



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R03-OAR-2017-0681; FRL-10000-28-Region 3]

Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Attainment Plan for the Beaver, Pennsylvania Nonattainment Area for the 2010 Sulfur Dioxide Primary National Ambient Air Quality Standard

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving a state implementation plan (SIP) revision submitted by the Commonwealth of Pennsylvania. The revision is an attainment plan for the purpose of providing for attainment of the 2010 sulfur dioxide (SO₂) primary national ambient air quality standard (NAAQS) in the Beaver County, Pennsylvania SO₂ nonattainment area (hereafter referred to as the “Beaver Area” or “Area”). The attainment plan includes the base year emissions inventory, an analysis of the reasonably available control technology (RACT) and reasonably available control measure (RACM) requirements, a reasonable further progress (RFP) plan, a modeling demonstration of SO₂ attainment, enforceable emission limitations and control measures, contingency measures for the Beaver Area, and Pennsylvania’s new source review (NSR) permitting program. As part of approving the attainment plan, EPA is approving into the Pennsylvania SIP new SO₂ emission limits and associated compliance parameters for the FirstEnergy Generation, LLC (FirstEnergy) Bruce Mansfield Power Station (Bruce Mansfield) and a consent order with Jewel Acquisition Midland steel plant (Jewel Facility). EPA is approving these revisions that demonstrate attainment of the

SO₂ NAAQS in the Beaver Area in accordance with the requirements of the Clean Air Act (CAA).

DATES: This final rule is effective on **[insert date 30 days after date of publication in the Federal Register]**.

ADDRESSES: EPA has established a docket for this action under Docket ID Number EPA-R03-OAR-2017-0681. All documents in the docket are listed on the <https://www.regulations.gov> website. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available through <https://www.regulations.gov>, or please contact the person identified in the “For Further Information Contact” section for additional availability information.

FOR FURTHER INFORMATION CONTACT: Megan Goold, Planning & Implementation Branch (3AD30), Air & Radiation Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. The telephone number is (215) 814-2027. Ms. Goold can also be reached via electronic mail at goold.megan@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Background

On June 2, 2010, the EPA Administrator signed a final rule establishing a new SO₂ primary NAAQS as a 1-hour standard of 75 parts per billion (ppb), based on a 3-year average of the

annual 99th percentile of daily maximum 1-hour average concentrations. See 75 FR 35520 (June 22, 2010), codified at 40 CFR 50.17. This action also provided for revocation of the existing 1971 primary annual and 24-hour standards, subject to certain conditions.¹ Following promulgation of a new or revised NAAQS, EPA is required by the CAA to designate areas throughout the United States as attaining or not attaining the NAAQS; this designation process is described in section 107(d)(1)-(2) of the CAA. On August 5, 2013, EPA promulgated initial air quality designations for 29 areas for the 2010 SO₂ NAAQS (78 FR 47191), which became effective on October 4, 2013, based on violating air quality monitoring data for calendar years 2009–2011, where there were sufficient data to support a nonattainment designation.²

Effective on October 4, 2013, the Beaver Area was designated as nonattainment for the 2010 SO₂ NAAQS for an area that encompasses the primary SO₂ emitting source Bruce Mansfield and the nearby SO₂ monitor (Air Quality Site ID: 42-007-0005). The final designation triggered a requirement for Pennsylvania to submit a SIP revision with an attainment plan for how the Area would attain the 2010 SO₂ NAAQS as expeditiously as practicable, but no later than October 4, 2018, in accordance with CAA section 192(a).

For a number of areas, including the Beaver Area, EPA published a document on March 18, 2016, effective April 18, 2016, that Pennsylvania and other pertinent states had failed to submit the required SO₂ attainment plan by this submittal deadline. See 81 FR 14736. This finding

¹ EPA's June 22, 2010, final action provided for revocation of the 1971 primary 24-hour standard of 140 ppb and the annual standard of 30 ppb because they were determined not to add additional public health protection given a 1-hour standard at 75 ppb. See 75 FR 35520. However, the secondary 3-hour SO₂ standard was retained. Currently, the 24-hour and annual standards are only revoked for certain of those areas the EPA has already designated for the 2010 1-hour SO₂ NAAQS. See 40 CFR 50.4(e).

² EPA is continuing its designation efforts for the 2010 SO₂ NAAQS. Pursuant to a court-order entered on March 2, 2015, by the U.S. District Court for the Northern District of California, EPA must complete the remaining designations for the rest of the country on a schedule that contains three specific deadlines. *Sierra Club, et al. v. Environmental Protection Agency*, 13–cv–03953–SI (N.D. Cal. 2015).

initiated a deadline under CAA section 179(a) for the potential imposition of new source review and highway funding sanctions. However, pursuant to Pennsylvania's submittal of September 29, 2017, and EPA's subsequent letter dated October 5, 2017 to Pennsylvania finding the submittal complete and noting the stopping of the sanctions clock, these sanctions under section 179(a) will not be imposed as a consequence of Pennsylvania's having missed the SIP submission deadline. Additionally, under CAA section 110(c), the March 18, 2016 finding triggered a requirement that EPA promulgate a Federal implementation plan (FIP) within two years of the effective date of the finding unless, by that time, the state has made the necessary complete submittal and EPA has approved the submittal as meeting applicable requirements. This FIP obligation will not apply as a result of this action to finalize this SIP approval.

Attainment plans for SO₂ must meet the applicable requirements of the CAA, and specifically, CAA sections 110, 172, 191, and 192. The required components of an attainment plan submittal are listed in section 172(c) of Title I, part D of the CAA, and in EPA's implementing regulations at 40 CFR part 51. On April 23, 2014, EPA issued guidance (hereafter 2014 SO₂ Nonattainment Guidance) recommending how state submissions could address the statutory requirements for SO₂ attainment plans.³ In this guidance, EPA described the statutory requirements for an attainment plan, which include: an accurate base year emissions inventory, of current emissions, for all sources of SO₂ within the nonattainment area (172(c)(3)); an attainment demonstration that includes a modeling analysis showing that the enforceable emissions limitations and other control measures taken by the state will provide for expeditious attainment of the NAAQS (172(c)); demonstration of RFP (172(c)(2)); implementation of RACM, including RACT

³ See "Guidance for 1-Hour SO₂ Nonattainment Area SIP Submissions" (April 23, 2014), available at https://www.epa.gov/sites/production/files/2016-06/documents/20140423guidance_nonattainment_sip.pdf.

(172(c)(1)); Nonattainment NSR requirements (172(c)(5)); and adequate contingency measures for the affected area (172(c)(9)).

II. Summary of SIP Revision and EPA Analysis

In accordance with section 172(c) of the CAA, the Pennsylvania attainment plan for the Beaver Area includes: (1) an emissions inventory for SO₂ for the plan's base year (2011); and (2) an attainment demonstration. The formal SIP revision was submitted by Pennsylvania on September 29, 2017. The attainment demonstration includes the following: analyses that locate, identify, and quantify sources of emissions contributing to violations of the 2010 SO₂ NAAQS; a determination that the control strategy for the primary SO₂ source within the nonattainment area constitutes RACM/RACT; a dispersion modeling analysis of an emissions control strategy for the primary SO₂ source (Bruce Mansfield), showing attainment of the SO₂ NAAQS by the October 4, 2018 attainment date; requirements for RFP toward attaining the SO₂ NAAQS in the Area; contingency measures; the assertion that Pennsylvania's existing SIP-approved NSR program meets the applicable requirements for SO₂; and the request that emission limitations and compliance parameters for Bruce Mansfield be incorporated into the SIP. On October 5, 2018 (83 FR 50314), EPA published a notice of proposed rulemaking (NPRM) for the Commonwealth of Pennsylvania. In the NPRM, EPA proposed approval of the attainment plan for the Beaver Area for the 2010 SO₂ NAAQS. Comments on EPA's proposed rulemaking were due on or before November 5, 2018.

Other specific requirements of the Beaver Area attainment plan and the rationale for EPA's proposed action are explained in the NPRM and will not be restated here. This final action incorporates the rationale provided in the NPRM, except to the extent necessary to reflect any

changes in the rationale in response to the public comments. Multiple comments on the NPRM were received from one entity. Several of the comments had various points and are addressed point by point by EPA. To review the full set of comments received, refer to the Docket for this rulemaking, as identified above. A summary of the comments received and EPA's responses are provided below.

Comment 1. The commenter asserts that considering FirstEnergy's announcement that the Bruce Mansfield Plant will retire in 2021, the proper path forward is for the Pennsylvania Department of Environmental Protection (PADEP) to incorporate that retirement into the SIP and set emission limits for the plant of zero.

Response 1. EPA disagrees with the commenter that PADEP needs to revise their SIP submission to incorporate the retirement of Bruce Mansfield. The Commonwealth of Pennsylvania correctly submitted a complete attainment plan SIP on September 29, 2017, and EPA is finalizing approval of that submittal with this action. The Beaver Area Attainment Plan includes modeling using the Bruce Mansfield critical emissions values (CEVs) and operational restrictions for other SO₂ sources in the area that demonstrates attainment of the 1-hour SO₂ NAAQS. PADEP developed comparably stringent 30-day emissions limits for Bruce Mansfield based on the modeled CEVs. The attainment plan meets the requirements of CAA Section 172(c) as submitted, and there is no need to amend the plan to incorporate the planned shutdown of Bruce Mansfield. In addition to the planned shutdown which the commenter mentioned, EPA is aware that Units 1 and 2 of the Bruce Mansfield Plant have been listed on PJM's (Pennsylvania New Jersey Maryland Interconnection LLC) deactivation list as of February 5, 2019 (which was after the public comment period for this action); nevertheless, EPA continues

to assert that even though Bruce Mansfield Units 1 and 2 are already deactivated, the SIP does not need to be amended. The permits for these units have not been retired, and, thus, the units are still permitted to emit SO₂ to the allowable emission limit. The emission limits and operational restrictions being incorporated into the SIP in this action are still in effect, and still provide for attainment of the 1-hour SO₂ NAAQS, as the attainment modeling demonstrated.

Comment 2. The commenter claims that EPA has failed to issue a FIP or impose sanctions against the state for not having a Federally enforceable SIP that demonstrates how the Beaver Area will reach attainment by the statutorily required compliance deadline of October 4, 2018. The commenter asserts that it is unclear how the SIP can meet this now passed compliance deadline when the limits proposed in the Pennsylvania submission are not presently Federally enforceable.

Response 2. EPA disagrees with the commenter that sanctions should have been applied in this case because, as discussed in the NPRM, the sanctions clock was turned off when EPA determined a complete SIP was submitted as stipulated in CAA 179(a). See also 40 CFR 52.31(d)(5), which provides that a sanctions clock started by a finding of failure to submit a required SIP will be permanently stopped upon a final finding that the deficiency forming the basis of the finding of failure to submit has been corrected, and that in such a case a letter from EPA to the State would be how EPA issues a finding that the deficiency has been corrected.

EPA agrees with the commenter that the approval of this SIP did not occur before the October 4, 2018 deadline for NAAQS attainment. However, EPA disagrees that the proposed emission limits at Bruce Mansfield and operational restrictions at the Jewel Facility in the SIP, which have been in effect and enforceable at the state level since October 1, 2018, and September 21, 2017,

respectively, have not brought the SO₂ concentrations in the area under the 75-ppb standard by the applicable deadline. Supporting evidence of timely attainment is available from the most recent SO₂ concentrations at the Brighton Township monitor (AQS 42-007-0005) in the nonattainment area being well below the 75-ppb standard. Specifically, the 99th percentile of the 1-hour maximum SO₂ concentrations at the (previously violating) Brighton Township monitor was 18 ppb in 2018, and the most recent design value (3-year average of the annual 99th percentile of 1-hour daily maximum concentrations using 2016-2018 data) was 22 ppb.⁴

EPA also disagrees with the apparent view of the commenter that because EPA did not approve, and thereby make Federally enforceable, the Commonwealth's emission limits before the October 4, 2018 attainment deadline, Pennsylvania's plan itself is somehow no longer approvable and EPA cannot thereafter approve the emissions limits and make them Federally enforceable. Such a view cannot be correct, as adopting it would preclude EPA from ever being able to approve a SIP that has fully adequate emissions limits that reduce emissions concentrations to attaining levels merely due to EPA's timing of action, rather than based on the technical merits of the SIP, and force EPA to possibly adopt in a FIP the exact same emissions limits but on an even more belated schedule. Such a result is not compelled by the CAA, and would offend the value of cooperative federalism reflected in the Act. In addition, EPA believes its obligation is to evaluate the state's plan, and to evaluate whether the state has established timely obligations for pertinent sources, without regard to the timing by which the state enforceable obligations become Federally enforceable.

⁴ The Brighton Township monitor was the highest violating monitor in Beaver County in 2011 when the area was designated nonattainment. The 2009-2011 Design Value (3-year average of the annual 99th percentile of 1-hour daily maximum concentrations) was 158 ppb, and the 2008-2010 design value was 167 ppb.

In any case, EPA has proposed approval, and with this action, finalizes approval of the Beaver, PA attainment plan, which makes Federally enforceable the 30-day average SO₂ limits at Bruce Mansfield and operational restrictions at the Jewel Facility. The 30-day average SO₂ limits for Bruce Mansfield were developed using procedures recommended in EPA's 2014 SO₂ Nonattainment Area Guidance and are a comparably stringent substitute for a 1-hour limit at the modeled CEV. The CEV for Bruce Mansfield and the operational restrictions for the Jewel Facility were modeled as resulting in attainment of the NAAQS, Bruce Mansfield is complying with the comparably stringent 30-day limits, Jewel is complying with the operational restrictions, and the limits have been enforceable Pennsylvania since October 1, 2018 for Bruce Mansfield, and since September 21, 2017 for the Jewel Facility.

In regard to EPA's failure to issue a FIP, EPA believes that the most expeditious way to bring this area into attainment and maintain attainment is to approve the submitted SIP with the limits and restrictions adopted by the Commonwealth, making those limits and restrictions Federally enforceable. Also, any FIP for this area would likely mirror what Pennsylvania has proposed in the SIP, so approval of the SIP is likely just as effective and a more efficient way to ensure that the limits and other elements of the SIP become Federally enforceable. Thus, it is reasonable to conclude that the most expeditious approach to having a Federally enforceable plan to bring the area into attainment and keep it in attainment is to approve this SIP, and not issue a FIP.

Comment 3. The commenter asserts that the 30-day average emission limits in the Proposal for Bruce Mansfield are fundamentally incapable of protecting a 1-hour standard. The commenter provided two references to EPA documents where EPA states that averaging periods for

emissions limits should be consistent with the NAAQS averaging time periods.⁵

Response 3. EPA disagrees with the commenter's statement that the proposed 30-day limit is fundamentally incapable of protecting the 1-hour NAAQS. EPA believes as a general matter that properly set, longer term average limits are comparably effective in providing for attainment of the 1-hour SO₂ standard as 1-hour limits. EPA's 2014 SO₂ Nonattainment Area Guidance sets forth in detail the reasoning supporting its view that the distribution of emissions that can be expected in compliance with a properly set longer term average limit is likely to yield comparable overall air quality than constant hourly emissions set at a level that provides for attainment. See 2014 SO₂ Nonattainment Guidance, including Appendix B. This reasoning is also expressed in detail in the NPRM for this action.

At the outset, EPA notes that the specific examples of earlier EPA statements cited by the commenter (*i.e.*, those contained in Exhibits 1 and 2 to Appendix A of the comment submission) pre-date the release of EPA's 2014 SO₂ Nonattainment Area Guidance. As such, these examples only reflect the Agency's development of its policy for implementing the 2010 SO₂ NAAQS as of the dates of the issuance of the statements. At the time these statements were issued, EPA had not yet addressed the specific question of whether it might be possible to devise an emission limit with an averaging period longer than 1-hour, with appropriate adjustments that would make it comparably stringent to an emission limit shown to attain 1-hour emission levels, that could adequately ensure attainment of the SO₂ NAAQS. None of the pre-2014 EPA documents cited by the commenter address this question; consequently, it is not reasonable to read any of them as rejecting that possibility.

⁵ EPA Region 7 Comments re: Sunflower Holcomb Station Expansion Project 4 (August 12, 2010); EPA Region 5 comments re: Monroe Power Plant Construction Permit 1 (February 1, 2012).

In contrast, EPA's 2014 SO₂ Nonattainment Area Guidance specifically addressed this issue as it pertains to requirements for SIPs for SO₂ nonattainment areas under the 2010 NAAQS, especially with regard to the use of appropriately set comparably stringent limitations based on averaging times as long as 30 days. EPA found that a longer term average limit which is comparably stringent to a short-term average limit is likely to yield comparable air quality; and that the net effect of allowing emissions variability over time but requiring a lower average emission level is that the resulting worst-case air quality is likely to be comparable to the worst-case air quality resulting from the corresponding higher constant short-term average emission limit. See 2014 SO₂ Nonattainment Guidance.

Any accounting of whether a 30-day average limit provides for attainment must consider factors reducing the likelihood of 1-hour average concentrations that exceed the NAAQS level as well as factors creating a risk of additional concentrations that exceed the NAAQS level. To facilitate this analysis, EPA used the concept of a CEV for the SO₂-emitting facilities which are being addressed in a nonattainment SIP. The CEV is the continuous 1-hour emission rate which is expected to result in the 3-year average of annual 99th percentile daily maximum 1-hour average concentrations being at or below 75 ppb, which in a typical year means that fewer than four days have maximum hourly ambient SO₂ concentrations exceeding 75 ppb. See 2014 SO₂ Nonattainment Guidance, Appendix B.

EPA recognizes that a 30-day limit can allow occasions in which emissions exceed the CEV, and such occasions yield the possibility of concentrations exceeding the NAAQS level that would not be expected if emissions were always at the CEV. At the same time, the establishment of the 30-day average limit at a level below the CEV means that emissions must routinely be lower than

they would be required to be with a 1-hour emission limit set at the CEV. On those critical modeled days in which emissions at the CEV are expected to result in concentrations exceeding 75 ppb, emissions set to comply with a 30-day average level which is below the CEV may well result in concentrations below 75 ppb. Requiring emissions on average to be below the CEV introduces significant chances that emissions will be below the CEV on critical days, so that such a requirement creates significant chances that air quality would be better than 75 ppb on days that, with emissions at the CEV, concentrations would have exceeded 75 ppb.

The NPRM for this area provides an illustrative example of the effect that application of a limit with an averaging time longer than 1 hour can have on air quality. This example illustrates both 1) the possibility of elevated emissions (emissions above the CEV) causing concentrations exceeding the NAAQS level not expected with emissions at or below the CEV and 2) the possibility that the requirement for routinely lower emissions would result in avoiding concentrations exceeding 75 ppb that would be expected with emissions at the CEV. In this example, moving from a 1-hour limit to a 30-day average limit results in one day that exceeds 75 ppb that would otherwise be below 75 ppb, one day that is below 75 ppb that would otherwise be above 75 ppb, and one day that is below 75 ppb that would otherwise be at 75 ppb. In net, the 99th percentile of the 30-day average limit scenario is lower than that of the 1-hour limit scenario, with a design value of 67.5 ppb rather than 75 ppb. Stated more generally, this example illustrates several points: 1) the variations in emissions that are accounted for with a longer term average limit can yield higher concentrations on some days and lower concentrations on other days, as determined by the factors influencing dispersion on each day, 2) one must account for both possibilities, and 3) accounting for both effects can yield the conclusion that a properly set longer term average limit can provide as good or better air quality than allowing constant

emissions at a higher level. The commenter has not disputed this rationale that longer term limits can suitably provide for attainment, and thus EPA continues to assert that appropriately set 30-day emission limits can be protective of the 1-hour SO₂ standard.

Comment 3a. The commenter states that the Bruce Mansfield 30-day average emission limits are 720 times the standard, and they would do nothing to change Bruce Mansfield's current behavior. The commenter provided data from the last four years of publicly available emissions data for the facility and notes that the proposed 30-day average emission limits for Units 1 and 2 combined, and for Unit 3, respectively, are far higher than actual historical emissions. The commenter also provided hourly emissions data from Bruce Mansfield Units 1 and 2 combined from June 1, 2013 to May 30, 2017⁶ and states that during this time period, there are 101 hours in which emissions from Units 1 and 2 exceed the hourly limit. The commenter further asserts that using their 30-day average analysis, Bruce Mansfield would have been in "compliance" with the proposed 30-day emission limits during this time period. In the commenter's view, given that exceedances of the NAAQS can occur if as few as four hours over the course of a year are above the 75-ppb threshold, the commenter states that it is impossible that the proposed 30-day limit will protect the standard.

Response 3a. EPA disagrees with the commenter that the 30-day average emission limits are 720 times the standard. The averaging period for the emissions limit is 30 days, or 720 hours, which is 720 times the length of the averaging time of the standard. The 30-day emission limits are not 720 times the 1-hour CEV, and the resulting concentrations are not 720 times the

⁶ The Appendix B spreadsheet submitted with this comment shows the data analysis for the hourly emissions at Bruce Mansfield Units 1 and 2 was for the time period June 1, 2013 through June 30, 2017. However, the text of the comment states the analysis was completed for emissions from June 1, 2013 to May 30, 2017.

NAAQS (75 ppb). More importantly, this comment does not include a rationale that a limit with this averaging time necessarily fails to assure attainment.

The SO₂ emissions and SO₂ concentrations have significantly declined in the Beaver Area. As described in the NPRM for this action, two facilities within the nonattainment area have permanently shut down – AES Beaver, a coal fired power plant, shut down in 2015, and Horsehead Monaca, a zinc smelter, shut down in 2014. In addition, the Jewel Facility, a steel mill, has entered into a Consent Order and Agreement (COA) with PADEP to prohibit operation of the Meltshop (the primary source of sulfur dioxide). The closure of two facilities and the operational restrictions on a third facility have provided SO₂ emission reductions, and a significant portion of these reductions are enforceable pursuant to Pennsylvania’s plan. These reduced allowable emissions, along with the allowable emissions at Bruce Mansfield, have been modeled in accordance with Appendix W to 40 CFR part 51 and the EPA’s 2014 SO₂ Nonattainment Area Guidance and demonstrate that the area will attain the standard by its attainment date. PADEP developed a comparably stringent 30-day average emission limit for Bruce Mansfield using the modeled emission levels as a starting point and adjusted downward, in accordance with procedures recommended in EPA’s SO₂ Nonattainment Area Guidance. In response 3 above and in EPA’s 2014 SO₂ Nonattainment Area Guidance, EPA has explained at length its reasoning that a comparably stringent 30-day average limit is a suitable substitute for a 1-hour limit at the CEV in providing for attainment.

Furthermore, although the focus of this rulemaking is on whether the plan has limits that assure attainment, it is worth noting that significant emission reductions have also occurred and will occur in the future at Bruce Mansfield. Compared to emissions for 2010 to 2012 (the period of

the air quality data that resulted in this area being designated nonattainment), when emissions from Bruce Mansfield averaged 20,700 tons per year, emissions for 2017 to 2018 averaged 7,000 tons per year. As stated in the attainment plan, in order to comply with the new limit, Bruce Mansfield planned to make operational and physical changes prior to October 2018 to ensure compliance with the new limits (Appendix E-1, p. 7). Also, although shutdowns at Bruce Mansfield are beyond the planning horizon of the SIP and are not part of the SIP, the shutdown of this full facility that is slated for 2021 provides further confidence that the area will continue to attain the standard.

Therefore, EPA continues to believe that the emission limits at Bruce Mansfield, in concert with the shutdown of AES Beaver and Horsehead Monaca, and operating restrictions on the Jewel plant, provide the SO₂ emission reductions required to demonstrate attainment. EPA notes that attainment is not solely dependent on reducing emissions or changing the operations at Bruce Mansfield, but on all the SO₂ emission reductions that have occurred and were modeled in the nonattainment area.

Furthermore, EPA disagrees with the commenter's premise that the existence of hours with emissions exceeding modeled attainment levels despite compliance with the 30-day average limit necessarily means that the 30-day limit is not protective of the NAAQS. (The commenter claims the existence of 101 hours from mid-2013 to mid-2017 when the emissions from Units 1 and 2 exceeded the "hourly limit" despite being in compliance with the 30-day limit. In fact, there is no hourly limit; as discussed further below, the commenter identified an equation, based on Pennsylvania's simulations of attainment level emissions, for characterizing the range of combinations of hourly Unit 1, Unit 2, and Unit 3 emissions that would model attainment, and

found that 101 hours had emissions exceeding those levels.) Indeed, the NPRM provides an extensive discussion of EPA's rationale for believing that a 30-day average limit, which creates risk of occasions of emissions exceeding the CEV but also creates a compensating likelihood that the mandate for lower average emissions will avert some of the exceedances that would be allowed with a higher 1-hour average limit, will have the net effect of assuring attainment.

However, the commenter does not address EPA's full rationale for concluding that properly set 30-day average limits are a suitable basis for providing for attainment of the 1-hour SO₂ standard. Instead, the commenter merely notes that there were 101 hours when the emissions from Unit 1 and 2 exceeded attainment levels (which is 0.36 percent of the operating hours that the commenter examined) but fails to address the effect of the adjusted 30-day average limit requiring emissions to be well below critical emission levels, namely avoiding some exceedances that would be expected to occur with emissions allowed always to be at the CEV. Consequently, the commenter does not acknowledge or address the occasions in which the longer term limit provides better air quality, which is a key element of EPA's rationale for concluding that the net effect of limiting longer term average emissions to a downward adjusted level can be comparably effective in providing for attainment as limiting 1-hour emissions to the level of the CEV.

Because the pertinent question is whether Pennsylvania's plan provides for attainment, EPA must address the net effect of applying a long-term average, not just considering those factors that increase the likelihood of exceedances or just considering those factors that reduce the likelihood of exceedances.

At issue here is how often emissions from Bruce Mansfield, upon compliance with Pennsylvania's 30-day average limits, might be expected to have hourly emission rates above the

level modeled to result in attainment. Ordinarily, a single model run establishes upper bound hourly emission rates at which the area attains the standard; EPA calls these hourly emission rates CEVs. However, in this case, Pennsylvania conducted numerous runs reflecting the combined effect of emissions from the three units (two stacks) at Bruce Mansfield. These model runs were used to determine the relationship between emissions from Stacks 1 and 2 which would result in attainment.

Therefore, to determine the historic frequency of excess emission events, a more complicated analysis is warranted. Part of such analysis should be to establish criteria for defining excess emission events, i.e., hours when emissions exceed the level demonstrated in the state's plan to provide for attainment. Ordinarily, excess emission events may be defined simply as hours when emissions exceed the CEV. However, in this case, Pennsylvania has defined attainment level emissions in significant part as an interactive function of the emissions of both stacks at Bruce Mansfield. In particular, using the results of 17 modeling runs reflecting a range of combinations of emissions from Bruce Mansfield Stack 1 and Stack 2, the Commonwealth determined an equation defining the range of combinations of 1-hour emissions that provide for attainment, as indicated in their correction email dated 6/11/18 which was included in the docket for this action, and discussed in the NPRM. The equation contains a critical value, which is the equation result (applying the equation to Stack 1 and Stack 2 emissions) that is considered to correspond to the sets of 1-hour emission rates that Pennsylvania modeled as providing attainment. EPA will call this critical value the critical formula value (CFV), and will call the analysis to determine how many exceedance events over the CFV occurred, the CFV exceedance analysis.

The commenter developed a different CFV, based on a different equation (again based on the modeled combinations of Stack 1 and Stack 2 emissions) to define the combinations of 1-hour emissions from these stacks that could be considered to yield attainment.

Finally, EPA developed a third equation (with a third CFV), again designed around a graph of the emission values that modeled attainment from Stack 1 and Stack 2.

These three equations (reflecting different order polynomials and having different CFVs) provide three different expressions of the maximum combinations of Stack 1 and Stack 2 emissions that may be considered to yield attainment, and thus provide three different means of assessing whether a particular historic combination of Stack 1 and Stack 2 emissions should be considered to be an excess emission event. These equations are presented in Pennsylvania's correction email, in the commenter's comment letter, and in EPA's technical support document (TSD) for this rulemaking, respectively.

These three approaches all yielded similar results. Pennsylvania, examining data for 2012 to 2016, found that 219 hours out of 43,848 hours, or 0.50 percent of hours, exceed Pennsylvania's CFV. (Dividing this 219 hours over the number of hours in which at least one unit is operating, 43,030 hours, suggests 0.51 percent of operating hours exceeded the CFV.) The commenter, examining data for mid-2013 to mid-2017, found that 101 hours (which, out of 28,074 operating hours, is 0.36 percent) exceeded the CFV. EPA, examining data for 2011 to 2017, found that 226 hours out of 56,503 operating hours, or 0.40 percent, constituted excess emission events, including 221 hours that exceeded the CFV and 5 hours in which Unit 3, operating alone, exceeded its CEV. Additional information regarding these three analyses are provided respectively in the submittal, the comment letter, and the TSD noted above.

These results should be put in the context of whether the baseline periods for these analyses reflected compliance with Pennsylvania's emission limits and, if not, the frequency with which the facility exceeded these limits. Pennsylvania did not assess whether Bruce Mansfield met its adopted limits. The commenter did conduct this assessment and concluded that the facility met all three limits for all 30-day average periods. However, EPA believes that the commenter analyzed these data incorrectly, using averaging procedures different from the procedures that Pennsylvania would use in assessing compliance.

The COA that Pennsylvania adopted and submitted to govern emissions from Bruce Mansfield does not precisely define the data handling procedures that it would use in assessing compliance with the pertinent limits. However, Pennsylvania states, "The 30-operating day rolling average SO₂ emissions rate shall be calculated using the procedures outlined in the Mercury and Air Toxics Standards (MATS) regulations in 40 C.F.R. Parts 60 and 63." EPA interprets this statement to mean that compliance shall be assessed by calculating an average of the hourly emission rates applicable while the facility is operating. While the SO₂ limit in MATS, which regulates mass of emissions per unit heat input, has a different form from Pennsylvania's limit, which regulates mass per hour, EPA interprets Pennsylvania to intend the same feature of conducting its compliance calculations in a manner that gives no weight to periods in which the unit(s) is not operating. (While these procedures may be a moot point if Bruce Mansfield does not resume operation, EPA's evaluation of the approvability of Pennsylvania's SIP necessitates review of whether the applicable limits provide for attainment should the facility restart.)

The commenter computed 30-day averages by computing daily average emission rates (including only operating hour emission rates) and then by computing the unweighted average of these daily

average values. This approach gives days with partial operation the same weight as days with 24 hours of operation, and thus overweights the hours on the partial operation days.

EPA then conducted its own evaluation of whether Bruce Mansfield was complying with the limits in Pennsylvania's SIP during the period being evaluated for excess emission events. In this evaluation, EPA examined data for 2011 to 2017.⁷ During this period, EPA concluded that Bruce Mansfield was in compliance with the prospective limits for Stack 1 (Units 1 and 2) and for Stack 2 (Unit 3) at all times but exceeded the formula limit for 16 out of 2116 averaging periods, or 0.76 percent. Therefore, EPA believes that compliance with the limits in Pennsylvania's SIP will require Bruce Mansfield to have a slightly smaller fraction of hours exceeding the CFV than occurred in the historical record. EPA, Pennsylvania, and the commenter nevertheless agree that the frequency with which Bruce Mansfield could be expected to exceed the CFV (or either of the stack-specific CEVs) is less than 0.6 percent of operating hours.

However, EPA disagrees with the commenter on the air quality consequences of these occasions of elevated emissions. EPA believes that a full analysis of the air quality impact of Pennsylvania's limits must consider these hours of elevated emissions in conjunction with the far greater number of hours when emissions are required to be well below the level (on average, on the order of 20 to 30 percent below the level) that would model violations. For reasons described in more detail in EPA's guidance and in the NPRM for this action, EPA believes that the net

⁷ Consistent with the characteristics of data handling in MATS, EPA interprets Pennsylvania's limits to reflect data handling in which compliance with these mass per hour limits is assessed by dividing total mass by total operating time, thereby giving hours with fractional operating time the appropriate fractional weight. For simplicity in this analysis, EPA gave the same weight to all hours with any operation, averaging the hourly mass values regardless of what portion of the hour was operational. However, EPA expects in this case that a more precise analysis would give similar results.

effect of these compensating factors is that Pennsylvania's limits provide adequate assurance that the area will attain the SO₂ standard. EPA notes that the data used for these analyses were from time periods prior to the adoption of 30-day emission limits, prior to the requirement of 95% scrubber control efficiency, and prior to the operational and physical changes that were made to meet the new lower emission limits. Through the adoption of these new requirements, Bruce Mansfield will restrict the variability in emissions and will need to comply with new emission limits.

After reviewing Pennsylvania's submittal, EPA finds that the limits established for Bruce Mansfield provide a suitable alternative to establishing 1-hour average emission limits for this source. Consistent with EPA guidance, EPA anticipates that, if Bruce Mansfield resumes operation and complies with Pennsylvania's limits, excess emission events will be sufficiently infrequent that compliance with the 30-day average limits will provide for attainment.

Comment 3b. The commenter states that EPA suggests that because Bruce Mansfield has exceeded the polynomial-based emission limits on an hourly basis only "0.50%" of the time during 2012-2016, that the 30-day limits are therefore adequately protective.⁸ However, the commenter asserts that EPA's reliance on FirstEnergy's math is misplaced and its reasoning is incorrect. First, FirstEnergy and EPA improperly compare the exceedances not to plant operating hours, but to the number of hours in the calendar. The commenter states that FirstEnergy and EPA significantly understate the significance of those nonoperating hours because there are thousands of hours in which one or another boiler at Bruce Mansfield was not

⁸ The commenter misrepresented EPA's statement. The emission limits are expressed as 30-day average limits. As such, the limits cannot be exceeded on an hourly basis. The commenter presumably meant to refer to the frequency with which the facility exceeded the attainment level hourly emission values, computed by the state's unadjusted polynomial-based formula, which is the frequency that EPA described as being 0.50 percent.

operating, and nearly a thousand hours during the examined time period in which no boiler was operating. The commenter asserts that the 219 hours that FirstEnergy concedes Bruce Mansfield exceeded the polynomial hourly attainment level emissions is significant, given the commenter's view that the NAAQS can be violated with heightened emissions in as few as four hours a year over three years. Second, FirstEnergy's analysis only looks at times in which the emissions from Units 1 and 2 together exceed the polynomial function, and not at those times when emissions from Unit 3 exceed the polynomial function. As such, the commenter states that the analysis only looks at a part of the story—there are numerous hours where emissions from Unit 3 all by itself are enough to mean that, even with their emission limits governed by the polynomial function, Units 1 and 2 would need to emit negatively. As such, the commenter asserts that FirstEnergy and EPA are arbitrarily ignoring a significant aspect of the problem.

Response 3b. EPA agrees with the commenter regarding mistakes in FirstEnergy's math, but disagrees with the commenter regarding its claims that a 30-day limit cannot be protective of a 1-hour standard. EPA has addressed the latter issue above in Response 3a.

Pennsylvania/FirstEnergy's CFV analysis contained two mistakes. FirstEnergy failed to only use plant operating hours in their CFV analysis. They also failed to count hours as exceeding the attainment emission level when the emissions from Unit 3 would have exceeded the limits on its own, thereby understating the number of hours in which that, if modeled as occurring constantly for every hour of the year, would be expected to estimate a violation. (The commenter describes hours with excessive emissions from Unit 3 as hours in which "Units 1 and 2 would need to emit negatively." EPA agrees that these hours when Unit 3 emits above its own CEV need to be counted as excess emissions hours for purposes of this analysis, but EPA believes that the

pertinent issue is whether the plant emitted excessively, not whether the limits require impossible emission levels.) EPA addressed these mistakes in its analysis. In order to determine exceedance events in respect to the CFV, EPA kept all hours where Stack 1 (unit 1 and 2) and Stack 2 had emission values. EPA included these occurrences in the analysis because the formula applies when Stack 1 and Stack 2 are in service, and therefore, the analysis to determine how many times the formula was exceeded should include any hours when emissions were coming out of both stacks. As described above, EPA's CFV exceedance analysis shows that 0.4% of operating hours during 2011 through 2017 constituted an excess emissions event.

Consequently, EPA continues to have reasonable confidence that occasions with emissions above the CFV will be infrequent and limited in magnitude. EPA's revised CFV analysis is available in the docket for this action and is described in more detail in the TSD for this action. EPA provided a full rationale for comparably stringent longer term averages in Responses 3 and 3a above, concluding that the net effect of limiting longer term average emissions to a downward adjusted level can be comparably effective in providing for attainment as limiting 1-hour emissions to the level of the CEV.

Comment 3c. The commenter asserts that Pennsylvania's contingency measures are limited and do not support Pennsylvania's claims that the measures will minimize further the chance of an exceedance. The commenter asserts that the contingency measures will require Bruce Mansfield to 1) audit their systems if the emissions become close to the emission limits and 2) require Bruce Mansfield to monitor their systems to ensure the facility does not cause a violation at the monitor. The commenter claims that number 1 above is what Bruce Mansfield ought to be doing anyway to ensure that they are in compliance with their permit limits, and number 2 incorrectly

relies on one monitor when attainment should be reached throughout the nonattainment area.

Response 3c. EPA disagrees with the commenter that the contingency measures are too limited and do not support Pennsylvania's claims that the measures will minimize further the chance of an exceedance. The CAA requires a Nonattainment SIP to model attainment throughout the nonattainment area. Section 172(c)(9) of the CAA defines contingency measures as such measures in a SIP that are to be implemented in the event that an area fails to make RFP, or fails to attain the NAAQS by the applicable attainment date. Contingency measures are to become effective without further action by the state or EPA, where the area has failed to (1) achieve RFP or, (2) attain the NAAQS by the statutory attainment date for the affected area. These control measures are to consist of other available control measures that are not included in the control strategy for the attainment plan SIP for the affected area. However, EPA has also explained that SO₂ presents special considerations.⁹ First, for some of the other criteria pollutants, the analytical tools for quantifying the relationship between reductions in precursor emissions and resulting air quality improvements remains subject to significant uncertainties, in contrast with procedures for directly-emitted pollutants such as SO₂. Second, emission estimates and attainment analyses for other criteria pollutants can be strongly influenced by overly optimistic assumptions about control efficiency and rates of compliance for many small sources. This is not the case for SO₂.

In contrast, the control efficiencies for SO₂ control measures are well understood and are far less

⁹ See SO₂ Guideline Document, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, EPA-452/R-94-008, February 1994. See also EPA's 2014 SO₂ Nonattainment Guidance. See General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990 at 57 FR 13498 (April 16, 1992).

prone to uncertainty. Because SO₂ control measures are based on what is directly and quantifiably necessary to attain the SO₂ NAAQS, it would be unlikely for an area to implement the necessary emission controls yet fail to attain the NAAQS. See 2014 SO₂ Nonattainment Area Guidance, page 41. Therefore, for SO₂ programs, EPA has explained that contingency measures can mean that the air agency has a comprehensive program to identify sources of violations of the SO₂ NAAQS and to undertake an aggressive follow-up for compliance and enforcement, including expedited procedures for establishing enforceable consent agreements pending the adoption of the revised SIP. EPA believes that this approach continues to be valid for the implementation of contingency measures to address the 2010 SO₂ NAAQS, and consequently concludes that Pennsylvania's comprehensive enforcement program, as discussed below, satisfies the contingency measure requirement.

This approach to contingency measures for SO₂ does not preclude an air agency from requiring additional measures that are enforceable and appropriate for a particular source category if the state determines such supplementary measures are appropriate. As EPA has stated in our 2014 SO₂ Nonattainment Area Guidance, in order for EPA to rely on these measures to approve the SIP, the supplementary contingency measures would need to be fully adopted provisions in the SIP that become effective where the area has failed to meet RFP or fails to attain the standard by the statutory attainment date. See 2014 SO₂ Nonattainment Guidance, page 42.

As noted in EPA's NPRM, EPA's 2014 SO₂ Nonattainment Area Guidance describes special features of SO₂ planning that influence the suitability of alternative means of addressing the requirement in section 172(c)(9) for contingency measures. One effective alternative means identified by the Guidance is a comprehensive enforcement program for sources emitting SO₂.

Pennsylvania has a comprehensive enforcement program as specified in Section 4(27) of the Pennsylvania Air Pollution Control Act (APCA), 35 P.S. § 4004(27). Under this program, PADEP is authorized to take any action it deems necessary or proper for the effective enforcement of the Act and the rules and regulations promulgated under the Act. Such actions include the issuance of orders (for example, enforcement orders and orders to take corrective action to address air pollution or the danger of air pollution from a source) and the assessment of civil penalties. Sections 9.1 and 10.1 of the APCA, 35 P.S. §§ 4009.1 and 4010.1, also expressly authorize PADEP to issue orders to aid in the enforcement of the APCA and to assess civil penalties.

Any person in violation of the APCA, the rules and regulations, any order of PADEP, or a plan approval or operating permit conditions could also be subject to criminal fines upon conviction under Section 9, 35 P.S. § 4009. Section 7.1 of the APCA, 35 P.S. § 4007.1, prohibits PADEP from issuing plan approvals and operating permits for any applicant, permittee, or a general partner, parent or subsidiary corporation of the applicant or the permittee that is placed on PADEP's Compliance Docket until the violations are corrected to the satisfaction of PADEP.

In addition to having a fully approved enforcement program, Pennsylvania has included contingency measures that are triggered when a source's emissions reach a certain percentage of the allowable emissions and based on any monitor in the nonattainment area registering a 1-hour daily maximum concentration exceeding 75 ppb. These measures are in line with the supplemental contingency measure guidance EPA mentions above and are included in the FirstEnergy COA and the Jewel COA and thus will be fully approved provisions within the SIP. In regard to the monitoring contingency measure, the commenter erroneously confuses the requirement for Pennsylvania to plan for attainment in the entire Nonattainment area with the

ability of the Commonwealth to use monitoring data from a single location as a trigger for a contingency measure. Pennsylvania has demonstrated attainment throughout the entire Beaver Nonattainment area through their modeling demonstration discussed previously. Using monitoring data to trigger supplemental contingency measures is a defensible approach for helping achieve attainment throughout the area in cases where the plan has unexpectedly not achieved attainment.

EPA concludes that Pennsylvania's enforcement program by itself suffices to satisfy the contingency measure requirements. The magnitude of prospective benefit from Pennsylvania's supplemental contingency measures is unclear, but it is clear that these measures can only improve and will not worsen air quality. Therefore, notwithstanding the commenter's concerns about the specificity and triggering of the supplementary measures identified in the Pennsylvania SIP and the FirstEnergy and Jewel COAs, EPA believes that Pennsylvania's enforcement program, which is enhanced by the supplementary provisions in the COAs, suffice to meet Section 172(c)(9) requirements as interpreted in the 1992 General Preamble and the 2014 SO₂ Nonattainment Guidance.

Comment 4. The commenter states that the conversion factors used to determine the comparably stringent longer term limit for Bruce Mansfield are arbitrary and insufficiently protective. The commenter asserts that the conversion factors are highly dependent on the time period selected. The commenter provided a table of varying time periods, and corresponding adjustment factors. The commenter notes that depending on the time period selected the adjustment factors can range from 0.558 to 0.673.

Response 4. EPA disagrees with the commenter's assertion that Bruce Mansfield's SO₂ limits

are arbitrary and insufficiently protective. As stated in EPA's 2014 SO₂ Nonattainment Area Guidance, EPA expects that establishing an appropriate longer-term average limit will involve assessing a downward adjustment in the level of the limit that would provide for comparable stringency. This assessment should generally be conducted using data obtained by a Continuous Emissions Monitoring System (CEMS), in order to have sufficient data to obtain a robust and reliable assessment of the anticipated relationship between longer-term average emissions and 1-hour emission values. This is necessary to suitably assess the warranted degree of adjustment of the longer-term average limit in order to provide comparable stringency to the 1-hour emission rate that is determined to provide for attainment.

EPA generally expects that datasets reflecting hourly data for at least three to five years of stable operation (*i.e.*, without changes that significantly alter emissions variability) would be needed to conduct a suitably reliable analysis. PADEP's use of 2012-2016 CEM data represents five years of historic data of stable operation for the Bruce Mansfield facility, and provides the robustness recommended in EPA's guidance.

In contrast, the commenter's adjustment factors were based on time intervals that varied from six months to three and a half years, which are all less than the time interval used by Pennsylvania. The commenter's adjustment factors resulting from using shorter time periods illustrate a point that EPA considered in formulating its guidance, which is that using an insufficient amount of data is prone to yield results that vary unduly by data period and may not be a sufficiently robust basis for determining a reliable adjustment factor. The variability in adjustment factors using time intervals from six months to three and a half years provided by the commenter demonstrates the insufficiency of these shorter time periods for use in development of such an

adjustment factor, but does not demonstrate the insufficiency of the overall method in EPA's 2014 SO₂ Nonattainment Area Guidance had it been appropriately applied, nor does it demonstrate that Pennsylvania's adjustment factor is inappropriate.

EPA's guidance recommends calculating adjustment factors using statistics calculated according to the data handling procedures by which compliance is determined. The COA between Pennsylvania and FirstEnergy indicates that "the 30-operating day rolling average SO₂ emissions rate shall be calculated using the procedures outlined in the MATS regulations in 40 C.F.R. Parts 60 and 63." Pennsylvania and EPA calculated adjustment factors accordingly.

Pennsylvania imposed three separate limits, and EPA considered the adjustment inherent in each limit. For the limit on Unit 3 emissions, Pennsylvania appropriately compared the 99th percentile of 30-day averages of Unit 3 emissions against the 99th percentile of 1-hour values of Unit 3 emissions, computing an adjustment factor of 0.794. The commenter does not contest this adjustment factor. EPA computed similar statistics for seven years of emissions (2011 to 2017) and computed a similar emission factor, 0.786.

For the limit on the sum of Unit 1 and Unit 2 emissions, Pennsylvania conducted separate calculations for Unit 1 and for Unit 2, computing adjustment factors of 0.59 and 0.717, respectively. The commenter objects to the use of the Unit 2 adjustment factor for both units, thereby disregarding the variability of Unit 1. EPA agrees that the variability of Unit 1 may not be disregarded, and that the variability of Unit 2 should not be used as a surrogate for the variability of both units.

However, since the limit governs the sum of emissions from both units, the more pertinent

question is how much variability exists in the sum of emissions from the two units. That is, the appropriate method for computing an adjustment factor for this limit is to use statistics for the sum of emissions from the two units, comparing the 99th percentile of the 30-day average sum of emissions against the 99th percentile of the 1-hour sum of emissions. As discussed in the TSD, EPA computed an adjustment factor in this manner using 2011 to 2017 data for these units, computing a value of 0.72. This indicates that proper calculation of an adjustment factor for this limit yields a result that is very similar to the adjustment that Pennsylvania applied, resulting in a limit that may be considered comparably stringent to the 1-hour limit that Pennsylvania would otherwise have imposed.

The third limit governs the combination of emissions from all three units, in particular mandating that the value of an equation adding the sum of 30-day average emissions from Units 1 and 2 plus two terms (respectively first order and second order) based on emissions from Unit 3 shall not exceed 7,100.¹⁰ Consequently, the most pertinent approach for assessing the effect of using 30-day emission averages in determining compliance with this limit is to apply EPA's recommended procedure to statistics calculated using the equation of Pennsylvania's limit. That is, EPA believes that the best assessment of the appropriate adjustment to the level to be mandated with this equation is to compare the 99th percentile of the values computed with this equation (as would be calculated to determine compliance with the limit) against the 99th percentile of the 1-hour values computed with this equation. Using Pennsylvania's 2012 to 2016 data, EPA in this manner computed an adjustment factor of 75.2 percent. Among the 14 model

¹⁰ As noted previously, although Pennsylvania's limit is expressed as limiting the sum of Units 1 and 2 emissions to 7100 minus the value of the two terms based on Unit 3 emissions, this translation of the limit provides a more appropriate perspective from which to examine the effect of the collective variability of all three units on the stringency of the collective 30-day average limit.

runs in which Unit 3 emissions comply with the Unit 3 emissions limit, the lowest formula result (i.e., the level of the 1-hour formula limit that would yield attainment in all scenarios) is 9,821. This value multiplied by 75.2 percent yields a comparably stringent 30-day average-based value of 7,385. Since Pennsylvania has imposed a more stringent requirement for the results of this equation (i.e., 7,100), EPA believes that Pennsylvania's limit is at least comparably stringent to the 1-hour-based limit that they would otherwise have imposed.

The commenter's adjustment factors are approximately 0.017 to 0.159 less than the adjustment factor calculated by PADEP, depending upon the time period selected. However, EPA's calculations, using seven years of hourly data from 2011 to 2017, and calculated in accordance with the data handling procedures that will be used in assessing compliance, provide a more robust and more pertinent assessment of the degree of adjustment needed to identify 30-day average-based limits that may be considered comparably stringent to the 1-hour limits that would otherwise have been set. This analysis resulted in an adjustment factor of 0.72 for Units 1 and 2 combined, and a formula limit value of 7,385 rather than the value of 7,100 that Pennsylvania imposed. These values are closely aligned with the adjustment factors reflected in Pennsylvania's limits, and support the limits that Pennsylvania established.

Comment 4a. The commenter notes that the years 2012-2016 used by PADEP in calculating the Bruce Mansfield adjustment factor are problematic. The commenter notes that the facility's dispatch has been steadily declining, that there is a trend of increased start ups and shut downs, and therefore, an increase in short term emission spikes. Specifically, the commenter claims the use of years 2012-2014 are not likely to be representative of future operation as in those years, Bruce Mansfield's operation and emissions were more consistent. The commenter asserts that

future operation will be even more variable considering a 2018 fire at the scrubber system and the need to rebuild part of that system, noting that rebuilding will result in changes to scrubber operation.

Response 4a. EPA disagrees with the commenter that increased start-ups and shutdowns will lead to an increase in SO₂ emission spikes at Bruce Mansfield and disagrees with the commenter that PADEP's use of 2012-2016 emissions data was not representative of future operations (PADEP used 2012 through 2016 emissions, and the commenter's concern is with 2012-2014). EPA notes that the commenter did not provide any material supporting the claim that more start-ups and shutdowns increase SO₂ emissions or cause emission spikes at Bruce Mansfield. EPA analyzed hourly emissions data for Bruce Mansfield's units from 2011 through 2017. This analysis shows that there was an increasing number of start-ups and shutdowns during this time period for Units 1, 2 and 3. However, EPA's analysis also shows that SO₂ emissions at these units do not spike during start-up and shutdowns. In fact, the emissions are generally lower than 100 pounds per hour (lbs/hr) during these time periods for these units. Absent any specific evidence from the commenter supporting their claim that increased start-ups and shutdowns at Bruce Mansfield will increase SO₂ emissions spikes, EPA does not believe that the commenter has justified its claims that Bruce Mansfield can expect to experience more emission spikes due to start-ups and shutdowns or that expected differences between operation from 2012 to 2016 and future operation warrants a lower adjustment factor.

In addition, EPA's 2014 SO₂ Nonattainment Guidance recommends using emissions data that reflect the distribution of emissions that is expected once the attainment plan is implemented. PADEP was correct to assume that the Bruce Mansfield Facility (if it resumes full operation)

would continue to operate with a similar distribution of emissions as it did during 2012 through 2016, since the attainment plan was not requiring any new control technology. SO₂ emissions from each of the three boilers were already controlled by three individual Flue Gas Desulfurization (FGD) systems. Unit 1 and Unit 2 each vent through two flues within a common stack. Unit 3 vents through two flues in the other stack. Through the COA, PADEP required Bruce Mansfield FGD units to achieve at least a 95% removal efficiency. The recent fire at the scrubber system which was identified as an issue by the commenter does not remove the requirement to achieve at least a 95% removal efficiency from the FGD units, and to meet the emission limits outlined in the COA. As such, the control technology after the implementation of the attainment plan remains the same as the control technology prior to the development of the attainment plan, and therefore EPA reasonably believes that emissions variability during the historic period of 2012-2016 continues to be representative regardless of any rebuilding of the FGD system (if that does need to occur as the commenter asserts).

EPA notes that Bruce Mansfield Units 1 and 2 have been listed on the PJM deactivation list as of February 2019. Therefore, EPA anticipates not that these units will start up and shut down more often but instead that these units will not resume operation and will not start up or shut down at all. However, EPA's task here is to assess whether Pennsylvania's plan provides for attainment, including in the scenario that these units resume operation. In this scenario, EPA presumes that satisfaction of emission limits will reflect full repair of emission control systems and the resumption of normal, stable operations, which may resume the trend toward more startups and shutdowns but which can be expected to have a distribution of upper level emissions that is similar to the distribution seen in 2012 to 2016. Thus, the deactivation of these units does not impact the approval of this attainment plan. The emission limits for the three units at Bruce

Mansfield are still in effect.

Comment 4b. The commenter asserts that Pennsylvania's use of Unit 2's adjustment factor (0.717) for Unit 1 was incorrect and by using this higher adjustment factor, the 30-day emission limit calculated is significantly higher than the one that would be calculated using Unit 1's adjustment factor. The commenter asserts that EPA incorrectly determined that it was appropriate to use Unit 2's adjustment factor for Unit 1, because Unit 2's hourly emissions tend to be higher more frequently than those of Unit 1. The commenter asserts that during the time period 2012-2016, Unit 2's emissions were actually lower than Unit 1's for nearly 5,000 hours. Thus, the commenter claims EPA's own logic actually supports using the 0.59 conversion factor for Unit 1, not the 0.717 ratio.

The commenter continues that neither EPA nor Pennsylvania provides any evidence or enforceable mechanism to ensure that the future operations of Bruce Mansfield will demonstrate variability representative of Unit 2 rather than Unit 1, and as such there is no demonstrable mechanism to ensure compliance with the NAAQS.

Response 4b. PADEP followed the recommendation in EPA's 2014 SO₂ Nonattainment Guidance to use an appropriate emissions data set when determining the adjustment factors. The data set used should be sufficiently robust in terms of time covered, should be representative of the type of control strategy that is expected after the attainment plan controls are in place and should reflect the emissions variability that might be expected at the source once the SIP is implemented. However, PADEP did not use the same data handling procedures for development of the adjustment factor as for the calculation of compliance with the limit, which is recommended in EPA's 2014 SO₂ Nonattainment Guidance. PADEP calculated unit specific

adjustment factors even though the form of the limit was for combined units. PADEP's use of Unit 2's adjustment factor for Unit 1 did provide for a higher 30-day average limit than would have resulted from the use of separate adjustment factors for the two limits. However, if PADEP followed EPA's Guidance in calculating the adjustment factor using the same data handling procedures as the form of the limit, they would have combined Units 1 and 2, and developed one adjustment factor based on the sum of the two units' emissions. EPA did this analysis and obtained an adjustment factor of 0.72. EPA's analysis supports the adjustment factor that PADEP applied. In fact, PADEP's approach provides for a slightly lower adjustment factor than would have been calculated using EPA's recommended approach. EPA's analysis is described in the TSD for this action.

EPA reviewed the hourly emissions data from 2012 to 2016 for Units 1 and 2, and continues to assert that Unit 2's emissions tend to be higher more frequently. Based on the commenter's explanation of the analysis they conducted to claim that Unit 2's emissions were lower than Unit 1's emissions for nearly 5,000 hours, EPA believes the commenter may be comparing the hourly emission value per hour of each specific day (i.e., Unit 1, Day 1-Hour 1 versus Unit 2, Day 1-Hour 1). However, EPA does not believe this type of comparison is relevant to the adjustment factor analysis for a limit. EPA believes that a larger data set and more robust statistical analysis over a longer period of time, such as five years (as PADEP did), and use of data calculated in the same manner in which Pennsylvania will be determining compliance, provides a better portrayal of the influence of variability on the stringency of each limit and thus the degree of adjustment each limit needs to be comparably stringent to the 1-hour limits that Pennsylvania would otherwise have imposed.

Providing further support for the use of a 0.717 adjustment factor for Unit 1 and Unit 2, the adjustment factor listed in Appendix D of EPA's SO₂ Nonattainment Guidance for Sources with Wet Scrubbers (30-day average vs. 1-hour adjustment factor) is 0.71. Therefore, EPA continues to believe that the adjustment factors used for Units 1 and 2 provide for a comparably stringent 30-day emission limit.

Regarding the commenter's concern that there is no enforceable mechanism provided to ensure that future emissions variability of Bruce Mansfield will reflect the emissions variability representative of Unit 2 rather than Unit 1, EPA has provided options to states in the 2014 SO₂ Nonattainment Guidance to reduce the likelihood of increased emissions variability in the future. PADEP followed EPA's Guidance of adopting a direct work practice requirement for control equipment which could set a minimum level of control efficiency. The Bruce Mansfield plant is required to use this work practice in order to ensure that the NAAQS is not exceeded. To this end, the Bruce Mansfield plant FGDs must achieve at least a 95% design removal efficiency on Units 1, 2, and 3 during normal operating conditions following the general requirements of 25 Pa. Code Chapter 139.11 and the testing frequency contained in the COA. This additional work practice requirement provides greater assurance that there will be less variability in emissions when complying with the 30-day limits, as well as minimizing the likely frequency and magnitude of elevated emissions. In addition, as stated in the 2014 SO₂ Nonattainment Guidance, if the source is exceeding the expected variability, such that the plan proves not to provide the expected confidence that the NAAQS is being attained, EPA will use its available authority to pursue any necessary correction of the plan.

Comment 5. The commenter states that the emission limits for Bruce Mansfield are needlessly

complex and prevent transparency in determining compliance. The commenter asserts that the emission limit formula only applies when both Chimney 1 and Chimney 2 are operating, and as such it is unclear what limits apply when one chimney is not operating. In addition, the commenter states that when Chimney 2 emits over 3584 lbs/hour on a 30-day average, it is not clear what the allowable emission limits are for Chimney 1. The commenter states that a Federal plan with transparent emission limits should be adopted.

Response 5. EPA disagrees with the commenter that the emission limits for Bruce Mansfield are needlessly complex and lack the transparency needed to determine compliance. While the formula-based emission limit requires extra calculation to determine compliance, and therefore is more complex than a Unit-specific 30-day limit, all the data needed to calculate whether Bruce Mansfield is complying with the limit are available from the PADEP certified CEM data and are reported to EPA's Clean Air Markets Division. The CEM data are available at <https://ampd.epa.gov/ampd/>. Anyone may then determine Bruce Mansfield's compliance status simply by retrieving those data into a spreadsheet (or other suitable software) and applying the formula in the Pennsylvania's rule. As such, the limit is sufficiently transparent for Federal, state and public scrutiny.

EPA disagrees that the emission limit is not clear when one chimney is not operating. As described in the NPRM, Unit 1 and Unit 2 each vent through two flues within Chimney 1, and Unit 3 vents through two flues in Chimney 2. The 30-operating day rolling average SO₂ emissions rate for Units 1 and 2 cannot exceed the result of equation one (EQ-1), below, with Chimney 1 and Chimney 2 in service, calculated daily. Pursuant to this equation, the limit for the sum of emissions from Unit 1 and Unit 2 is a function of the emissions from Unit 3, with a

maximum limit (when Unit 3 has low emissions) under 7,100 lb/hr. In addition, if Unit 3 is not operating (and therefore only Chimney 1 is operating), the 30-operating day rolling average emissions rate cannot exceed 7,362 lb/hr for Units 1 and 2 combined. The 30-operating day rolling average SO₂ emissions rate for Chimney 2 (Unit 3) cannot exceed 3,584 lb/hr.

$$\text{EQ-1: } \text{CH1SO}_2 \text{ Lim} = -1.38\text{E-}04 \times \text{CH2SO}_2^2 - 0.920 \times \text{CH2SO}_2 + 7100$$

Where:

CH1SO₂ Lim: Chimney 1 SO₂ lb/hr 30-day rolling average

$$\text{CH1SO}_2 \text{ Lim} \leq 7,362 \text{ lb/hr}$$

CH2SO₂: Chimney 2 SO₂ lb/hr 30-day rolling average.

$$\text{CH2SO}_2 \leq 3,584 \text{ lb/hr}$$

In other words, if Chimney 1 is not in service, the stand-alone 30-operating day rolling average emission limit for Chimney 2 (Unit 3) is set at 3,584 lb/hr. If Chimney 2 is not in service, Chimney 1's 30-operating day average emission limit is 7,362 lb/hr. EPA continues to assert that the 30-operating day limit established for Bruce Mansfield is clear and transparent and therefore a Federal plan with a different limit is unnecessary.

Comment 5a. The commenter asserts that the emission inventories are improper because the projected 2018 emissions of 32,443 tons of SO₂ are greater than the actual emissions of 26,622 tons reported for 2011, when the Beaver County SO₂ monitor had a design value of 136 ppb. The commenter asserts that this increase in emissions is particularly egregious for Bruce Mansfield with 21,196 tons of SO₂ in 2011, and allowable 2018 emissions of 32,246 tons.

Response 5a. The commenter is comparing allowable emissions for 2018 against actual emissions for 2011. EPA agrees with the commenter that the allowable annual 2018 emissions

for Bruce Mansfield (and for all sources combined in the Beaver Area) are greater than the base year 2011 annual actual emissions for Bruce Mansfield (and for all sources in the Beaver Area combined, respectively). However, air quality in a multi-source area like this is not a function of total allowable emissions, since sources with different stack heights, different locations, and other differences will have different impacts per ton of emissions. For example, the monitor is near the former Horsehead facility and the former AES Beaver facility, and the improvements in air quality at the monitor have clearly been more influenced by the shutdown of these facilities than by the decline in actual emissions at Bruce Mansfield. In this area, modeling provides the best information regarding the impact per ton of emissions from each facility. Pennsylvania has conducted an appropriate modeling analysis of this area, and EPA concurs with the state's finding that its limits for Bruce Mansfield (which reduce allowable emissions), in combination with the other emission reductions in the area, will assure that the area attains the standard, notwithstanding the fact that these limits allow more total emissions than were actually emitted in 2011.

Comment 5b. The commenter further claims that assuming 8,760 hours in a year, Bruce Mansfield's allowable annual emissions of 32,246 tons translates to an hourly allowable rate of 7,362 lbs/hr, an emission rate that is higher than many of the emission rate scenarios modeled by FirstEnergy. Also, because these modeled scenarios model attainment less than one microgram per cubic meter below the NAAQS, the annual allowable maximum SO₂ emissions for Bruce Mansfield are much greater than what the modeling indicates are protective of the NAAQS.

Response 5b. EPA disagrees with commenter that the allowable emissions for Bruce Mansfield are not protective of the NAAQS. EPA understands the commenter's concern as follows: Since

there are modeled scenarios where the combined hourly emission value of Units 1, 2 and 3, are less than 7,362 lb/hr (which is the highest 30-day average emission value allowed under the emission limits) and those model runs show SO₂ concentrations very close to the standard, then an allowable emissions rate of 7,362 lb/hr is much greater than what several modeling runs indicate is protective of the NAAQS.

The commenter incorrectly assumes that all modeled scenarios are permitted. However, that is not the case. Seventeen scenarios with varying combinations of 1-hour critical emission values for Unit 1 and 2, and Unit 3 were modeled and used to develop an equation for limiting the combination of emissions from Units 1, 2 and 3 at Bruce Mansfield. As shown in Table 1, all 17 scenarios modeled attainment.

In addition to the limit on the combination of the three units' emissions, Pennsylvania also set a limit specifically limiting the emissions from Unit 3, that Unit 3 30-operating day average emissions shall not exceed 3,584 lb/hr. In model runs 9 through 11, Unit 3's emissions correspond to an adjusted 30-day average value that would have been greater than 3,584 lb/hr. Thus, these runs are disallowed scenarios.

It is these three model runs that the commenter refers to as those showing SO₂ concentrations very close to the standard, and asserts that the allowable emissions (calculated from these 1-hour values; *i.e.*, for model run 9 from Table 1, using the 1-hour CEVs, $2056.54 + 4743.88 = 6800.42$ lb/hr combined CEV for all units) are much less than the allowable emissions that PADEP calculates. Although the relevant values are hourly emissions, adjusted to be limited with 30-day average limits, both the commenter and PADEP calculated the corresponding annual emission rates. The model run 9 values correspond to annual emissions of 29,786 tons per year, which is

much less than PADEP’s calculated allowable annual emissions of 32,246 tons per year. If the emission rates in model runs 9 through 11 were allowable, they would indicate that Pennsylvania’s limits are not protective of the NAAQS. However, these model runs contain disallowed emission rates, and so these runs are not indicative of the emission rates necessary to attain the standard. Therefore, EPA continues to support Bruce Mansfield’s 30-day emission limits as demonstrating attainment of the 1-hour SO₂ NAAQS.

Table 1. Modeling results and emission values for the Bruce Mansfield Facility

Model Run	Modeled Emissions for Units 1 + 2 (lb/hr)	Corresponding 30-day Average Emissions for Units 1 + 2 (lb/hr)**	Modeled Emissions for Unit 3 (lb/hr)	Corresponding 30-day Average Emissions for Unit 3 (lb/hr)**	30-Day Average SO₂ Limit for Units 1 + 2 based on 30-day average equivalent to modeled Unit 3 emissions (lb/hr)***	Modeled Maximum using the 1-hr CEV from column 1 and 3
1**	10,282.70	7,372.70	0.00	0.00	Disallowed	196.17563
2	9,254.43	6,635.43	761.19	604.38	6493.6	196.18089
3	8,226.16	5,898.16	1,482.72	1,177.28	5825.6	196.17966
1FE*	7,484.24	5,366.20	2,006.14	1,592.88	5284.4	196.18033
4	7,197.89	5,160.89	2,206.62	1,752.06	5064.5	196.17977
2FE*	6,765.97	4,851.20	2,507.57	1,991.01	4721.2	196.14426
5	6,169.62	4,323.62	2,885.44	2,291.04	4267.9	196.18044
3FE*	5,952.47	4,267.92	3,009.17	2,389.28	4114.1	196.07897
6	5,141.35	3,686.35	3,469.90	2,755.10	3517.8	196.17912
4FE*	5,051.66	3,622.04	3,510.68	2,787.48	3463.3	196.11106
7	4,113.08	2,949.08	3,985.46	3,164.46	2806.8	196.17974
5FE*	4,015.93	2,879.42	4,012.20	3,185.69	2768.7	196.04158
8	3,084.81	2,211.81	4,407.53	3,499.58	2190.3	196.18032
6FE*	2,857.18	2,048.60	4,513.72	3,583.89	2030.3	196.10031
9**	2,056.54	1,474.54	4,743.88	3,766.64	Disallowed	196.18082
10**	1,028.27	737.27	4,956.43	3,935.41	Disallowed	196.18081
11**	0.00	0.00	5,041.58	4,003.01	Disallowed	196.17832

*FirstEnergy Model run

**Disallowed modeled scenarios. Model run 1 is disallowed because the emission limit equation only applies when

both Chimneys are operating. Model runs 9-11 are prohibited as Unit 3's 30-day average emission rate is greater than the comparably stringent 30-day emission limit of 3584 lb/hr.

***The limit that would result from the compliance equation (EQ-1) using the Unit 3 30-operating day average emission rate that corresponds to the modeled 1-hour rate (from fifth column of this table).

III. Final Action

EPA is approving Pennsylvania's SIP revision submittal for the Beaver Area, as submitted by PADEP to EPA on September 29, 2017 for the purpose of demonstrating attainment of the 2010 1-hour SO₂ NAAQS. EPA has determined that Pennsylvania's SO₂ attainment plan for the 2010 1-hour SO₂ NAAQS for the Beaver Area meets the applicable requirements of the CAA in sections 110, 172 and 191-192, and comports with EPA's recommendations discussed in the 2014 SO₂ Nonattainment Area Guidance. Specifically, EPA is approving the base year emissions inventory, a modeling demonstration of SO₂ attainment, an analysis of RACM/RACT, an RFP plan, and contingency measures for the Beaver Area, and concludes that the Pennsylvania SIP has met requirements for NSR for the 2010 1-hour SO₂ NAAQS. Additionally, EPA is approving into the Pennsylvania SIP specific SO₂ emission limits, compliance parameters and contingency measures established for Bruce Mansfield, and operational restrictions for the Jewel Facility. Furthermore, approval of this SIP submittal removes EPA's duty to promulgate and implement a FIP under CAA section 110(c) for the Beaver Area.

IV. Incorporation by Reference

In this document, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of the unredacted portions of the COA entered between Pennsylvania and FirstEnergy Generation, LLC for the Bruce Mansfield Generating Station, and the COA entered between Pennsylvania

and Jewel Acquisition, LLC on September 21, 2017 as described in the amendments to 40 CFR part 52 set forth below. This includes emission limits and associated compliance parameters, record-keeping and reporting, and contingency measures for Bruce Mansfield; and operational restrictions for the Jewel Facility. EPA has made, and will continue to make, these materials generally available through <https://www.regulations.gov/> or at the EPA Region III Office (please contact the person identified in the “For Further Information Contact” section of this preamble for more information). Therefore, these materials have been approved by EPA for inclusion in the SIP, have been incorporated by reference by EPA into that plan, are fully Federally enforceable under sections 110 and 113 of the CAA as of the effective date of the final rulemaking of EPA’s approval, and will be incorporated by reference in the next update to the SIP compilation.¹¹

V. Statutory and Executive Order Reviews

A. General Requirements

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

¹¹ 62 FR 27968 (May 22, 1997).

- Is not a “significant regulatory action” subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866.
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

B. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

C. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by **[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 action 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 to approve the Beaver Area attainment plan for the 1-hour SO₂ NAAQS into the Pennsylvania SIP may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements, Sulfur oxides

Dated: September 13, 2019.

Diana Esher,
Acting Regional Administrator,
Region III.

40 CFR part 52 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 NN—Pennsylvania

2. In § 52.2020:

a. The table in paragraph (d)(3) is amended by adding an entry for “Bruce Mansfield Generating Station and an entry for Jewel Acquisition, LLC” at the end of the table; and

b. The table in paragraph (e)(1) is amended by adding an entry for “Attainment Plan for the Beaver, Pennsylvania Nonattainment Area for the 2010 Sulfur Dioxide Primary National Ambient Air Quality Standard” at the end of the table.

The additions read as follows:

§52.2020 Identification of plan.

* * * * *

(d)* * *

(3)***

Name of source	Permit No.	County	State effective date	EPA approval date	Additional explanation/ § 52.2063 citation
* * * * *					
Bruce Mansfield Generating Station	FirstEnergy Redacted Consent Order and Agreement	Beaver	10/1/18	[Insert date of publication in the Federal Register]. [Insert Federal Register citation]	Sulfur dioxide emission limits and related parameters in unredacted portions of the Consent Order and Agreement dated 9/21/17

Jewel Acquisition, LLC Midland Facility	Jewel Acquisition Redacted Consent Order and Agreement	Beaver	9/21/17	<u>[Insert date of publication in the Federal Register], [Insert Federal Register citation]</u>	Operational restrictions and related parameters in unredacted portions of the Consent Order and Agreement
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* * * * *

(e)***

(1) ***

Name of non-regulatory SIP revision	Applicable geographic area	State submittal date	EPA approval date	Additional explanation
* * * * *				
Attainment Plan for the Beaver, Pennsylvania Nonattainment Area for the 2010 Sulfur Dioxide Primary National Ambient Air Quality Standard	Industry Borough, Shippingport Borough, Midland Borough, Brighton Township, Potter Township and Vanport Township	9/29/17	<u>[Insert date of publication in the Federal Register], [Insert Federal Register citation]</u>	52.2033(d)

* * * * *

3. Section 52.2033 is amended by adding paragraph (d) to read as follows:

§52.2033 Control strategy: Sulfur oxides.

* * * * *

(d) EPA approves the attainment demonstration State Implementation Plan for the Beaver, PA Nonattainment Area submitted by the Pennsylvania Department of Environmental Protection on September 29, 2017.

[FR Doc. 2019-20848 Filed: 9/30/2019 8:45 am; Publication Date: 10/1/2019]