported NO<sub>x</sub> rates for Unit 2, sorted by gross load in the range of 138 to 270 MW, which is the load range in which the low-load temperature control system would be expected to operate. The commenter identified several periods of time in which Unit 2 operated in this load range, but emitted higher NO<sub>x</sub> rates that indicated that the SCR was

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<sup>42</sup> See Specific Condition II.E.2.c , Title V Operating Permit No. 52693, issued December 6, 2011 (“The Permittee shall continuously operate *each NO<sub>x</sub> control* at all times the unit it serves is in operation consistent with technological limitations, manufacturer’s specifications, and good engineering and maintenance practices for minimizing emissions to the extent practicable” (emphasis added)).

not operating in this load range. Based on this information, the commenter asserted that the low-load temperature control system is not operating as intended.

Further, the commenter asserted that had the low-load temperature control system operated at this load range, the corresponding NO<sub>x</sub> rates would have been much lower and the resulting 30-day average NO<sub>x</sub> rates for these periods would also be lower. Earthjustice also stated that, in order to simulate proper low-load temperature control system operation, it had substituted the NO<sub>x</sub> value of 0.049 lb/MMBtu (the average of 0.039 and 0.059, the lowest and highest NO<sub>x</sub> rates corresponding to 270 MW) for all loads in the 138-270 MW range and computed the 30-day average NO<sub>x</sub> rate, including startup, shutdown, and malfunctions (excluding some anomalous data). Based upon the results of this substitution, the commenter asserted that the highest 30-day average using these results was 0.0621 lb/MMBtu, and that the appropriate NO<sub>x</sub> limit for Unit 2 would be 0.0650 lb/MMBtu, allowing for a reasonable compliance margin.

*Response:* We disagree with the commenter's assertion that the noted instances indicate that the low-load temperature control system was not operating as intended. The commenter has accurately identified certain operating hours with load values that fall within a range of 138 to 270 MW. We agree that these instances exhibit NO<sub>x</sub> emission rates that are consistent with nonoperation of the SCR system. We note, however, that these instances do not correspond to periods of low-load cycling (i.e., periods of extended operation at low-load electricity generation). Rather, the instances identified by the commenter correspond to startup/shutdown events.

For example, the first instance listed by the commenter (hours 13 to 15 on June 1, 2014) are the final 3 hours of a 15-hour-long startup event, in which Unit 2 starts at zero load, proceeds

to full load, and engages in high-load cycling on a continuous basis for the next 5 weeks.<sup>43</sup> The 3 hours of low load are part of the process of ramping the boiler up to high load and/or full load, and are not part of a period of actual low-load operation. The other instances identified by the commenter on July 13, July 18, July 22, September 11, September 15, November 13, and November 17, 2014, are similarly all startup/shutdown events. As described in our 2015 proposed rulemaking, the low-load temperature control systems on the Coronado units function during periods of low-load cycling by the boilers. During these periods of low load, the boiler exhaust falls below the 600 degree F minimum operating temperature of the SCR system. By using a portion of the steam generated by the boiler to reheat the exhaust stream up to 600 degrees F, the low-load temperature control system allows operation of the SCR system during periods of low-load cycling. The availability of steam reheat is a crucial element of this system. In a boiler startup event, boiler steam may not be available in sufficient quantity or temperature to allow operation of the temperature control system, because the boiler is starting up.

More broadly, the commenter raises concerns regarding whether these instances of SCR nonoperation are indicative of the low-load temperature control system being improperly installed or operated. The 2014 AMPD data supplied by the commenter do not appear to contain any periods of operation that correspond to low-load cycling. Therefore, it is not possible to readily evaluate the effectiveness of the low-load temperature control system based on these data alone. In preparing our final action on reconsideration, we have reviewed 2015 AMPD data in order to determine if the low-load temperature control system is being operated during periods of low-load cycling. We have identified several periods of low-load cycling in 2015, and note that

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<sup>43</sup> By comparison, a typical low-load cycling operation would consist of the boiler starting at gross load levels above 270 MW, dropping to below 270 for several hours, and finally returning to load levels above 270 MW.

the emission rates achieved during these periods are consistent with operation of the SCR system.<sup>44</sup> This is consistent with the analyses provided by SRP, which indicate that the low-load temperature control system is intended to operate during periods of low-load cycling.<sup>45</sup>

We also disagree with the commenter's second assertion, that 30-day NO<sub>x</sub> emission rates for Unit 2 would be lower had the low-load temperature control system operated in these load ranges, and that the appropriate NO<sub>x</sub> limit for Unit 2 is 0.065 lb/MMBtu. As described in the previous paragraphs, we note that the instances identified by the commenter correspond to startup/shutdown events and not periods of low-load cycling. As a result, we do not consider the information provided to be sufficient to demonstrate that the SCR should have operated during the instances identified by the commenter, and that a lower 0.065 lb/MMBtu limit is achievable by Unit 2.

In sum, in our 2015 proposed action on reconsideration, we proposed a BART limit of 0.080 lb/MMBtu for Unit 2 based on information and analysis provided by SRP indicating that the Unit 2 SCR system was designed to meet the 2012 Consent Decree emission limit of 0.080 lb/MMBtu, and that SRP had since installed a low-load temperature control system on Unit 2 to meet that emission limit. Because the information provided by the commenter does not alter the data, analysis, or reasoning underlying this proposed limit, we are finalizing a rolling 30-BOD limit of 0.080 lb/MMBtu for Unit 2.

### *C. Comments on Proposed Removal of Affirmative Defense for Malfunctions*

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<sup>44</sup> See Coronado 2015-09 (hourly).xls. May 24, May 27, May 28, June 8, August 25, September 7, September 11, September 14, and September 15, 2015. NO<sub>x</sub> emission rates observed during these periods of low-load cycling range from 0.028 to 0.060 lb/MMBtu, which based on the corresponding heat rates are emission rates that indicate operation of the SCR system.

<sup>45</sup> See Letter from Kelly J. Barr, SRP, to Deborah Jordan, EPA (April 28, 2014) page 4 and 2013 S&L Report page 6.  
Page 28 of 49

*Comment:* SRP urged the EPA to retain the affirmative defense for excess emissions due to malfunctions as part of the Arizona Regional Haze FIP. The commenter made several arguments in support of its position.

First, the commenter argued that the court's decision in *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir. 2014) does not compel the EPA to remove the affirmative defense provision from the Arizona Regional Haze FIP because the decision applies only to an EPA rulemaking under section 112 and is not binding precedent in the Ninth Circuit. The commenter further argued that by removing the affirmative defense provision, the EPA "ignores its own longstanding policy supporting affirmative defenses in situations beyond the owner's or operator's control, as well as decisions from other Courts of Appeals upholding affirmative defenses." Referring to the EPA's 1999 SSM Guidance,<sup>46</sup> the commenter stated that "[s]ince the early 1980s, EPA has consistently maintained the imposition of penalties for exceedance of an emission standard that is caused by circumstances beyond the owner's or operator's control is not appropriate." Citing *Arizona Public Service Co. v. EPA*, 562 F.3d 1116, 1129-30 (10th Cir. 2009), *Montana Sulphur & Chemical Co. v. EPA*, 666 F.3d 1174, 1192-93 (9th Cir. 2012), and *Luminant Generation v. EPA*, 714 F.3d 841, 851-53 (5th Cir. 2013), the commenter asserted that the EPA's prior SSM policy, which interpreted the CAA to allow affirmative defense provisions in SIPs, had been upheld by three separate U.S. Courts of Appeals. The commenter further argued that the EPA should not apply the D.C. Circuit decision in *NRDC* "where controlling precedent from the U.S. Court of Appeals for the Ninth Circuit condones EPA's use of affirmative defenses."

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<sup>46</sup> In particular, the commenter cited EPA's 1999 SSM Guidance (Memorandum to EPA Regional Administrators, Regions I-X from Steven A. Herman and Robert Perciasepe, USEPA, Subject: State Implementation Plans: Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown (September 20, 1999).

Second, SRP noted that, in the proposed SSM SIP Call, the EPA had only proposed to interpret the CAA to bar affirmative defense type provisions in SIPs and had also proposed to provide states 18 months to submit SIP revisions to remove affirmative defenses for exceedances due to malfunctions. The commenter thus asserted that the EPA should allow the SSM SIP Call rulemaking to proceed, rather than “predetermine the outcome of that rulemaking by removing the affirmative defense from the Arizona Regional Haze FIP far in advance of [the] timeline applicable to the SIP call rulemaking.”

Third, SRP asserted that “[t]he U.S. Constitution also supports retention of the affirmative defense for malfunctions.” In particular, the commenter noted that the U.S. Supreme Court has held that the Eighth Amendment, including protections against excessive fines and punishments, may apply to government action in a civil context as well as in a criminal context. SRP claimed that significant penalties are not proportional to an offense caused by unavoidable events, such as excess emissions during malfunction events. Furthermore, the commenter argued that “imposing liability for ‘unavoidable’ and therefore innocent conduct would infringe on substantive due process principles under the Fifth Amendment.” SRP asserted that affirmative defense provisions “avoid unjust punishment while at the same time placing on the source the burden of demonstrating that the offense actually was ‘unavoidable’ (and that punishment therefore would be unjust).” Again citing *Montana Sulphur*, the commenter asserted that providing an affirmative defense is the “minimum protection EPA or the state must provide to avoid infringing constitutional rights.”

Finally, SRP stated that the affirmative defense “was an integral part of the agreed-upon emission limits established in the [Coronado] Consent Decree” and “was integral to the analyses submitted by SRP in support of its Petition for Reconsideration and the proposed emission limits

SRP submitted to EPA for NO<sub>x</sub>.” The commenter asserted that without such an affirmative defense, “the emission limits identified as feasible and appropriate by S&L and RMB would have undoubtedly been higher.” The commenter argued that “[i]f EPA now removes the affirmative defense from the Arizona Regional Haze FIP for [Coronado], EPA must modify upward the emission limits for NO<sub>x</sub> to account for that action.”

*Response:* We do not agree with SRP’s arguments in favor of retaining the affirmative defense for violations due to malfunctions in the Arizona Regional Haze FIP or its assertion that the emission limits should be revised upward in light of removal of the affirmative defense.

First, we do not agree with the commenter’s suggestion that we are free to ignore the *NRDC* decision in the context of promulgating or revising a FIP. The fact that the decision pertained to a rulemaking by the EPA under section 112 is irrelevant. As explained in our proposal, *NRDC* turned on an analysis of CAA sections 113 and 304. These provisions apply with equal force to a civil action brought to enforce the provisions of a FIP. The logic of the court's decision thus applies to the promulgation of a FIP, and precludes the EPA from including an affirmative defense provision in a FIP. As explained in the final SSM SIP Call:

The EPA is revising its interpretation of the CAA with respect to affirmative defenses based upon a reevaluation of the statutory provisions that pertain to enforcement of SIP provisions in light of recent court opinions. Section 113(b) provides courts with explicit jurisdiction to determine liability and to impose remedies of various kinds, including injunctive relief, compliance orders and monetary penalties, in judicial enforcement proceedings. This grant of jurisdiction comes directly from Congress, and the EPA is not authorized to alter or eliminate this jurisdiction under the CAA or any other law. With respect to monetary penalties, CAA section 113(e) explicitly includes the factors that courts and the EPA are required to consider in the event of judicial or administrative enforcement for violations of CAA requirements, including SIP provisions. Because Congress has already given federal courts the jurisdiction to determine what monetary penalties are appropriate in the event of judicial enforcement for a violation of a SIP

provision, neither the EPA nor states can alter or eliminate that jurisdiction by superimposing restrictions on that jurisdiction and discretion granted by Congress to the courts. Affirmative defense provisions by their nature purport to limit or eliminate the authority of federal courts to determine liability or to impose remedies through factual considerations that differ from, or are contrary to, the explicit grants of authority in section 113(b) and section 113(e).<sup>47</sup>

Therefore, the EPA cannot include any such affirmative defense provision in a FIP.

The commenter has offered nothing to refute this interpretation of the CAA. Instead, the commenter suggests that the EPA should not apply the *NRDC* decision in this instance because of “controlling precedent” from the Ninth Circuit, namely the *Montana Sulphur* decision. As relevant here, that decision involved a challenge by Montana Sulphur to the EPA’s imposition of limits on flaring emissions during SSM events. In responding to Montana Sulphur’s argument that these limits were infeasible, “the EPA acknowledge[d] that violations are likely inevitable, but relie[d] on the provision of an affirmative defense to compensate for the infeasibility problem.”<sup>48</sup> Significantly, however, *Montana Sulphur* did not involve a challenge to inclusion of the affirmative defense in a FIP. On the contrary, Montana Sulphur argued that the affirmative defense in the FIP should have been *extended* to cover injunctive relief in addition to monetary penalties.<sup>49</sup> The court rejected this argument and concluded that the EPA had reasonably interpreted the CAA to limit the extent of the affirmative defense as part of imposing continuous limits on emissions.<sup>50</sup> However, because no party directly challenged the legal basis for the affirmative defense itself, the court did not have occasion to consider whether the affirmative defense in the FIP contravened CAA sections 113 and 304. Therefore, we do not agree that

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<sup>47</sup> 80 FR 33851-33852.

<sup>48</sup> 666 F.3d at 1192-93.

<sup>49</sup> *Id.* at 1193. The EPA’s position in that case was based on the 1999 SSM Policy, which has now been replaced by the EPA’s SSM SIP Policy as of 2015. See 80 FR 33977-33982.

<sup>50</sup> *Id.*

*Montana Sulphur* constitutes controlling precedent on the issue of whether the EPA may promulgate an affirmative defense in a FIP.

With regard to the other judicial decisions cited by the commenter, the *Luminant* decision did not involve a FIP at all, but concerned the EPA's evaluation of affirmative defense provisions in a SIP context. In that decision, the court upheld the EPA's disapproval of an affirmative defense provision applicable to violations due to emissions during startup, shutdown and maintenance events, and the EPA's approval of an affirmative defense provision applicable to violations due to emissions during malfunctions. In both instances, the court deferred to the EPA's then current interpretation of the CAA as a reasonable reading of ambiguous provisions. Subsequent to that decision, however, the D.C. Circuit issued its opinion in *NRDC*. In our Supplemental Proposal and Final SSM SIP Call, we explained at length why we now consider the court's reasoning in the *NRDC* decision to be the better reading of the CAA.<sup>51</sup> Thus, the EPA has now changed its interpretation of the CAA with respect to the permissibility of affirmative defense provisions in SIPs and has directed the affected state to remove the affirmative defense provision at issue in the *Luminant* decision from its SIP in the final SSM SIP call.

Finally, while the *Arizona Public Service* case did involve a challenge to an affirmative defense in a FIP, it did not involve a challenge to the statutory basis for such a defense.<sup>52</sup> Rather, Arizona Public Service argued that "the EPA must justify inclusion of the affirmative defense with a factual basis for presuming that excess emissions are the fault of APS, and requiring APS to prove otherwise" and that "the EPA offered no defense to this burden-shifting affirmative

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<sup>51</sup> See 79 FR 55920, 55931 – 55934 (September 17, 2014) and 80 FR 33856 – 33857.

<sup>52</sup> *Arizona Public Service Co. v. EPA*, 562 F.3d 1116, 1130 (10th Cir. 2009).

defense.”<sup>53</sup> The court rejected both of these arguments. However, as with *Montana Sulphur*, no party argued that the affirmative defense at issue was inconsistent with the enforcement structure of CAA sections 113 and 304, so the *Arizona Public Service* court did not have occasion to consider this question. Accordingly, the *Arizona Public Service* decision is not directly on point with regard to whether the EPA is authorized to include an affirmative defense in a FIP. Therefore, none of the cases cited by the commenter compel or persuade the EPA to adopt an interpretation of the CAA with regard to affirmative defenses that differs from the interpretation set forth in the SSM SIP Call Final Rule preamble, as quoted previously.

Second, as noted previously, the EPA has finalized the SSM SIP Call and determined that AAC R18-2-310(B) and AAC R18-2-310(C) are substantially inadequate to meet CAA requirements.<sup>54</sup> Arizona must submit a SIP revision to remove or revise these provisions by November 22, 2016. To the extent that the commenter disagrees with the EPA’s interpretation of the CAA in the SSM SIP Call, and disagrees with the EPA’s application of that interpretation to AAC R18-2-310(B) and AAC R18-2-310(C), that decision may be challenged in the D.C. Circuit. However, the EPA is not obligated to wait until that deadline for SIP revisions in response to the SSM SIP Call passes to remove these provisions from the Arizona Regional Haze FIP. On the contrary, having made a final determination that affirmative defense provisions are inconsistent with CAA requirements, we believe it is appropriate to expeditiously remove the affirmative defense provision from the Arizona Regional Haze FIP. The FIP is the EPA’s own rulemaking, which it is now conforming to the requirements of the CAA.

Third, the commenter’s constitutional arguments appear to suggest that the existing CAA

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<sup>53</sup> *Id.* (internal quotations omitted).

<sup>54</sup> 80 FR 33840, 33971 (June 12, 2015).

enforcement provisions are facially unconstitutional. We do not agree. The CAA does not mandate that any penalty be automatically assessed for a violation. Rather, the CAA establishes a maximum civil penalty in section 113(b), but then expressly provides in section 113(e) the criteria that the EPA (in administrative enforcement) or the courts (in judicial enforcement) “shall take into consideration (in addition to other factors as justice may require).” These criteria explicitly include consideration of “good faith efforts to comply.” Whether in administrative enforcement or judicial enforcement, there is a process through which the alleged violator may raise any legal or equitable arguments it may have based on the facts and circumstances of the violation. Thus, the CAA on its face does not mandate the imposition of any penalty automatically, much less one that is *per se* excessive. Notably, the commenter does not elaborate on how or why it believes the statutory penalty provisions of the CAA are facially unconstitutional. To the extent that the commenter is raising an “as applied” claim of unconstitutionality, any such claim can be raised in the future in the context of a specific application of the statute in an enforcement action.

Fourth, we acknowledge that, as in the *Montana Sulphur* example cited by the commenter, the EPA has previously provided affirmative defense provisions as a mechanism to mitigate penalties where a violation was beyond the control of the owner or operator. Contrary to the commenter’s suggestion, however, the EPA did not indicate that such provisions were constitutionally mandated. These actions were premised upon the EPA’s prior interpretation of the CAA to permit such affirmative defense provisions under very narrow circumstances. More significantly, these actions predated the *NRDC* decision and, as explained previously, the EPA no longer considers affirmative defense provisions to be consistent with the enforcement provisions of the CAA. Furthermore, the EPA believes that the penalty criteria in section 113(e)

perform a similar function to the affirmative defense provisions previously promulgated by the EPA. The commenter does not explain why these explicit statutory factors do not provide sufficient protection from the imposition of allegedly unconstitutionally excessive penalties.

Finally, we do not agree that removal of the affirmative defense from the Arizona Regional Haze FIP necessitates an increase in the emission limits for NO<sub>x</sub> for Coronado Units 1 and 2. Neither the 2013 S&L Report nor the 2013 RMB Report indicates that it relied on the existence of such a defense in evaluating what emission limits were achievable at the Coronado units. Moreover, the affirmative defense in the FIP applied only to violations due to emissions during malfunctions, which (among other criteria) must have “resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment” and “not stem[med] from any activity or event that could have been foreseen and avoided, or planned.”<sup>55</sup> Nothing in the CAA, the RHR, or the BART Guidelines indicates that BART emissions limits should be set at a level that accommodates all emissions during such unforeseeable events. Finally, we note that, if Coronado were to violate a BART emission limit due to a malfunction, SRP retains the ability to defend itself in an enforcement action and to oppose the imposition of particular remedies or to seek the reduction or elimination of monetary penalties, based on the specific facts and circumstances of the event. To the extent that a violation is the result of a genuine malfunction, the EPA anticipates that the state, citizen suit plaintiffs, and the EPA itself will likely exercise enforcement discretion. To the extent that any party elects to pursue enforcement in such circumstances, however, the CAA already authorizes the courts to determine whether parties should be held responsible for such violations and to impose remedies

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<sup>55</sup> AAC R18-2-310(B)(1) and (8)

or penalties only as may be appropriate, given the relevant facts and circumstances. As noted previously, under CAA section 113(e), federal courts are required to consider the enumerated statutory factors when assessing monetary penalties, including "such other factors as justice may require." Accordingly, we do not consider it necessary or appropriate to revise the BART emission limits due to the removal of the affirmative defense for malfunctions.

It should also be noted that our removal of the affirmative defense from the Arizona Regional Haze FIP does not alter the terms of the Coronado Consent Decree, which includes an affirmative defense applicable only to stipulated penalties for violations of the Consent Decree itself.<sup>56</sup> This provision of the Consent Decree affects only whether SRP must pay stipulated penalties under the Consent Decree and does not provide a defense to otherwise applicable CAA penalties.<sup>57</sup> Thus, the provision operates as a liquidated damages clause applicable only to the penalties imposed for violations of the Consent Decree and does not purport to alter the jurisdiction of the courts to impose penalties for violations of CAA requirements. Moreover, this provision was sanctioned by the United States District Court for the District Of Arizona, which entered the Consent Decree. Therefore, it does not raise the same concerns about limiting the jurisdiction of courts that are raised by the affirmative defense provision in the FIP.

In sum, we do not agree that the affirmative defense applicable to violations due to malfunctions should be retained in the Arizona Regional Haze FIP or that the emission limits in the FIP should be revised upward in light of the removal of the defense.

*Comment:* Earthjustice expressed support for the EPA's proposal to remove the affirmative defense applicable to violations due to malfunctions from the FIP. Citing the *NRDC*

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<sup>56</sup> Consent Decree paragraph 107.

<sup>57</sup> See, e.g., *id.* paragraph 106.

decision relied upon by the EPA in the proposal, the commenter asserted that affirmative defenses for violations due to malfunctions like that previously incorporated into the Arizona Regional Haze FIP are prohibited by the plain language of the CAA. Earthjustice further argued that such affirmatives defenses are unnecessary because courts do not impose penalties for truly unavoidable and unforeseeable violations. Finally, the commenter urged the EPA to finalize its proposal in a separate action to find the affirmative defense for violations due to malfunctions in AAC Code R18-2-310(C) and the similar affirmative defense for violations due to startup and shutdown in AAC R18-2-310(B) substantially inadequate to meet CAA requirements as part of the SSM SIP Call.

*Response:* We agree with the commenter for the reasons detailed in the previous response. We note that the EPA has already finalized the SSM SIP Call and determined that AAC R18-2-310(B) and AAC R18-2-310(C) are substantially inadequate to meet CAA requirements.<sup>58</sup> Accordingly, the EPA has already directed the state to remove those existing affirmative defense provisions from the SIP, consistent with EPA's action to remove the affirmative defense for violations during malfunctions from the Arizona Regional Haze FIP.

#### *D. Other Comments*

*Comment:* SRP asserted that the EPA should defer to Arizona's NO<sub>x</sub> BART determination for Coronado, noting that this determination was less stringent than the requirements of the Consent Decree.

*Response:* This comment is outside the scope of the proposed action. The EPA is not

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<sup>58</sup> 80 FR 33840, 33971 (June 12, 2015).

reconsidering our prior final action disapproving Arizona's NO<sub>x</sub> BART determinations for Coronado Units 1 and 2. Furthermore, as explained in our proposal, we are not reconsidering our determination that BART for Coronado Units 1 and 2 is an emission limit consistent with the use of SCR, LNB with OFA, and low-load temperature control systems.<sup>59</sup> Finally, even if this comment were relevant to this action, we do not agree that Arizona's BART determinations for NO<sub>x</sub> at Coronado were reasonable or that they complied with the applicable statutory and regulatory requirements, for the reasons set forth in our prior proposed and final actions disapproving those determinations.<sup>60</sup>

*Comment:* ECO commented that the EPA's proposed action on reconsideration was "a critical step toward insuring the economic viability" of Coronado and urged the EPA to finalize the proposal.

*Response:* We acknowledge ECO's support for our action on reconsideration.

## **V. Final Action**

The EPA is taking final action to revise the Arizona Regional Haze FIP to replace a plant-wide BART compliance method and emission limit for NO<sub>x</sub> on Units 1 and 2 at Coronado with a single-unit compliance method and emission limit on each of the units. For the reasons described in our proposal and in our responses to comments above, we are finalizing emission limits of 0.065 lb/MMBtu for Unit 1 and 0.080 lb/MMBtu for Unit 2 with compliance based on a rolling 30-BOD basis. This revision constitutes our final action on SRP's petition for reconsideration of the FIP. We are also finalizing our proposals to remove the affirmative defense for malfunctions in the FIP and revise the work practice requirement that applies to Coronado under the FIP.

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<sup>59</sup> 80 FR 17013.

<sup>60</sup> 77 FR 42834, 77 FR 72512.

We find that this revision will not interfere with any applicable requirement concerning attainment, reasonable further progress, or any other applicable requirement of the CAA. The Arizona Regional Haze FIP, as revised by this action, will result in a significant reduction in emissions compared to current levels (roughly 5,000 tpy). Although this revision will allow a marginal increase in emissions after December 2017 from the Coronado facility as compared to the prior FIP (roughly 233 tpy), the FIP as a whole will still result in an overall NO<sub>x</sub> reductions from Coronado compared to those currently allowed. In addition, the area where Coronado is located has not been designated nonattainment for any NAAQS. Thus, the revised FIP will ensure a significant reduction in NO<sub>x</sub> emissions compared to current levels in an area that has not been designated nonattainment for the relevant NAAQS at those current levels. Likewise, for the reasons explained in our proposal and summarized in section III.D, the revision will not interfere with any other applicable CAA requirements.

## **VI. Environmental Justice Considerations**

The EPA believes the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations. We expect that Coronado will install the same control technology in order to meet the revised emission limits as would have been necessary to meet the previously finalized limits. As noted previously, this revision to the FIP will allow for an increase in NO<sub>x</sub> emissions of roughly 233 tpy compared to the original Arizona Regional Haze FIP.<sup>61</sup> Although this is a not a trivial amount of emissions, it is relatively small compared to the facility's total emissions. In particular, 233 tpy is equivalent to about three percent of the

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<sup>61</sup> 80 FR 17010.

7,300 tpy of NO<sub>x</sub> that the facility is currently allowed to emit under the Coronado Consent Decree.<sup>62</sup> Furthermore, total NO<sub>x</sub> emissions from the facility following full implementation of the FIP will be roughly 2,275 tpy, a decrease of over 5,000 tpy compared to the amount the facility is presently allowed to emit. In sum, while this revision will allow for a marginal increase in emissions compared to the prior FIP, it will still ensure a significant reduction in emissions compared to present levels. Thus, the FIP, as revised by this action, increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

## **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 two facilities 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 two facilities. 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

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<sup>62</sup> Coronado Consent Decree, paragraph 44.

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. 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. Each of the owners of facilities affected by this rule, SRP, APS and PacifiCorp, 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 EO 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 the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations. The results of this evaluation are contained in section VI previously.

*K. Determination Under Section 307(d)*

Pursuant to CAA section 307(d)(1)(B), this action is subject to the requirements of CAA section 307(d), as it revises a FIP under CAA section 110(c).

*L. Congressional Review Act (CRA)*

This rule is exempt from the CRA because it is a rule of particular applicability.

*M. Petitions for Judicial Review*

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by [**Insert date 60 days after date of publication in the Federal Register**]. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. See CAA section 307(b)(2).

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Incorporation by reference, Nitrogen oxides,  
Reporting and recordkeeping requirements, Visibility.

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

Dated: March 29, 2016.

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Gina McCarthy,

Administrator.

Part 52, chapter I, title 40 of the Code of Federal Regulations is amended 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 § 52.145:

- a. Revise paragraphs (f)(3)(i) and (f)(5)(ii)(A).
- b. Add paragraph (f)(5)(ii)(B).
- c. Revise paragraph (f)(10).
- d. Remove paragraph (f)(11).

The revisions and addition read as follows:

**§52.145 Visibility protection.**

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(f) \* \* \*

(3) \* \* \*

(i) *NO<sub>x</sub> emission limitations.* The owner/operator of each coal-fired unit subject to this paragraph

(f) shall not emit or cause to be emitted NO<sub>x</sub> in excess of the following limitations, in pounds per million British thermal units (lb/MMBtu) from any coal-fired unit or group of coal-fired units.

Each emission limit shall be based on a rolling 30-boiler-operating-day average, unless otherwise

indicated in specific paragraphs.

<b>Coal fired unit or Group of coal-fired units</b>	<b>Federalemissionlimitation</b>
Cholla Power Plant Units 2, 3, and 4	0.055
Coronado Generating Station Unit 1	0.065
Coronado Generating Station Unit 2	0.080

\* \* \* \* \*

(5) \* \* \*

(ii) \* \* \*

(A) *Cholla Power Plant*. The 30-day rolling average NO<sub>x</sub> emission rate for the group of coal-fired units identified as Cholla Power Plant, Units 2, 3, and 4 shall be calculated for each calendar day, even if a unit is not in operation on that calendar day, in accordance with the following procedure: step one, for each unit, sum the hourly pounds of NO<sub>x</sub> emitted during the current boiler-operating day (or most recent boiler-operating day if the unit is not in operation), and the preceding twenty-nine (29) boiler-operating days, to calculate the total pounds of NO<sub>x</sub> emitted over the most recent thirty (30) boiler-operating day period for each coal-fired unit; step two, for each unit, sum the hourly heat input, in MMBtu, during the current boiler-operating day (or most recent boiler-operating day if the unit is not in operation), and the preceding twenty-nine (29) boiler-operating days, to calculate the total heat input, in MMBtu, over the most recent thirty (30) boiler-operating day period for each coal-fired unit; step 3, sum together the total pounds of NO<sub>x</sub> emitted from the group of coal-fired units over each unit's most recent thirty (30)

boiler-operating day period (the most recent 30 boiler-operating day periods for different units may be different); step four, sum together the total heat input from the group of coal-fired units over each unit's most recent thirty (30) boiler-operating day period; and step five, divide the total pounds of NO<sub>x</sub> emitted from step three by the total heat input from step four for each group of coal-fired units, to calculate the 30-day rolling average NO<sub>x</sub> emission rate for each group of coal-fired units, in pounds of NO<sub>x</sub> per MMBtu, for each calendar day. Each 30-day rolling average NO<sub>x</sub> emission rate shall include all emissions and all heat input that occur during all periods within any boiler-operating day, including emissions from startup, shutdown, and malfunction.

(B) *Coronado Generating Station*. Compliance with the NO<sub>x</sub> emission limits for Coronado Unit 1 and Coronado Unit 2 in paragraph (f)(3)(i) of this section shall be determined on a rolling 30 boiler-operating-day basis. The 30-boiler-operating-day rolling NO<sub>x</sub> emission rate for each unit shall be calculated in accordance with the following procedure: Step one, sum the total pounds of NO<sub>x</sub> emitted from the unit during the current boiler operating day and the previous twenty-nine (29) boiler operating days; Step two, sum the total heat input to the unit in MMBtu during the current boiler operating day and the previous twenty-nine (29) boiler operating days; Step three, divide the total number of pounds of NO<sub>x</sub> emitted from that unit during the thirty (30) boiler operating days by the total heat input to the unit during the thirty (30) boiler operating days. A new 30-boiler-operating-day rolling average NO<sub>x</sub> emission rate shall be calculated for each new boiler operating day. Each 30-boiler-operating-day average NO<sub>x</sub> emission rate shall include all emissions that occur during all periods within any boiler operating day, including emissions from startup, shutdown, and malfunction.

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(10) *Equipment operations*—(i) *Cholla Power Plant*. At all times, including periods of startup, shutdown, and malfunction, the owner or operator of Cholla Power Plant Units 2, 3 and 4 shall, to the extent practicable, maintain and operate each unit including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. Pollution control equipment shall be designed and capable of operating properly to minimize emissions during all expected operating conditions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Regional Administrator which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of each unit.

(ii) *Coronado Generating Station*. At all times, including periods of startup, shutdown, and malfunction, the owner or operator of Coronado Generating Station Unit 1 and Unit 2 shall, to the extent practicable, maintain and operate each unit in a manner consistent with good air pollution control practices for minimizing emissions. The owner or operator shall continuously operate pollution control equipment at all times the unit it serves is in operation, and operate pollution control equipment in a manner consistent with technological limitations, manufacturer's specifications, and good engineering and good air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Regional Administrator which may include, but is not limited to, monitoring results, review of operating and maintenance procedures, and inspection of each unit.

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