



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R03-OAR-2017-0615; FRL- 10015-78-Region 3]**

**Air Plan Approval; Pennsylvania;**

**Attainment Plan for the Indiana, 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 2010 sulfur dioxide (SO<sub>2</sub>) primary national ambient air quality standard (NAAQS) in the Indiana County, Pennsylvania SO<sub>2</sub> nonattainment area (hereafter referred to as the “Indiana Area” or “Area”). The Indiana Area is comprised of Indiana County and a portion of Armstrong County (Plumcreek Township, South Bend Township, and Elderton Borough) in Pennsylvania. 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 showing SO<sub>2</sub> attainment, enforceable emission limitations and control measures, contingency measures for the Indiana 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 SO<sub>2</sub> emission limits and associated compliance parameters for Keystone Plant (hereafter referred to as “Keystone”), and existing SO<sub>2</sub> emission limits and associated compliance

parameters for Conemaugh Plant, Homer City Generation, and Seward Generation Station (hereafter referred to as “Conemaugh,” “Homer City,” and “Seward”). EPA is approving these revisions that demonstrate attainment of the SO<sub>2</sub> NAAQS in the Indiana 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-2017-0615. 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 of 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](mailto:goold.megan@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Background**

On June 2, 2010, the EPA Administrator signed a final rule establishing a new SO<sub>2</sub> 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. 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.<sup>1</sup> 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 SO<sub>2</sub> 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 was sufficient data to support a nonattainment designation.<sup>2</sup> The Indiana Area was designated as nonattainment in this initial (first) round of designations. 78 FR 47191 (August 5, 2013).

The Indiana Area consists of all of Indiana County, Pennsylvania and also Plumcreek Township, South Bend Township, and Elderton Borough in Armstrong County, Pennsylvania. The boundaries of the nonattainment area were defined in order to encompass the four primary SO<sub>2</sub> emitting sources of Keystone, Conemaugh, Homer City, and Seward. The October 4, 2013 effective date of the final designation triggered a requirement for Pennsylvania to submit, by April 4, 2015, an attainment plan SIP revision describing how the Area would attain the 2010 SO<sub>2</sub> NAAQS as expeditiously as practicable, but no later than October 4, 2018, in accordance

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<sup>1</sup> 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. 75 FR 35520. However, the secondary 3-hour SO<sub>2</sub> 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 SO<sub>2</sub> NAAQS. 40 CFR 50.4(e).

<sup>2</sup> EPA is continuing its designation efforts for the 2010 SO<sub>2</sub> 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).

with CAA sections 172(c) and 191-192.

For a number of areas, including the Indiana Area, EPA published a document on March 18, 2016, finding that Pennsylvania and other states had failed to submit the required SO<sub>2</sub> attainment plan by the April 4, 2015 deadline. 81 FR 14736. This finding triggered the CAA section 179(a) deadline for the potential imposition of new source review and highway funding sanctions. Pennsylvania submitted the attainment plan on October 11, 2017. EPA then sent a letter to Pennsylvania, dated October 13, 2017, finding that the attainment plan submittal was complete, and therefore the sanctions under section 179(a) would not be imposed as a consequence of Pennsylvania having missed the April 4, 2015 deadline. Additionally, EPA's March 18, 2016 finding triggered a requirement under CAA section 110(c) 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 no longer apply as a result of this action to finalize this SIP approval.

Attainment plans for SO<sub>2</sub> must meet the applicable requirements of the CAA, and specifically, CAA sections 110, 172, 191, and 192. The required components of any attainment plan submittal are listed in section 172(c) of Title I, part D of the CAA, and additional requirements specific to SO<sub>2</sub> attainment plans are found in CAA sections 191 and 192 and in EPA's implementing regulations at 40 CFR part 51. On April 23, 2014, EPA also issued guidance (hereafter "2014 SO<sub>2</sub> Nonattainment Guidance") recommending how state submissions could address the statutory requirements for SO<sub>2</sub> attainment plans.<sup>3</sup> The 2014 SO<sub>2</sub>

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<sup>3</sup> "Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions" (April 23, 2014), available at [https://www.epa.gov/sites/production/files/2016-06/documents/20140423guidance\\_nonattainment\\_sip.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/20140423guidance_nonattainment_sip.pdf).

Nonattainment Guidance describes the statutory requirements for an attainment plan, which include: (1) a comprehensive, accurate, current inventory of actual emissions from all sources of SO<sub>2</sub> within the nonattainment area (172(c)(3)); (2) 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)); (3) demonstration of RFP (172(c)(2)); (4) implementation of RACM, including RACT (172(c)(1)); (5) Nonattainment NSR requirements (172(c)(5)); and (6) 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 Commonwealth of Pennsylvania's October 2017 attainment plan for the Indiana Area includes: (1) an emissions inventory for SO<sub>2</sub> for the plan's base year (2011); and (2) an attainment demonstration. The plan's attainment demonstration includes the following: (1) analyses that locate, identify, and quantify sources of emissions contributing to violations of the 2010 SO<sub>2</sub> NAAQS; (2) a determination that the control strategy for the primary SO<sub>2</sub> sources within the nonattainment areas constitutes RACM/RACT; (3) a dispersion modeling analysis of an emissions control strategy for the primary SO<sub>2</sub> sources (Keystone, Conemaugh, Homer City, and Seward), showing attainment of the SO<sub>2</sub> NAAQS by the October 4, 2018 attainment date; (4) requirements for RFP toward attaining the SO<sub>2</sub> NAAQS in the Area; (5) contingency measures; (6) the assertion that Pennsylvania's existing SIP-approved NSR program meets the applicable requirements for SO<sub>2</sub>; and (7) the request that emission limitations and compliance parameters for Keystone, Conemaugh, Homer City, and Seward be incorporated into the SIP.

On July 13, 2018 (83 FR 32606), EPA published a notice of proposed rulemaking (NPRM) in which EPA proposed approval of Pennsylvania's Indiana, PA SO<sub>2</sub> attainment plan and SO<sub>2</sub> emission limits and associated compliance parameters for the Keystone, Homer City, Conemaugh and Seward sources. During the public comment period, the Sierra Club (in conjunction with the National Parks Conservation Association, PennFuture, Earthjustice, and Clean Air Council) submitted a modeling analysis which purported to show that the emission limits in the attainment plan did not assure attainment because one modeled receptor within the nonattainment area was above the SO<sub>2</sub> NAAQS. Sierra Club's modeling also purported to show exceedances of the SO<sub>2</sub> NAAQS outside of the nonattainment area.

In response to this comment, on February 5, 2020, the Pennsylvania Department of Environmental Protection (PADEP) submitted supplemental information in support of the attainment plan. The February 5, 2020 submittal includes: (1) a supplemental air dispersion modeling report; (2) supplemental air dispersion modeling data; (3) a supplemental air dispersion modeling protocol; (4) a meteorological monitoring plan; (5) meteorological monitoring data; (6) meteorological monitoring quality assurance, quality control, and audit reports; (7) Clean Air Markets Division (CAMD) emissions data for 2010 – 2018; and (8) Continuous Emissions Monitoring (CEM) data for 2010 – 2019 (3<sup>rd</sup> Quarter). The supplemental air dispersion modeling used a more refined model receptor grid than the original submittal, meteorological data collected near the controlling modeled source (Seward) and more recent (2016-18) background concentrations from the South Fayette SO<sub>2</sub> monitor (the monitor used to determine background concentrations in the original modeling analysis). All of these updates have been fully described in the supplemental modeling report from the February 5, 2020 submittal and in four separate Technical Support Documents (TSDs) written by EPA for this action: (1) the TSD

for the Randomly Reassigned Emission (RRE) Modeling Analysis in the Supplemental Information to Address a Comment Received by the EPA on Pennsylvania's 1-hour Sulfur Dioxide Attainment Demonstration for the Indiana, Pennsylvania Nonattainment Area submitted on February 5, 2020 (hereafter referred to as the RRE Modeling TSD); (2) the TSD for the Modeling Portions of the Document Entitled “Supplemental Information to Address a Comment Received by the EPA on Pennsylvania's 1-hour SO<sub>2</sub> Attainment Demonstration for the Indiana, Pennsylvania Nonattainment Area” (hereafter referred to as the Supplemental Modeling TSD); (3) the TSD Addressing Modeled Concentration Values for the Keystone Generating Station Included in the Indiana, PA 1-Hour SO<sub>2</sub> Nonattainment Area (hereafter referred to as the Keystone Modeling TSD); and (4) the TSD For the Part 75 Source Emissions Contained in the Supplemental Information to Address a Comment Received by the EPA on Pennsylvania's 1-hour Sulfur Dioxide Attainment Demonstration for the Indiana, Pennsylvania Nonattainment Area 2020 submitted on February 5, 2020 (hereafter referred to as the Part 75 Emissions TSD).

In order to allow for public comment on this supplemental information and modeling, on March 9, 2020 (85 FR 13602), EPA published a notice of data availability (NODA) for the February 5, 2020 submittal. Sierra Club submitted new comments raising issues with the supplemental modeling, which are fully discussed later in this preamble.

Other specific requirements of the Indiana 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 and the NODA, except to the extent necessary to reflect any changes in the rationale in response to the public comments.

### **III. Response to Comments**

EPA received multiple comments on the NPRM and adverse comments from two commenters on the NODA. To review the full set of comments received, refer to the Docket for the rulemaking, as identified in the ADDRESSES section of this document. A summary of the comments and EPA's responses are provided below.

*Comment 1.* The commenter states that the alternative limits for Homer City are greater than the critical emission value (CEV),<sup>4</sup> with no explanation given. The CEV for the three units at Homer City are 6,360 pounds per hour (lb/hr) for all three combined. There are multiple emissions limits in the proposal for Homer City that are higher than the CEV. There is a start-up limit of 9,000 lb/hr, and an alternative limit of 7,300 lb/hr for all units in a transition phase. These limits are higher than the CEV and the commenter believes they would thus lead to NAAQS violations. The commenter argues that the modeling shows that these additional limits would violate the NAAQS.

*Response 1.* EPA agrees with the commenter that there are multiple SO<sub>2</sub> emission limits for Homer City. However, EPA disagrees that the modeling shows that the alternative limits would result in SO<sub>2</sub> emissions concentrations that violate the NAAQS. The modeling does not include the alternative limits since they are intermittent in nature, and, as explained in more detail later in this preamble, Pennsylvania correctly excluded them from the modeling demonstration.

The Homer City emission limits for start-up, shut down and the Novel Integrated Desulfurization (NID) system transitions are limited to 500 hours combined in any 12-month rolling period. As stated in EPA's March 2011 Memorandum on Additional Clarification

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<sup>4</sup> The CEV is the continuous 1-hour emission rate which modeling shows is expected to result in the 3-year average of annual 99<sup>th</sup> 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 SO<sub>2</sub> concentrations exceeding 75 ppb.

Regarding Application of Appendix W Modeling Guidance for the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard (hereafter referred to as the “March 2011 Clarification Memo”)<sup>5</sup> and as specifically referenced in EPA’s August 2010 Memorandum on the Applicability of Appendix W Modeling Guidance for the 1-hour SO<sub>2</sub> National Ambient Air Quality Standard,<sup>6</sup> EPA believes the most appropriate data to use for compliance demonstrations for the 1-hour SO<sub>2</sub> NAAQS are those based on emissions scenarios that are continuous enough or frequent enough to contribute significantly to the annual distribution of daily maximum 1-hour concentrations. EPA’s modeling recommendations involve a degree of conservatism in the modeling assumptions for demonstrating compliance with the NAAQS by recommending the use of maximum allowable emissions. The intermittent nature of the actual emissions associated with these transitions, when coupled with the probabilistic form of the SO<sub>2</sub> standard, could result in modeled impacts being significantly higher than actual impacts would realistically be expected to be if the maximum allowable emissions were modeled continuously year round.

EPA is concerned that if emissions occurring during intermittent operations are assumed to be occurring continuously, this would impose an additional level of stringency beyond that intended by the level of the standard itself. EPA, therefore, recommended that compliance demonstrations for the 1-hour SO<sub>2</sub> NAAQS be based on emission scenarios that can logically be assumed to be relatively continuous or which occur frequently enough to contribute significantly to the annual distribution of daily maximum 1-hour concentrations. Existing modeling

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<sup>5</sup> Memorandum, Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard. March 2011. [https://www.epa.gov/sites/production/files/2015-07/documents/appwno2\\_2.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf)

<sup>6</sup> Memorandum, Applicability of Appendix W Modeling Guidance for the 1-hour SO<sub>2</sub> National Ambient Air Quality Standard. August 2010. [https://www3.epa.gov/ttn/scram/guidance/clarification/ClarificationMemo\\_AppendixW\\_Hourly-SO2-NAAQS\\_FINAL\\_08-23-2010.pdf](https://www3.epa.gov/ttn/scram/guidance/clarification/ClarificationMemo_AppendixW_Hourly-SO2-NAAQS_FINAL_08-23-2010.pdf)

guidelines provide sufficient discretion for states to exclude certain types of intermittent emissions from compliance demonstrations for the 1-hour SO<sub>2</sub> standard under these circumstances.

Pennsylvania's exclusion of the alternative limits for Homer City (which are limited to a combined 500 hours in a 12-month rolling period) in the modeling demonstration follows EPA's guidance regarding intermittent emission scenarios. The modeling demonstration provided by Pennsylvania provides support that the one-hour emission limit that was adopted by Homer City provides for attainment of the NAAQS.

*Comment 2.* The commenter asks EPA to explain why there are numerous values in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) that have been translated to 75 ppb. The commenter notes in this action EPA is using 1 ppb = approximately 2.619  $\text{g}/\text{m}^3$ ,<sup>7</sup> and in other EPA documents, the conversion factor of 2.62 was used. The commenter claims that this use of multiple conversion factors is a hindrance in determining if an area has met the standard.

*Response 2.* The commenter is correct in stating that historically EPA has accepted a range of values for the  $\mu\text{g}/\text{m}^3$  equivalent to 75 ppb. In the Round 3 intended designations (82 FR 41903) published September 5, 2017, EPA recognized the need noted by the commenter to identify and apply a consistent value expressed in  $\mu\text{g}/\text{m}^3$  that EPA considers equivalent to 75 ppb. At that time, EPA endorsed a value of 196.4  $\mu\text{g}/\text{m}^3$  (based on calculations using all available significant figures). To avoid confusion, EPA is expecting attainment demonstrations to show achievement with concentrations at or below precisely 196.4  $\mu\text{g}/\text{m}^3$ .<sup>8</sup>

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<sup>7</sup> The commenter erroneously claims that EPA is using 1 ppb = 2.619  $\text{g}/\text{m}^3$ . EPA believes the commenter meant to write 2.619  $\mu\text{g}/\text{m}^3$ .

<sup>8</sup> While some Round 3 designation TSDs explained that this value was "equivalent... using a 2.619  $\mu\text{g}/\text{m}^3$  conversion factor" (more precisely, using a conversion factor of approximately 2.6187), in fact EPA here was determining the concentration value in  $\mu\text{g}/\text{m}^3$  that is to be considered equivalent to 75 ppb, rather than the precise

*Comment 3.* The commenter asserts that the longer term limits applicable to Seward and Keystone (1) do not follow EPA's 2014 SO<sub>2</sub> Nonattainment Guidance; (2) are not comparably stringent to the one-hour CEV; and (3) are not based on maximum allowable emissions. The commenter argues that approval of these longer term limits would be arbitrary and capricious. The commenter provides the following reasons as to why the emission limits have not followed EPA's 2014 SO<sub>2</sub> Nonattainment Guidance: (1) EPA is proposing to approve longer term emission limits that are higher than the comparably stringent emission limits that are calculated via Appendix C methodology; and (2) EPA is proposing to approve longer term emission limits that were calculated using Appendix B methodology, which was provided in the 2014 SO<sub>2</sub> Nonattainment Guidance to justify the Appendix C methodology. The commenter therefore argues that using Appendix B methodology to calculate emission limits is contrary to the purposes of that Appendix as described in the 2014 SO<sub>2</sub> Nonattainment Guidance. The commenter continues that EPA is now proposing to approve emission limits that are based on a facility's actual historic emissions, instead of maximum allowable emissions. This is unprecedented and does not meet the requirements of 40 CFR 51.112 and 40 CFR part 51 appendix W, which mandates the use of allowable emissions.

*Response 3.* EPA agrees that Pennsylvania did not employ EPA's SO<sub>2</sub> Nonattainment Guidance Appendix C methodology in developing the longer term emission limits for the Seward and Keystone facilities. EPA also agrees that the longer term emission limits for Seward and Keystone are higher than the emission limits would be if the state used the Appendix C methodology. However, that does not mean that the longer term emission limits are not protective of the NAAQS, nor does it mean that the emission limits are arbitrary and capricious.

EPA's 2014 SO<sub>2</sub> Nonattainment guidance explains how state air agencies might establish emissions limitations for sources such as Seward and Keystone that have averaging periods that are longer than one hour in duration. Appendix W to 40 CFR part 51 - Guideline on Air Quality Models, requires modeling conducted in support of SIP limits to be representative of maximum allowable emission rates. In most cases, EPA requires using the American Meteorological Society (AMS) / EPA Regulatory Model or AERMOD near-field dispersion modeling system. While uses of AERMOD for attainment planning purposes generally use a constant emission rate for each source throughout the duration of a simulation, AERMOD can also be run with time-varying emissions, varying for example by month or by hour.

In formulating its 2014 guidance, EPA recognized the challenges of representing allowable emissions for a limit that reflects a longer-term average. EPA recommended an approach which did not require any development of variable emission profiles to represent allowable emissions. Instead, EPA's recommended approach relies on traditional modeling of a constant emission rate, for purposes of determining the 1-hour average emission rate that if adopted as a 1-hour limit would provide for attainment. In normal circumstances, a longer-term average limit at a given level is inherently less stringent than a 1-hour limit at the same level. Therefore, EPA's recommended approach then uses appropriate data, generally taken from the historical record for the pertinent source, to obtain a quantitative estimate of the reduction of a one-hour limit's stringency arising from use of the longer-term average. The ratio derived in this approach (found by comparing the 99<sup>th</sup> percentile among the longer-term average values in the data set against the 99<sup>th</sup> percentile among the 1-hour values in the data set) serves as an adjustment factor. In EPA's recommended approach, this adjustment factor is applied to the modeled (1-hour) attaining emission rate, and the resulting, downward adjusted longer-term

average emission limit is presumed to have comparable stringency to a 1-hour limit at the modeled emission rate. This approach is described at length in the body of EPA's 2014 guidance (see pages 22 to 39) and delineated as a step-by-step procedure in Appendix C of the guidance. Appendix B of the guidance presents analyses that support EPA's view that longer-term limits that are comparably stringent to their 1-hour counterparts may be expected to yield comparable air quality.<sup>9</sup>

EPA has approved several SIPs relying on longer term average limits derived according to these methods. See, for example, 83 FR 4591 (February 1, 2018) (approval of Illinois SO<sub>2</sub> SIP); 83 FR 25922 (June 5, 2018) (approval of New Hampshire SO<sub>2</sub> SIP); 84 FR 8813 (March 12, 2019) (approval of Arizona SO<sub>2</sub> SIP); 84 FR 30920 (June 28, 2019) (approval of Kentucky SO<sub>2</sub> SIP); 84 FR 51988 (October 1, 2019) (approval of Pennsylvania SO<sub>2</sub> SIP for the Beaver County area); 85 FR 22593 (April 23, 2020) (approval of Pennsylvania SO<sub>2</sub> SIP for the Allegheny County area), and 85 FR 49967 (August 17, 2020) (approval of Indiana SO<sub>2</sub> SIP). As part of its 2014 SO<sub>2</sub> Nonattainment Guidance, EPA added that states are not precluded from using other approaches to determine appropriate longer-term average limits (see page 26).

For the Indiana County area, Pennsylvania did not use the methods discussed in the 2014 guidance for deriving its limits, but instead developed a different approach. Therefore, the validity of EPA's recommended approach in the 2014 guidance and the validity of the resulting longer-term average limits when using that approach, which are issues in other rulemakings such

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<sup>9</sup> See also work done to supplement the work described in appendix B. This supplemental work, done to address a comment on rulemaking for the Southwest Indiana SO<sub>2</sub> nonattainment area objecting that the appendix B analysis is not comparable to an assessment of air quality with a 1-hour emission limit, provides further evidence that longer term limits that are appropriately determined can be expected to achieve comparable air quality as comparably stringent 1-hour limits. Documentation of this supplemental work is available in the docket for the Southwest Indiana rulemaking, at <https://www.regulations.gov/document?D=EPA-R05-OAR-2015-0700-0023>, as discussed in the associated rulemaking at 85 FR 49969-49971 (August 17, 2020).

as those cited previously, are not at issue in this rule. Instead, at issue in this rule is whether the particular approach applied by Pennsylvania suffices to demonstrate that its adopted and submitted allowable emissions limits provide for attainment as required in CAA sections 110, 172, and 192.

Pennsylvania used conceptually similar approaches for assessing the adequacy of limits for Keystone and for Seward, though selected features of these analyses differ. Therefore, the following first discusses the analysis for Keystone and then discusses the analysis for Seward.

Pennsylvania's different approach for Keystone (as for Seward) began at the same starting point as EPA's 2014 guidance's recommended approach. As recommended by EPA, Pennsylvania determined the 1-hour CEV (9,711 lb/hr) for Keystone using AERMOD. Then, Pennsylvania provided modeling addressing its proposed limit for Keystone using an approach which relies on a large number of AERMOD simulations and an underlying data set that represents recent hourly emissions variability of the source (referred to as RRE Modeling). This approach relies on the expectation that future variability of Keystone while meeting the limit is likely to be similar or less than historic variability given that no major changes are planned for the source (i.e., no new control equipment, fuel changes, etc.), except for the imposition of a new 24-hour emission limit based on this attainment SIP. EPA analyzed 10 past years of Keystone's emissions and operational data, and the regional transmission organization Pennsylvania-New Jersey-Maryland (PJM) forecasts for future electric demand, which support these suppositions (see the Part 75 Emissions TSD in the docket for this rule).

The hourly modeled emission values were based on actual emissions and determined through a binning approach further described in the RRE Modeling TSD. Keystone has had highly variable emissions in the past. Hourly emissions are less variable in recent years. The

source's historic emissions profile was such that the actual emission rate for 15% of the hours per year were above the CEV of 9,711 lb/hr, and those hours fell within 15 days in each month. Because of this pattern, where hourly values above the CEV were clustered together on a limited number of days rather than individually dispersed throughout the year, Pennsylvania created a "rule" in the modeling, whereby the hours over the CEV were modeled in clusters which Pennsylvania calls "high emission event days." The total amount of SO<sub>2</sub> emissions each day, however, are constrained by a limit which restricts the total pounds of SO<sub>2</sub> emissions, on a 24-hour block average basis, to be at or below 9,600 lb/hr. The hours for which the emissions were modeled above the CEV were not randomly dispersed individually throughout the year because the plant did not and likely will not operate that way in order to meet the limit. Thus, these high emission events were modeled in a way that is representative of the variability in the historic emissions data and in compliance with the allowable emissions limit.

The "rule" constrained the high emission events days to not exceed 9,604 lb/hr on a 24-hour block average; however, not every day was modeled with hourly emission rates resulting in a 24-hour block average at or near 9,604 lbs/hr. As previously described, the historical emissions data demonstrate that not every day is a high emission event day based on the historic variability of the source. Pennsylvania modeled about 50% of the days in a month where hourly SO<sub>2</sub> emissions were always below the CEV value and about 50% of the days in a month as high emission event days where there were at least three hours over the CEV during that 24 hours. The high emission events days included nine days (30% of the days) in a month where the 24-hour averages were near 9,600 lb/hr. The remaining six high emission event days per month experienced three hours of emissions above the CEV, yet emissions during the remaining hours of the day resulted in the 24-hour daily average falling at 6,333 lb/hr for five of the six days and

at 8,964 lb/hr for one of the six days. However, the other hours in these days were assigned values at or below the CEV, reflecting the predominance of values below the CEV in the modeled emissions distribution (which in turn reflected the predominance of values below the CEV in the historical record), resulting in daily average emission rates for these days below 9,600 lb/hr. The remaining days (not categorized as high emission events days) had 24-hour daily average emissions between 5,000 lb/hr and 6,200 lb/hr.

Pennsylvania developed 100 different annual emission profiles using the historic data of high emission event days, and randomly assigning the other hourly emissions such that the 24-hour limit of 9,600 lbs/hr is modeled 30% of the days across each month, which is representative of the variation within the historical emissions. These emission files provide a large array of temporally varying hourly emissions which take into account the “rule” where hourly emissions above the CEV are clustered together into high emission event days, representative of the variability in the historic emissions data and are reflective of historic plant operations. Each of the 100 emissions scenarios (each reflecting compliance with the emissions limit) were modeled with five years of meteorological data using AERMOD. For each of the 100 5-year AERMOD simulations for Keystone, the 5-year average of the 99<sup>th</sup> percentile of the daily maximum 1-hour SO<sub>2</sub> modeled concentrations were below the NAAQS.<sup>10</sup>

EPA concludes that this modeling provided enough permutations of emissions and meteorology that we can be reasonably confident that the longer-term limit is protective of the NAAQS. This conclusion is based upon the large number of emission distribution profiles (100), the frequency and distribution of high emission event days, the 9,600 lb/hr 24-hour emission

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<sup>10</sup> See EPA’s March 1, 2011 clarification memo *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard*.

limit modeled 30% of the days per month, emissions inputs reflective of the variability in historic plant operations, and meteorological data (five years of National Weather Service data).

Pennsylvania used the same general modeling approach to support the 30-day rolling average SO<sub>2</sub> emission limit for Seward. First, Pennsylvania determined Seward's CEV of 4,500 lb/hr using AERMOD.<sup>11</sup> Then, using 2016-2018 emissions from Seward, Pennsylvania developed a binned emissions dataset to be used in formulating the inventories modeled in 100 AERMOD simulations. Pennsylvania used a total of 13 bins, including five bins ranging from an upper level of 2,000 lbs/hour to an upper level of 4,500 lbs/hour and eight bins at various ranges above the CEV. Hours without operation were represented as hours with 2,000 lbs/hour, and other hours were represented with the upper level of the applicable bin. The dataset included 2.5% of emissions above the CEV (or 220 hours). This was based on how the plant historically operated while complying with this 30-day limit and how it is expected to operate into the future while in compliance with the 30-day limit. The hours above the CEV were distributed across four high emission events, where the duration of each event was 4, 7, 12, or 16 hours, with the frequency of those events being twice per month, monthly, every six months and once per year, respectively, such that these 220 hours above the CEV were spread across 39 days.

The remaining 97.5% of hourly emissions were below the CEV and randomly assigned throughout the annual emission profile. EPA analyzed 10 past years of Seward's emissions and operational data and PJM forecasts for future electric demand, and understands that no major changes are planned for the source (i.e., no new emission limits, no new control equipment, fuel changes, etc.) (See the Part 75 Emissions TSD in the docket for this rulemaking). Therefore,

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<sup>11</sup> This CEV and the description provided are based on Pennsylvania's updated analysis which was provided to EPA on February 5, 2020.

EPA believes that the future variability of Seward while meeting the limit is likely to be similar to historic variability.

Pennsylvania calculated a weighted average of the emissions in the binned inventory by multiplying the bin level times the percentage of hours in each bin and summing the results. This sum, representing the average of the modeled emissions, equaled 3,088 lb/hr. Despite minor variations resulting from the random distribution process, each of the 100 AERMOD simulations had approximately this average level of emissions.

Pennsylvania developed 100 different annual emission profiles using the historic data of high emission event days, and randomly assigning the other hourly emissions such that the average of the 30-day averages of each simulation was close to 3,088 lb/hr, which is representative of the variation within the historical emissions. Seward's SO<sub>2</sub> emissions limit of 3038.4 lb/hr on a 30-day rolling average basis is approximately 50 lb/hr less than the approximate average emissions value used in the AERMOD simulations.

Each of the 100 emissions scenarios (each with average emissions above the limit level) were modeled with one year of site specific meteorological data using AERMOD. For each of the 100 AERMOD simulations for Seward, the 99<sup>th</sup> percentile of the daily maximum 1-hour SO<sub>2</sub> modeled concentrations were below the NAAQS.

EPA concludes that this modeling provided enough permutations of emissions and meteorology that we can be reasonably confident that Seward's longer-term limit is protective of the NAAQS. This conclusion is based upon the large number of emission distribution profiles (100), the targeted 30-day emissions average value in each simulation being set slightly above the 30-day average limit, model inputs reflective of the variability in historic plant operations (based on EPA's review of 10 years of emissions data) and one year of site specific

meteorological data.

Pennsylvania's modeling process is described in Appendix C-1 of the state submittal, in the state's February 5, 2020 supplemental modeling report, in EPA's TSD for the proposed rulemaking entitled "State Implementation Plan Revision: Attainment Demonstration and Base Year Inventory Indiana, PA Nonattainment Area for the 2010 1-Hour SO<sub>2</sub> NAAQS", dated October 2017 (hereafter referred to as the "October 2017 Modeling TSD"), and EPA's RRE Modeling TSD, which are available in the docket.<sup>12</sup>

In regard to the commenter's concern that Appendix B was not meant to provide guidance on how to develop a longer term limit, EPA agrees that neither the Guidance nor Appendix B stated that Appendix B was a recommended approach to develop longer term emission limits. Nevertheless, EPA believes that elements of the methodology used in Appendix B may be used to assess whether a longer term limit could be protective of the NAAQS.

Although the analysis described in Appendix B does not use allowable emissions (insofar as only the maximum 30-day average emissions equal the 30-day average limit), the analyses in Pennsylvania's submittal differ in some respects from the analysis described in Appendix B, and EPA must evaluate Pennsylvania's submittal on its own merits. For reasons described previously, EPA believes that Pennsylvania's modeling provides a suitable demonstration that the plan provides for attainment. Using actual historic operations as a basis for developing the emission rates used in the modeling analysis is in EPA's opinion a reasonable approach. Past actual operations provide the data necessary to develop a representative and realistic range of emission rates to be used in the RRE simulations to assess if Seward's 30-day rolling average limit provides for attainment. Without the bounds of past operations, there are an infinite

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<sup>12</sup> The analysis was updated in the February 5, 2020 submittal.

number of emission scenarios that could fit within Seward's 30-day rolling limit (and to a lesser extent Keystone's 24-hour block limit). For example, Seward could emit 2,186,929 lbs between midnight and one in the morning then 1 lb/hr for the next 719 hours and still meet its limit (it is impossible that Seward can emit at this rate, but this illustrates that there is a wide range of numeric operating scenarios which could still result in compliance with the 30-day average limit). On the other hand, Seward could emit 3,084 lb/hr for 720 hours with no variability and meet its limit. Neither of these scenarios are likely to occur, and thus EPA believes that Pennsylvania has appropriately used historical data to develop a representative distribution of potential future hourly emissions that can be expected to occur when complying with a longer term limit.

In summary, EPA has concluded that Pennsylvania's evaluation of longer term limits using 100 AERMOD simulations provides reasonable confidence that the longer term limits for Keystone and Seward are protective of the NAAQS. Pennsylvania evaluated the likelihood of violations based on random reassignment of emission profiles designed to reflect the historic variability of emissions at each of these plants, and modeled these emission profiles using appropriate meteorological data (1-year of site specific meteorological data for Seward and five years of representative meteorological data for Keystone). Because an hour with emissions above the CEV will not necessarily experience a NAAQS exceedance, Pennsylvania's analysis showing the source's emissions variability, when randomly reassigned to different hours in the year, with a percentage of hours modeled above the CEV, provides evidence that the sources complying with those longer term emission limits will protect the NAAQS.

*Comment 4.* The commenter states that the 30-day average limit for Seward was calculated contrary to EPA Guidance. The commenter notes that the conversion factor AECOM

presented in worksheets of 0.47 was not used, and a conversion factor of 0.60 was used. The commenter asserts that the conversion factors of 0.47 and 0.60 are both too permissive. The commenter provided an analysis which they claim demonstrates that the conversion factor is dependent on the time period used to analyze Seward's emission, and that the 0.47 and 0.60 conversion factors are inconsistent with the actual variability observed in Seward's emissions.

A similar comment was received on the NODA, where the commenter asserted that AECOM failed to employ a conversion factor that "properly reflects the emissions variability" at Seward and ignored EPA's 2014 Nonattainment Guidance Appendix C methodology. AECOM provided a conversion factor of 0.47 that was not used to calculate the longer term limit. Rather, the commenter asserts, AECOM used Appendix B methodology to calculate longer term limits, and the commenter asserts this is against the stated purpose of Appendix B.

*Response 4.* EPA agrees that the adjustment factor (which the commenter refers to as the "conversion" factor) which was calculated by AECOM of 0.47 using Appendix C methodology was not used to calculate the longer term emission limit for Seward. However, EPA does not agree that an adjustment factor of 0.60 was used. Adjustment factors were not used to develop the emission limit for Seward. In determining whether the longer term limit at Seward was supportive of the NAAQS, Pennsylvania considered variability of the source in a different manner than the recommended Appendix C methodology. As described in Response 3 of this preamble, Pennsylvania used a modeling approach which varied emissions and meteorology in 100 AERMOD simulations to evaluate the adequacy of the 30-day rolling average SO<sub>2</sub> emission limit for Seward.

EPA acknowledges that if EPA's recommended adjustment factor approach is used to convert a shorter term emission limit into a longer term emission limit, the calculated adjustment

factor can vary depending on the time period used to analyze the source's emissions, though as a general matter EPA expects that different periods with suitably robust data sets and similar control regimes will have similar variability and calculated adjustment factors. However, the state did not use EPA's recommended approach for developing the longer term emission limit for Seward. The commenter did not explain why its objections to an adjustment factor that was not used are relevant. The question is not whether Pennsylvania used the correct adjustment factor to develop the longer term limit, but whether the longer term limit, which was developed without an adjustment factor, is set at a level which is protective of the NAAQS. Based on the information provided in Response 3 of this preamble, EPA concludes that the 30-day limit for Seward and the 24-hour block limit for Keystone are protective of the NAAQS, and that the commenter's objections related to the un-used adjustment factor are not relevant to this determination.

*Comment 5.* The commenter asserts that the longer term limits for Seward and Keystone are fundamentally incapable of protecting the 1-hour SO<sub>2</sub> NAAQS. The commenter asserts that an emission limit with an averaging period longer than one hour is highly unlikely to protect the short term standard, and spikes in emissions could cause short term elevations in ambient SO<sub>2</sub> levels sufficient to violate the NAAQS while nonetheless averaging out over a longer period such that the source complies with their longer term limit. The commenter cites to previous EPA documents stating that compliance with emission limits should be determined based on an averaging time consistent with the NAAQS.<sup>13</sup> The commenter asserts that the 30-day emission limit proposed for Seward is 720 times the standard. The commenter provided an assessment of

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<sup>13</sup> 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).

historic hourly emissions from 2011 to 2016 for Seward and concluded that during this period, there were 445 hours in which emissions from the plant exceeded its CEV. The commenter states that because exceedances<sup>14</sup> of the NAAQS can occur if as few as four hours over the course of a year are above 75 ppb, the 30-day proposed emission limit cannot be protective of the NAAQS.

The commenter also states that the 24-hour emission limit proposed for Keystone is also inadequate to protect against violations of the NAAQS. The commenter provided an analysis of historic hourly emissions data from 2011 to 2016 for Keystone<sup>15</sup> and concluded that Keystone had exceeded its CEV 12,830 total hours over the examined period. The commenter argues that given the Keystone and Seward emissions limits are not new requirements, it is questionable that these limits will protect the NAAQS.

*Response 5.* The commenter is incorrect in stating that Keystone does not have new emission limit requirements. Prior to the attainment plan, the SO<sub>2</sub> emission limit at Keystone was set at 1.2 lb/MMBtu on a 30-day rolling average basis. A new SO<sub>2</sub> limit was established in this attainment plan for Keystone of 9,600 lb/hr average calculated on a 24-hour block basis, a limit which went into effect on October 1, 2018. Therefore, the commenter's reasoning that the Keystone limit will not protect the NAAQS because the past emissions exceeded the CEV 12,830 hours in a six-year period (prior to the adoption of the limit) is based on faulty information. Subsequent evidence indicates, as expected, that imposition of the limit has led to a significant decline in the frequency of emissions exceeding the CEV.

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<sup>14</sup> For clarity, EPA notes that a violation of the 2010 SO<sub>2</sub> NAAQS occurs when the 3-year average of the 99th percentile of the yearly distribution of daily maximum 1-hour average concentrations is above 75 ppb. The 2010 SO<sub>2</sub> NAAQS is not a single exceedance based standard.

<sup>15</sup> EPA notes that the graph provided on page 7 of the Comment document indicates the commenter's analysis is based on a CEV equal to 9600 lb/hr, however, the CEV for Keystone is 9711 lb/hr.

EPA disagrees with the commenter's statement that the proposed 30-day limit for Seward and the 24-hour limit for Keystone are fundamentally incapable of protecting the 1-hour SO<sub>2</sub> NAAQS. Pennsylvania has conducted detailed modeling supporting the view that the distribution of emissions that can be expected in compliance with its requested SIP limits will provide for attainment. 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 SO<sub>2</sub> Nonattainment Area Guidance. As such, these examples only reflect the Agency's development of its policy for implementing the 2010 SO<sub>2</sub> 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 one-hour, using appropriate adjustments that would make it comparably stringent to an emission limit shown to attain one-hour emission levels or other possible approaches, that could adequately ensure attainment of the SO<sub>2</sub> 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.

In contrast, EPA's 2014 SO<sub>2</sub> Nonattainment Area Guidance specifically addressed this issue as it pertains to SIP requirements for SO<sub>2</sub> nonattainment areas under the 2010 NAAQS. EPA found that a longer term average limit could be devised such that it is likely to yield attaining air quality under the one-hour NAAQS. See 2014 SO<sub>2</sub> Nonattainment Guidance. While EPA's guidance focuses on a different approach (involving establishment of a longer term average limit that is comparably stringent to the one-hour limit that would otherwise be set), EPA believes that Pennsylvania has made a suitable demonstration that its limits are adequate to provide for attainment.

Any analysis of whether a 30-day or 24-hour average limit provides for attainment must consider factors for 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 SO<sub>2</sub>-emitting facilities which are being addressed in a nonattainment SIP. The CEV is the continuous 1-hour emission rate which modeling shows is expected to result in the 3-year average of annual 99<sup>th</sup> 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 SO<sub>2</sub> concentrations exceeding 75 ppb. See 2014 SO<sub>2</sub> Nonattainment Guidance.

EPA recognizes that a 30-day or 24-hour average limits can allow occasions in which hourly emissions from the source exceed the CEV, and such occasions yield the possibility of ambient 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 longer term 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.

As described in detail in Response 3 of this preamble, the RRE modeling runs submitted by Pennsylvania specifically modeled “high emission events” at Keystone and Seward where the hourly emissions exceeded the CEV. The RRE modeling used the distribution of past hourly SO<sub>2</sub> emissions, with a certain number of hours over the CEV (15% of the hours at Keystone and 2.5% of the hours at Seward were modeled with emissions over the CEV). For each facility, the emissions in the resulting emission profiles were randomly reassigned to develop 100 hourly emission files for use in 100 AERMOD simulations. The AERMOD simulations were conducted with the same general methodology as the air dispersion modeling for the CEVs,

except that the hourly emission files, for either Keystone or Seward, replaced the CEV in AERMOD. All of these AERMOD simulations resulted in maximum 1-hour SO<sub>2</sub> design concentrations equal to or less than the NAAQS, which provides sufficient support for EPA to assert that the longer term emission limits for Seward and Keystone are protective of the NAAQS.

While the commenter claims that emissions above the CEV will cause NAAQS violations, no analysis has been provided to support this assertion. In contrast, Pennsylvania did provide a detailed modeling analysis which specifically showed that the longer term limits for Seward and Keystone, including a percentage of hours over the CEV, provide for attainment. A more detailed discussion of the hourly emissions data for Seward and Keystone and the RRE analysis is provided in the Part 75 Emissions TSDs, the Supplemental Modeling TSD and the RRE Modeling TSD found in the docket for this action.

*Comment 6.* The commenter states that EPA's justification for Pennsylvania's use of the Appendix B methodology for developing longer term emission limits is nonsensical and contrary to EPA's 2014 SO<sub>2</sub> Nonattainment Guidance. The commenter cites EPA's Guidance, which suggests that longer term emission limits are most appropriate where periods of hourly emissions above the CEV are a rare occurrence at a source, particularly if the magnitude of the emissions is not substantially higher than the CEV. These periods of time over the CEV would be unlikely to have a significant impact on air quality, because they would be very unlikely to occur repeatedly at the times when the meteorology is conducive for high ambient concentrations of SO<sub>2</sub>. However, the commenter indicates that in the TSD for the NPRM, EPA states that a survey of emissions from 2014-2016 for Keystone showed hourly emissions exceeded the CEV quite

frequently and therefore Appendix B was chosen to model attainment. The commenter argues that reasoning is nonsensical.

*Response 6.* EPA's 2014 SO<sub>2</sub> Nonattainment Guidance provides recommendations, but does not require states to follow the guidance in each aspect of their submittal. The state may decide to use a different approach than recommended by EPA, and it is EPA's role to determine if that approach and the result is reasonable and protective of the NAAQS. In this case, the state used elements of the methodology described in Appendix B to demonstrate that the longer term limits for Keystone are protective of the NAAQS. Regardless of the state's reasoning for using that approach, EPA must judge the state's submittal.

EPA's proposal that the SO<sub>2</sub> emission limits at Keystone are protective of the NAAQS relies upon Pennsylvania's RRE modeling analysis. Pennsylvania's SO<sub>2</sub> limits with averaging periods of longer than one-hour can provide sources flexibility to deal with the inherent variability in their SO<sub>2</sub> emissions and emission control systems.

Pennsylvania submitted RRE model simulations that calculate design values over the model receptor grid based on varying hourly emissions that for Keystone exceeded the 1-hour CEV emission rate approximately 15% of the hours in a year. The RRE simulations allow the model to determine if the total contribution to the averaged design value by the hours exceeding the 1-hour CEV, when considered along with the hours in which emissions are below the 1-hour CEV, and in compliance with the target emission limit, would result in a modeled NAAQS violation. Pennsylvania developed 100 sets of hourly emission data sets where Keystone's peak daily average emission rate was equal to a target value of 9,600 lb/hr (the new SO<sub>2</sub> 24-hr emission limit), 85% of the hours were modeled below the CEV, and 15% of the hours were modeled above the CEV. The RRE evaluation shows compliance with the NAAQS since all 100

simulations return modeled design values less than or equal to 75 ppb. If the modeled emission limits were not protective, the RRE test would show modeled design values above the 1-hour SO<sub>2</sub> NAAQS.

Because Pennsylvania did not follow the approach in Appendix C from EPA's SO<sub>2</sub> Nonattainment Guidance to develop the longer term limit for Keystone, this analysis was the evidence EPA relied on to determine that the longer term limit for Keystone was protective of the NAAQS. In any case, more recent evidence indicates that Keystone's compliance with its new limit will result in substantially fewer hours when emissions exceed the CEV. For example, in 2019, after the limit took effect, only 35 hours exceeded the CEV, representing 0.4% of the 8,623 operating hours during the year.

*Comment 7.* The commenter asserts that AECOM's modeling erroneously splits the nonattainment area into two modeling domains, and thus does not adequately assess the impacts of the four electric generating units (EGUs) together. The commenter points out that the modeled peak impact for Armstrong County of 192.3 µg/m<sup>3</sup> is due to Keystone impacts only, and does not include impacts from the other three EGUs. The commenter notes that the maximum modeled concentration from Seward<sup>16</sup> of 194.44 µg/m<sup>3</sup> occurs just over the border between Indiana and Armstrong Counties on the Indiana County side, and that simulation includes all four EGUs. The commenter thinks that both results cannot be true: either the maximum impact reported for Seward is incorrect because it considers all four EGUs or the modeling in Armstrong County needs to include all four EGUs. The commenter also argues that EPA used an incorrect rationale for approving the two separate modeling domains. Specifically, the

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<sup>16</sup> The peak model concentration of 196.44 ug/m<sup>3</sup> is in the area surrounding Keystone, it is not in the area surrounding Seward as the commenter wrote. The peak model concentration around Seward was reported at 192.75 ug/m<sup>3</sup> in the original state submittal.

commenter is concerned that the wind rose provided in the TSD shows that winds having a southeasterly component occur approximately 15% of the time, which they claim is not “infrequent,” as EPA describes in that TSD. Also, the commenter takes issue with the fact that the background concentrations used in the two modeling domains are different – while the same monitor is used, the dates from the monitoring values are different (2014-2016 vs. 2013-2015). The commenter believes that the same date range should be used.

*Response 7.* EPA disagrees that the nonattainment area was erroneously split into two modeling domains and that this splitting of the nonattainment area into separate modeling domains would not correctly consider the joint impacts of all four sources included in the Indiana, PA SIP modeling demonstration. EPA believes that modeling two domains was warranted in this case based on the justification provided by Pennsylvania in Appendix C-1a (AECOM’s SO<sub>2</sub> NAAQS Compliance Modeling Report for the Indiana, PA Non-Attainment Area: Phase 1 Modeling (Revision No. 1)) of the state’s submittal. EPA believes that the commenter misunderstands the model results for Seward and Keystone based on the fact that the commenter noted that the maximum modeled concentration from Seward was 194.44 µg/m<sup>3</sup>, which is actually the peak modeled concentration around Keystone.<sup>17</sup>

EPA will further explain the reasoning for the use of the split modeling domains and the reasons supporting EPA’s conclusion that the use of two modeling domains in this case is appropriate. The nonattainment area was divided into two modeling domains; one covering portions of Armstrong County surrounding Keystone, and one covering all of Indiana County. In the Armstrong domain, Pennsylvania modeled Keystone as the only source. In the Indiana

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<sup>17</sup> EPA has included in the docket for this action a TSD Addressing Modeled Concentration Values for the Keystone Generating Station Included in the Indiana, PA 1-Hour SO<sub>2</sub> Nonattainment Area. The TSD explains that using updated background concentrations, the modeled maximum concentration for Keystone is below 196.4 ug/m<sup>3</sup>.

domain, Pennsylvania modeled all four SIP sources. EPA agrees with this approach because of the long aerial transport distances (for SO<sub>2</sub>) between Keystone and the remaining SIP sources in Indiana County, and the prevailing wind directions in the Area.

The distances between Keystone and the remaining SIP sources are greater than 10 kilometers. From EPA's March 2011 Clarification Memo, "*...the emphasis on determining which nearby sources to include in the modeling analysis should focus on the area within about 10 kilometers of the project location in most cases.*" The distance between Keystone and Homer City is approximately 20.5 kilometers, between Keystone and Conemaugh is approximately 38.9 kilometers and between Keystone and Seward Station is approximately 38.3 kilometers. Therefore, it was reasonable for Pennsylvania to model Keystone in a separate modeling domain.

EPA's clarification memo continues, "*[T]he routine inclusion of all sources within 50 kilometers of the project location, the nominal distance for which AERMOD is applicable, is likely to produce an overly conservative result in most cases.*" EPA believes that including all four sources in the Keystone modeling domain would have been overly conservative.

When modeling all four sources, the peak model concentration is located approximately four km northeast of Keystone. This would be the result of plant emissions being blown from winds out of the southwest (from Keystone's stack towards the peak model receptor). Emissions from Conemaugh, Homer City and Seward would be transported in a similar direction, i.e. to locations far away from the peak receptor near Keystone. Evaluative modeling conducted by AECOM (Appendix C1-a of the SIP submittal) confirmed the minimal impact of these three sources in the vicinity of Keystone. Specifically, the modeling shows that the peak modeled concentration contains a fractional contribution (0.6%) from the other three SIP sources even under circumstances where those plant's emissions would have been advected in an almost

opposite direction. Given this result, and since it is logical to conclude that when winds are blowing from the southwest, emissions would not be transported in the northwesterly direction, EPA believes it was appropriate to exclude contributions from Conemaugh, Homer City and Seward in modeling the area around the Keystone plant.

In regard to the commenter's concern regarding the use of different background concentrations in the two modeling domains, EPA believes the state's use of a higher background concentration in the Keystone only modeling domain provides a level of conservatism that, while not required, provides additional assurances that the Keystone limits are protective of the NAAQS. The higher background concentration was from a period of time from 2013-2015, prior to the installation of SO<sub>2</sub> controls on Homer City and during a time with higher regional SO<sub>2</sub> background concentrations. Homer City is the closest of the three sources outside the modeling domain. The inclusion of these potential impacts was considered to provide a more conservative analysis. While Pennsylvania could have used more updated background concentrations reflecting a decrease in impacts from Homer City (and from all SO<sub>2</sub> sources), the state submitted a more conservative analysis to show that even if the background concentrations were higher than recent background data, the modeling results are within the NAAQS.

For model receptors in Indiana County, all four sources were modeled with newer regional background reflecting reduced emissions from Homer City due to new SO<sub>2</sub> controls. The use of newer background concentrations (2014-2016) is warranted since it provides a more accurate depiction of reality. Current background concentrations are even lower<sup>18</sup> than in 2016 (mainly due to reduced regional SO<sub>2</sub> emissions), providing additional support that the plan

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<sup>18</sup> <https://www.epa.gov/air-trends/sulfur-dioxide-trends#sonat>

provides for attainment. Pennsylvania provided more recent background values in the Supplemental Submittal of February 5, 2020.

*Comment 8.* GenOn (owner and operator of Conemaugh and Keystone) was advised by EPA that the absence of a site-specific study would not, in of itself, preclude the use of AERMOIST for the Indiana Area SIP provided that other site-specific studies conducted elsewhere demonstrated the applicability and effectiveness of AERMOIST in providing improved model results. Consequently, based on EPA's guidance, GenOn and their modeling contractor, AECOM, proceeded with the companion modeling effort that utilized AERMOIST.

*Response 8.* EPA acknowledges the detailed responses regarding AERMOIST provided during the public comment period (see next comment). EPA's analysis of possible shortcomings of the AERMOIST plume module was outlined in a December 27, 2017 response to Pennsylvania's request to use AERMOIST as an alternative model under Appendix W. At that time, EPA had determined that use of the AERMOIST plume module was not approvable under section 3.2.2 of Appendix W and that the (higher) limits established using AERMOIST were not protective of the 1-hour SO<sub>2</sub> NAAQS.

EPA continues to believe that the use of AERMOIST is not an appropriate basis for evaluating emission limits in the Indiana, PA nonattainment area.

*Comment 9.* The commenter asserts that in an EPA White Paper, EPA agreed with the physical and theoretical merits of the AERMOIST hypothesis, specifically that AERMOD does not account for the effects of plume moisture. Plume moisture tends to increase plume rise over that for a "dry" plume because the condensation which occurs when water vapor in a moist plume condenses upon leaving the stack, releasing heat as part of the condensation process. The commenter provided a presentation (which was previously shared with EPA) that responds to the

deficiencies of AERMOIST that EPA pointed out to them. The commenter asserts that EPA has acknowledged that AERMOD in default mode is deficient in not addressing the real effect of moisture in the plume, so there is merit in pursuing the AERMOIST approach. Therefore, the commenter concludes that AERMOIST should be considered as an “ALPHA” procedure, which means that as an “experimental” procedure, AERMOIST has scientific merit, but is not yet ready for regulatory applications.

*Response 9.* EPA acknowledges the analysis provided by the commenter regarding the AERMOIST plume module. As noted previously, application of AERMOIST in the Indiana, PA modeling demonstration has not been justified. The commenter appears to acknowledge that AERMOIST has not been demonstrated to warrant being used in regulatory applications such as in Pennsylvania’s SO<sub>2</sub> attainment plan. The comment regarding designation of AERMOIST as an alpha procedure is outside the scope of this rulemaking.

*Comment 10.* The commenter asserts that AECOM used erroneous assumptions and methods in their modeling analysis and EPA’s reliance on this modeling would be arbitrary and capricious. The commenter claims the following aspects of the modeling analysis are incorrect:

1. The receptor grid used by AECOM has glaring areas of no coverage including the area around Homer City and the area across the Indiana County border right next to Seward and Conemaugh. This is a particular problem for Seward and Conemaugh as the emissions from those sources cause attainment problems both inside the nonattainment area and east and southeast of the plants (outside the nonattainment area).
2. The AECOM modeling used fixed stack parameters and ignored differences in the plume loft and dispersion that would occur at different gas exit temperatures and velocities. AECOM plotted SO<sub>2</sub> emissions vs. temperature, and SO<sub>2</sub> emissions vs. gas velocity, and both data sets

showed a variation in the variables as a function of emissions. Data from Conemaugh and Homer City stacks are absent. In addition, the data for Seward and Keystone that are presented (SO<sub>2</sub> emissions and temperature/ velocity) are not directly correlated, and the link that would correlate them (boiler operation) is not provided or taken into consideration.

3. The emissions modeled in the randomized modeling for Keystone are improper because they do not account for the actual historic emissions practices at the plant. The data provided by the commenter show that approximately 25% of the hours for 2011 through 2016 were above the CEV, while the modeling only included emissions over the CEV 15% of the time.

4. Only one meteorological data source was used for modeling all four EGUs, rather than selecting the most appropriate meteorological data for each source. EPA should have insisted on a meteorological data sensitivity analysis to ensure the model results were not driven by the meteorological data source selection. Johnston airport is not in the nonattainment area and is a significant distance from several coal-fired power plants and the Strongstown monitor. It lies 16 miles south-southeast of the monitor. DEP could have considered the Jimmy Stewart Airport which is located in Indiana County. The model results could be affected by the differences in wind speed and direction at these airports. Wind roses for each airport were provided. EPA should do the modeling again using the closer meteorological data.

To summarize, the commenter states that these modeling issues are not trivial and notes that when these model assumptions are used, each facility, itself causes exceedances of the NAAQS.

*Response 10.* EPA disagrees with the commenters' points as follows:

1. Regarding model receptors surrounding the Homer City power plant, this item was brought

up (and fully addressed) during Pennsylvania's public comment period. EPA finds Pennsylvania's response fully adequate (see response to comment 11 in Pennsylvania's Comment Response Document). The modeling analysis did include model receptors "... along the public roads which pass through the facility, specifically, Coal Road, Power Plant Road, Cherry Run Road, and Quarter Center Road." Homer City has also properly established that it has ownership and imposed proper public access control protocols that support its modeled ambient air boundary. Additionally, due to Homer City's tall stacks, local peak model concentrations occur well beyond the plant's ambient air boundary (see Figure 5-7 of Appendix C-1a of the Commonwealth's submittal) indicating model receptors within the area highlighted by the commenters probably do not exceed the source generated local concentration peaks mainly due to the GEP oriented stack height. GEP formula height for all three stacks is 298.62 meters above local ground elevations.

The commenter's concern that no model receptors outside of the Indiana nonattainment area boundaries were included in Pennsylvania's modeling demonstration showing SO<sub>2</sub> attainment within the nonattainment area is outside the scope of this action. The boundaries of the Indiana, PA nonattainment area were set and made final in August 2013 in "Round One" of EPA's designations for the 2010 SO<sub>2</sub> NAAQS, and these boundaries were not challenged.<sup>19</sup> Pennsylvania's obligation under section 110(a) of the CAA is to submit "... a plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality control region (or portion thereof) within such State." CAA section 110(a)(1). Section 110 further provides that "[i]n the case of a plan or plan revision for an area designated as a nonattainment area, meet the applicable requirements of part D of this subchapter (relating to

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<sup>19</sup> See <https://www.epa.gov/sulfur-dioxide-designations/so2-designations-state-designations-round-1>

nonattainment areas).” CAA section 110(a)(2)(I). Section 172(c)(6) then requires the SIP for a nonattainment area to include enforceable emission limitations and control measures as necessary or appropriate to provide for NAAQS attainment “in such area.” CAA section 172(c)(6). In this case, Pennsylvania’s attainment plan for the Indiana area includes limits on SO<sub>2</sub> sources and a modeling demonstration showing that SO<sub>2</sub> concentrations throughout the Indiana nonattainment area are at or below the NAAQS. While section 110(a)(2)(D) contains provisions requiring that a state’s SIP contain provisions to avoid causing or contributing to nonattainment or maintenance in another state, the Commenter does not cite any statutory or regulatory requirements or EPA guidance that a state must include modeling receptors outside of a nonattainment area in an attainment plan. Further, EPA’s role is limited to determining whether the submitted SIP meets the requirements of the CAA, see section 110(k), and Pennsylvania’s SIP does not address areas outside the defined nonattainment area. Absent a clear requirement that Pennsylvania must include model receptors outside of the nonattainment area in its submission, EPA will confine its analysis to whether the attainment SIP demonstrates attainment within the designated nonattainment area.

Although some of the modeling submitted by the commenter purports to show SO<sub>2</sub> concentrations outside of the boundaries of the Indiana, PA nonattainment area that are above the SO<sub>2</sub> NAAQS, primarily in Cambria and Westmoreland Counties to the east, Pennsylvania was required to develop and submit an SO<sub>2</sub> attainment demonstration SIP only for the Indiana, PA nonattainment area, which does not include these counties. Prior to making its final round one designations, EPA invited interested parties other than the states and Tribes to submit comments on the proposed designations of these areas, including the boundaries of these areas. 78 FR 11124 (February 15, 2013).

2. The commenter's concern regarding not accounting for source variability in stack temperatures and velocities was also raised during the Pennsylvania public comment period. EPA believes Pennsylvania's response is adequate for the commenter's concern and information supporting their conclusions was provided as part of Pennsylvania's SIP package (see Comment Response Document, response to comment 12). EPA generally agrees with Pennsylvania's observation that while stack velocities (and sometimes stack temperatures) decrease under loads less than 100% or the facility's peak load, the emission reductions for boiler loads lower than 100% more than offset any reduction in stack plume-height and dispersion caused by lower plume lofting due to lower exit velocities and lower temperatures. Additional information included in AECOM's modeling reports clearly show stack temperatures and exhaust parameters are relatively uniform across different emission ranges, which supports using constant values in the modeling analysis.

3. Pennsylvania analyzed the heat input for years 2014 through 2016 for Keystone. Station operations in 2016 represented the average of station operations over the three-year period from 2014 through 2016 (heat input-based capacity factors of 74%, 64% and 69% for 2014, 2015 and 2016, respectively), therefore the 2016 emission cumulative frequency plot was used in the analysis to derive the emissions input to the 100 AERMOD simulations. EPA analyzed the last ten years of heat input and notes that the heat input has been relatively stable.

The commenter is evaluating the likelihood of emissions exceeding the CEV based on data before Pennsylvania's limit took effect. EPA has analyzed the hours over the CEV for the last 10 years and notes a downward trend. More importantly, the newly developed SIP limit for Keystone went into effect on October 1, 2018, which can be expected to cause a reduction in the frequency of emissions exceeding the CEV. Indeed, the available evidence indicates that this has

already occurred. Data from 2018 and 2019 indicates that Keystone emissions are now exceeding the CEV for only about 1 percent of the hours. EPA believes the new emission limit provides a constraint that will result in the frequency of hourly emissions over the CEV being considerably less than 15% of the time. While EPA believes that the 2016 data provide a good basis for formulating the anticipated shape of the future distribution of emissions, including assessing the variability of emissions (particularly as it pertains to the spread among the emission rates in the upper portion of the distribution, which are of most interest for air quality planning purposes), EPA does not believe that modeling with 25 percent of hours exceeding the CEV would appropriately reflect emissions in compliance with Pennsylvania's limits. A more detailed discussion of EPA's analysis of Keystone's emissions and heat input is included in the Part 75 Emissions TSD.

4. The use of the Johnstown-Cambria County airport as the source of meteorological data for the modeling analysis has been adequately justified. The possibility of using the Indiana County (Jimmy Stewart) airport data was addressed in Pennsylvania's comment response document (see comment 9 and response). In addition to Pennsylvania's response, EPA asserts that using a site in lower terrain, such as the Indiana County airport, may provide unrepresentative wind speeds for the modeling analysis. The Johnstown-Cambria County airport sits in elevated terrain along the Allegheny Front to the east of the Indiana, PA nonattainment area. Due to its elevation, the Johnstown-Cambria County airport experiences relatively sustained wind speeds. One of the reasons this airport was chosen was because its elevation is closer to the exit height of the elevated stacks that are included in the Indiana, PA modeling demonstration.

Pennsylvania submitted additional site-specific meteorological data on February 5, 2020 which was collected near the Seward and Conemaugh stations. This meteorological data is

called the Ash Landfill Tower data and is more representative of the meteorology in the vicinity of Seward and Conemaugh. EPA compared the new Ash Landfill Tower data<sup>20</sup> to the Johnstown-Cambria County airport data which demonstrated that more sustained wind speeds aloft are clearly evident. Ash Landfill Tower wind speeds from the lowest level (10-meters) tend to be lighter during the overnight hours and suggest that wind speeds at lower elevation sites, such as the Jimmy Stewart airport the commenters suggested, may not be representative of wind speeds near the exit heights of the stacks for the four coal and waste-coal fired facilities in the SIP modeling demonstration (see 500-m Ash Landfill SODAR wind speeds vs the Johnstown-Cambria County Airport wind speeds).

*Comment 11.* The commenter questions the purpose of EPA's Emissions Inventory Technical Support Document and requests a robust analysis and discussion of the emissions so the public can understand why the emissions information provided by the state is acceptable.

*Response 11.* Pennsylvania submitted their attainment and projection year emission inventories in accordance with EPA's 2014 SO<sub>2</sub> Nonattainment Guidance. The guidance states that air agencies should develop a comprehensive, accurate and current inventory of actual emissions from all sources of SO<sub>2</sub> in the nonattainment area, as well as any sources located outside the nonattainment area which may affect attainment in the area as required under the Clean Air Act section 172(c)(3). EPA verified all emissions that were submitted by Pennsylvania against the 2011 National Emissions Inventory (NEI) version 2 and found them to be acceptable.

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<sup>20</sup> The Ash Landfill Tower Data was a site-specific meteorological monitoring data collected at a site located in southeast Indiana county along the Conemaugh River between the Conemaugh and Seward power plants. AECOM collected meteorological data from a multi-level instrumented tower and SODAR. A more complete description of this site-specific data can be found in AECOM's *Meteorological Monitoring Station Design and Quality Assurance Project Plan for the Conemaugh and Seward Generating Stations – Indiana County, PA* referenced in the NODA.

**Table 1. Commonwealth submitted SO<sub>2</sub> emissions compared to 2011 NEI (tpy)**

<b>Indiana Nonattainment Area Emission Source Category</b>	<b>Commonwealth Submitted SO<sub>2</sub> Tons per year (tpy)*</b>	<b>2011 NEI v2 SO<sub>2</sub> Tons per year (tpy)</b>
Stationary Point Sources	144,269.02	144,266.29
Area Sources	555.61	555.597
Non-road Sources	1.025	1.025
On-road Highway Sources	7.73	7.319
<b>TOTAL</b>	<b>144,833.38</b>	<b>144,830.23</b>

\*Submitted with the Attainment Plan

For the attainment year inventory, EPA's 2014 SO<sub>2</sub> Nonattainment Guidance explains that the inventory should reflect projected emissions for the attainment year for all SO<sub>2</sub> sources in the nonattainment area, taking into account emission changes that are expected after the base year. For point sources, Pennsylvania projected emissions from 2011 to 2018 based on the anticipated 2018 operating scenario for each facility. For the nonpoint and nonroad emission projections, Pennsylvania submitted projected inventories developed by the Mid-Atlantic Regional Air Management Association (MARAMA), which are documented in the TSD found in Appendix A-1 of the Attainment Plan. Onroad emission projections were developed by Michael Baker Corp. and are also detailed in Appendix A of the Attainment Plan. Point Source emissions account for approximately 95% of the emissions in the NAA. EPA compared the 2018 projected actual emissions with the actual point source emissions in the most recent 2017 NEI for all point sources in the NAA, and the projected emissions are conservative (i.e. higher) when compared to actual emissions from the NEI. EPA also compared nonpoint, nonroad, and on-road emissions

from the 2017 NEI and found the 2018 projected emissions to be conservative in comparison.

**Table 2. Facility-specific Comparison of 2018 Anticipated SO<sub>2</sub> emissions and 2017 NEI SO<sub>2</sub> emissions**

<b>Facility</b>	<b>2018 Anticipated Actual SO<sub>2</sub> (tpy)*</b>	<b>2017 NEI SO<sub>2</sub> (tpy)</b>
KEYSTONE STATION	32,459.53	23,248.09
SEWARD GENERATING STATION/SEWARD	10,118.93	7,265.86
HOMER CITY GEN LP/CENTER TWP	16,714.31	5,748.06
CONEMAUGH STATION	9,248.29	4,619.78
All other point Sources	4.24	7.93
<b>Total</b>	<b>68,545.30</b>	<b>40,889.72</b>

\*Submitted with the Attainment Plan in 2016

*Comment 12.* The commenter provided modeling analyses of Seward and Conemaugh's emission limits using the same meteorological data, the same stack parameters, the same background concentrations, and the same building downwash data as did Pennsylvania/AECOM. The commenter used emissions inputs from actual historical emissions from a variety of time periods between 2013 through quarter one of 2018 (EPA's Air Markets Program Database) and used a finer receptor grid around Seward and Conemaugh and included receptors outside the Indiana nonattainment area. The commenter modeled the CEVs and asserts that EPA cannot approve this SIP because the commenter's modeling demonstrates emission limits for those facilities are too lax and will not ensure attainment of the NAAQS. Modeling results for four separate date ranges were provided: 2013-2015, 2014-2016, 2015-2017, and 2013-2017.

*Response 12.* EPA agrees with the commenter that their modeling demonstrated that the CEV for Seward was too high because one receptor in the southeast corner of the nonattainment

area exceeded the standard. However, EPA does not agree that the commenter’s modeling demonstrates that the emission limits for Seward and Conemaugh are too lax. As a result of this comment, on February 5, 2020, Pennsylvania submitted an additional analysis showing compliance within the southeast portion of the Indiana, PA nonattainment area (near the Conemaugh and Seward power plants) where the commenter’s modeling analysis had shown a modeled violation of the 1-hour SO<sub>2</sub> NAAQS at one receptor. This new analysis used one year (September 2015 through August 2016) of meteorological tower/SODAR (Sonic Detection and Ranging) data collected at the Ash Landfill site (located in Indiana County between the Conemaugh and Seward power plants), which is more representative of local conditions. The CEV model runs for Seward and Conemaugh were updated using this site-specific meteorological data and updated, more accurate background concentrations, plus a refined modeling grid to better resolve the commenter’s modeled violation. The newly submitted CEV for Seward is 4,500 lbs/hr; the Conemaugh CEV did not change.

To better understand the reduction in Seward’s CEV, EPA analyzed the changes in the model inputs for the supplemental analysis through an iterative process. A summary of the changes and the resulting model concentrations is provided in Table 3.

**Table 3. Modeling Results for Seward CEV model runs**

<b>Run Iteration Description</b>	<b>Seward Emissions (lbs/hr)</b>	<b>Meteorological Data</b>	<b>Peak Receptor Location</b>	<b>Receptor Grid</b>	<b>Background Concentration</b>	<b>Peak Model Concentration (µg /m<sup>3</sup>)</b>
Commenter’s Original Run	5,079	JST 2011-15	Laurel Ridge Terrain	Commenter	Original SIP (2014-16)	213.84551
Change to Supplemental Grid	5,079	JST 2011-16	Laurel Ridge Terrain	Supplemental	Original SIP (2014-16)	304.07974
Change to Supplemental Grid and Ash Tower Meteorological data	5,079	Ash Landfill	Robindale Heights	Supplemental	Original SIP (2014-16)	220.21861

Change to Supplemental Grid, Ash Tower, Updated Background Concentration	5,079	Ash Landfill	Robindale Heights	Supplemental	Updated SIP (2016-18)	217.81186
All changes; Lower CEV until compliance	4,500	Ash Landfill	Robindale Heights	Supplemental	Updated SIP (2016-18)	191.85440

When EPA used the same inputs as the commenter's except replaced the receptor grid with the Pennsylvania supplemental grid, EPA's analysis produced a peak concentration over  $300 \mu\text{g}/\text{m}^3$  as opposed to the commenter's concentration of  $213 \mu\text{g}/\text{m}^3$ . In the next iteration, EPA used the supplemental grid, and the Ash Landfill meteorological data, and the concentrations in the area of the original modeled violation went below the NAAQS and the maximum modeled concentration now occurred in a location north-northeast of the Conemaugh and Seward power plants in East Wheatfield Township near Robindale Heights.

Finally, EPA completed a model run with all the updates from the supplemental modeling: the Ash Landfill met data, supplemental receptor grid, and updated background concentration from 2016-18. When all the updates were modeled, Seward's 1-hour modeled CEV (for the supplemental run) had to be reduced (about 11% from the original modeling analysis) to show compliance with the NAAQS. A detailed description of EPA's analysis can be found in the June 2020 Supplemental Modeling TSD (Appendix B).

Based on the AERMOD simulations provided which show that no receptors in the nonattainment area exceed the NAAQS, EPA believes the revised CEV for Seward and the pre-existing CEV for Conemaugh are protective of the 1-hour  $\text{SO}_2$  NAAQS.

Pennsylvania submitted updated RRE model simulations using the site-specific Ash Landfill meteorological data, updated receptor grid, updated background concentration, and

updated operating information (2016-2018) at Seward. The 30-day emission limit for Seward is below the newly submitted CEV, and the updated RRE modeling provides evidence that this limit is protective of the NAAQS (as described in Response 3). EPA solicited public comments on this updated modeling in a notice of data availability published on March 9, 2020 at 85 FR 13602. A more detailed analysis of the RRE modeling for Seward is provided in the February 2020 RRE Modeling TSD.

*Comment 13.* The commenter asserts that the SIP is not approvable because the AECOM modeling is improperly based on “representative future operations” that are not enforceable. The modeling evaluated hourly emissions from 2014 through 2016 and assumed similar future operations in its 100 RRE model simulations. However, the commenter argues that there is no mechanism proposed (enforceable or otherwise) to ensure future distribution of emissions do not change such that a NAAQS violation would occur.

*Response 13.* While the comment is somewhat ambiguous, EPA interprets this comment to express concerns that the modeled emissions reflect a variability that may not occur in the future. Other comments by this commenter discussed previously spoke more precisely to maximum allowable emissions; those comments were answered previously. EPA is expecting states to set limits that reflect expected normal degrees of variability (at the 99<sup>th</sup> percentile level).<sup>21</sup> EPA does not believe that the constraints on operation inherent in restricting emissions distributions are workable, warranted, or appropriate. EPA believes that air quality is likely to be

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<sup>21</sup> EPA uses the term “variability” to address the shape of the distribution of a facility’s emissions, in particular to be a measure of how much variation exists between upper emission levels and more common emission levels. EPA’s guidance recommends a specific procedure, delineated in appendix C, for taking one measure of variability, to obtain a quantitative indication of how the typical range of emissions from a facility influences the relative magnitude of long term average emissions versus 1-hour values. While Pennsylvania did not use this procedure, the principle in EPA’s guidance that historic variability may be used in many cases to predict future variability, without the need for explicit limitations on variability, nevertheless applies here.

relatively insensitive to differences among normal emission distributions. In addition, the intention of allowing longer term SO<sub>2</sub> limits was to provide sources some degree of operating flexibility while still attaining the 2010 SO<sub>2</sub> NAAQS. Requiring that the sources maintain a specific emission profile would greatly hamper any flexibility provided by a longer term limit.

EPA believes the RRE modeling provided by Pennsylvania in the original submittal and supplemented on February 5, 2020 provides the technical evidence that the longer term emission limits (i.e. 30 day rolling average and 24-hour average) at Seward and Keystone are protective of the NAAQS. EPA agrees that the future distribution of hourly emissions for either source will not be exactly the same as those modeled in the RRE demonstration, but does not agree that an enforceable mechanism is required to ensure that the future distribution of emissions do not change. EPA believes that the longer term limits provide the constraints necessary to protect the NAAQS.

The commenter did not provide any analysis, modeling or otherwise, showing that adherence with these limits with a different emissions distribution would violate the NAAQS.

The commenter may be assuming that future operations at Seward and Keystone would change significantly in a way that generates much higher hourly SO<sub>2</sub> emissions than those observed over the RRE emission survey years, even while complying with their emission limits. If so, no justification or analysis was provided to support such an assumption. EPA believes that even if this source operates at higher heat inputs in the future, the emission limits will constrain operations and continue to provide protection of the NAAQS. Nonetheless, EPA researched the regional transmission organization's (PJM's) projected electric demand and analyzed historic emission trends at Seward and Keystone to better understand the potential for a change in emissions in the future. Based on the review of PJM forecasts, EPA contends that it is highly

unlikely that Seward or Keystone will operate at much higher levels in the future. Furthermore, hourly operations and emissions data from Keystone and Seward collected under part 75 of the CAA also show no long-term increase in operating levels (total hours of operation and MMBtu/hr) over the past 10 years. Both of these sources of information strongly suggest that the plants will not increase their hours of operation or level of operation. EPA further finds no reason to believe that the shape of the distribution of these plants' emissions will change in a way that indicates greater variability. EPA's assessment of this data is available in the Part 75 Emissions TSD available in the docket for this action.

*Comment 14.* The commenter asserts that EPA's proposed approval fails to meet the CAA statutory deadline for issuing a Federal Implementation Plan (FIP) because the SIP was not approved by March 8, 2018 (two years after EPA issued a finding of failure to submit), and EPA must impose sanctions on Pennsylvania for failing to submit a lawful, approvable SIP.

*Response 14.* The comment raises issues that are not relevant to the action EPA must take here, which is to either approve or disapprove the submitted SIP. 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 and obviating any need for EPA to issue a FIP. We also note that neither the commenter nor any other entity has undertaken any effort to enforce a duty to promulgate a FIP for this area.

EPA disagrees with the commenter that sanctions should have been applied in this case because, as discussed in the NPRM, the sanctions clock that was started by Pennsylvania not timely submitting its SIP was turned off when EPA determined that Pennsylvania subsequently submitted a complete SIP on October 13, 2017. See CAA 179(a); see also 40 CFR 52.31(d)(5)

(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).

The result of EPA's final approval of the Indiana, PA attainment plan will be to make Federally enforceable the 24-hour average SO<sub>2</sub> limits at Keystone Station and the contingency measures for all four sources. The emission limits at Homer City, Conemaugh, and Seward were already Federally enforceable, and are also being incorporated into the SIP for purposes of permanently attaining the SO<sub>2</sub> NAAQS.

*Comment 15.* The commenter expresses concern with the RACM/RACT and contingency measures, questioning how EPA can incorporate the unredacted portions of Homer City's Plan approval, which lists an expiration date of August 28, 2017, and Seward's Title V Operating Permit, which lists an expiration date of February 11, 2017. The commenter asks EPA to explain why not all of the consent orders have compliance parameters and why the contingency measures appear to be compliance parameters.

*Response 15.* EPA acknowledges that expiration dates were inadvertently included in the unredacted portions of Homer City's Plan approval and Seward's Title V Operating Permit. Pennsylvania has submitted corrected redacted permits which redact the expiration dates, such that the limits may be considered permanent. These corrected permits will be incorporated into the SIP, and will remain in effect unless and until Pennsylvania submits a SIP revision seeking changes to these incorporated permit terms and EPA approves such revisions after evaluating whether such a revision would interfere with NAAQS attainment, as required by CAA section 110(l). EPA also notes that the SO<sub>2</sub> emission limits listed in these permits for Homer City and Seward did not actually expire on the dates listed in the originally submitted permits. Both

permits were properly extended per the state permitting requirements and Title V of the CAA.

Concerning the request for an explanation of why contingency measures appear to be compliance parameters, EPA notes that the 2014 SO<sub>2</sub> Nonattainment Guidance describes special features of the pollutant SO<sub>2</sub> and therefore SO<sub>2</sub> planning that warrant the adoption of alternative means of addressing the requirement in section 172(c)(9) for contingency measures. The control efficiencies for SO<sub>2</sub> control measures are well understood and are far less prone to uncertainty than for other criteria pollutants. Because SO<sub>2</sub> control measures are based on what is directly and quantifiably necessary to attain the SO<sub>2</sub> NAAQS, it would be unlikely for an area to implement the necessary emission controls yet fail to attain the NAAQS. See 2014 SO<sub>2</sub> Nonattainment Area Guidance, page 41. Therefore, for SO<sub>2</sub> programs, EPA has explained that contingency measures can mean that the air agency has a comprehensive program to identify sources of violations of the SO<sub>2</sub> 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 SO<sub>2</sub> NAAQS, and consequently concludes that Pennsylvania's comprehensive enforcement program, as discussed later, satisfies the contingency measure requirement.

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, Pennsylvania 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 Pennsylvania 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 any of the four SIP sources' emissions reach a certain percentage of the allowable emissions or if the Strongstown monitor in the nonattainment area registers a daily maximum 1-hour average concentration exceeding 75 ppb. These measures are in line with the supplemental contingency measure guidance EPA mentions previously and are included in the Homer City COA, Seward COA, Conemaugh Order and the Keystone Order, and thus will be fully approved provisions within the SIP.

EPA concludes, in accordance with the 2014 SO<sub>2</sub> Nonattainment Guidance, that Pennsylvania's enforcement program suffices to satisfy the contingency measure requirements for SO<sub>2</sub>. 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. EPA believes that Pennsylvania's enforcement program, which is enhanced by the supplementary provisions in the COAs and Orders, suffice to meet Section 172(c)(9) requirements as interpreted in the 1992 General Preamble and the 2014 SO<sub>2</sub> Nonattainment

Guidance.

In regard to the commenter's question as to why all of the consent orders do not contain compliance parameters, the compliance parameters can be found in either the COA, Orders or permits that are being incorporated into the SIP. EPA is interpreting the term "compliance parameters" in the comment to mean any specified method for determining compliance with the emission limits. The compliance parameters for Seward, Homer City and Conemaugh are found in the respective redacted permits, and the compliance parameters for Keystone are found in the Order. The COA or Orders for Seward, Homer City and Conemaugh do not have compliance parameters, as they are contained in the redacted permits.

*Comment 1 on NODA.* The commenter expresses concern with the idea that the newly calculated CEV for Seward of 4,500 lbs/hr, which is less than the original CEV of 5,079 lbs/hr, still supports the 3,038 lbs/hr 30-day average emission limit for Seward. The commenter concludes that the prior Seward CEV used to calculate the emission limit in the original submittal was too high and accordingly that the 3,038 lbs/hour emission limit itself is too high.

*Response 1 on NODA.* EPA recognizes the concern that the prior CEV calculated for Seward was higher than the newly calculated CEV, but the longer term limit has not changed. While this would not necessarily occur if Pennsylvania had followed the methodology described in Appendix C, they did not. Pennsylvania opted to use a different approach to calculate the longer term limits (their approach was the same in the original submittal as in the supplemental submittal). Pennsylvania did not rely on adjustments from the CEV as set forth by the approach in Appendix C. Therefore, a reduction in the CEV does not necessarily dictate a reduction in the longer term limit. Instead, Pennsylvania provided an updated RRE modeling analysis demonstrating that Seward's 30-day average emission limit of 3,038 lbs/hr is protective of the

NAAQS.<sup>22</sup>

The supplemental modeling analysis provided on February 5, 2020 included updated and more accurate meteorological data, a more refined receptor grid and updated emission profiles. These updates were incorporated into both the CEV AERMOD simulations and the RRE AERMOD simulations. EPA's February 2020 RRE Modeling TSD located in the docket for this rulemaking explains EPA's review of Pennsylvania's updated RRE analysis and is also addressed in Response 3 of this preamble.

EPA reviewed Seward's emissions data which indicates a decline in emissions variability.<sup>23</sup> In particular, while a comparison of 2014 to 2016 data against 2016 to 2018 shows fairly similar or even slightly increasing 99<sup>th</sup> percentile 30-day average values, these data also show a significant decline in the 99<sup>th</sup> percentile 1-hour values. This decreased difference between peak 1-hour values and peak 30-day average values, indicating a decline in this critical measure of variability, appears to be an important factor in Pennsylvania's supplemental modeling (using emissions reflecting the more recent, less variable emissions) concluding that the same 30-day average limit in the original modeling (using emissions reflecting the older, more variable emissions) still suffices to show attainment. The 2017 to 2019 data indicate that this trend toward less variable emissions appears to be continuing.

*Comment 2 on NODA.* The commenter states that AECOM justified the conversion factor of 0.68 for Seward by comparing it to Table 1 of Appendix D of EPA's 2014 SO<sub>2</sub> Nonattainment Guidance for sources with dry scrubbers (which lists the conversion factor as 0.63). The commenter points out that 0.63 is significantly lower than 0.68, yet significantly

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<sup>22</sup> PADEP did not provide an updated RRE analysis for Keystone, only for Seward.

<sup>23</sup> Clean Air Market Division data submitted to EPA from PADEP on February 5, 2020

higher than the 0.47 conversion factor AECOM calculated using Appendix C methodology for Seward, but ultimately decided to not use. The commenter states that Seward is a waste coal plant and is less likely to operate similarly to the coal fleet as a whole, which may be why using Appendix C methodology supports a conversion factor of 0.47.

*Response 2 on NODA.* A conversion factor was not used to calculate the longer term limit for Seward. While a ratio between the 30-day average limit for Seward and the CEV may be calculated, and this ratio may be compared to the adjustment factor that would be derived using the procedures in Appendix C, the concept of a conversion factor is not directly relevant to the calculation of Seward's longer term limit. EPA acknowledges that the CEV provides an upper bound for the value of a potential longer term limit (i.e., the longer term limit cannot be greater than the CEV). However, that is the extent to which the CEV was used in Pennsylvania's development of Seward's 30-day limit. Instead, Pennsylvania provided updated 100 RRE AERMOD simulations as reasonable evidence that the longer-term emission limit for Seward is protective of the NAAQS. More details on Pennsylvania's methodology for developing Seward's longer term limit is provided in Response 3 of this preamble, and in the RRE Modeling TSD.

*Comment 3 on NODA.* The commenter expressed concern that the modeling analysis did not include areas outside the nonattainment area boundary. The commenter claims that by hiding areas with peak impacts above the NAAQS, the AECOM analysis undercalculates CEVs, and thereby fails to assess emission limits low enough to protect the NAAQS.

*Response 3 on NODA.* As discussed in more detail in Response 10 of this preamble, absent a clear requirement that Pennsylvania must include model receptors outside of the nonattainment area in its submission, EPA will confine its analysis to whether the attainment SIP

demonstrates attainment within the designated nonattainment area.

*Comment 4 on NODA.* The commenter requested that EPA extend this public comment period due to the National Covid-19 Pandemic. Specifically, the commenter requested an additional 30 days after the President's National Emergency Order or Governor Wolf's State Emergency Order are pulled back.

*Response 4 on NODA.* EPA is not able to extend the public comment period for this NODA, particularly when the request seeks an additional 30 day period after some unknown future date when the President's or Governor's Emergency Order is withdrawn. EPA is under an October 30, 2020 court-ordered deadline to take action on this SIP, and therefore an indeterminate delay would require an amendment of that court order, and EPA could not be assured that such an extension could be obtained, particularly when the amount of time of the extension is tied to Emergency Orders with indefinite end dates. Also, EPA believes that issuance of the President's and Governor's orders did not significantly hamper the public's ability to comment because the supplemental information and all materials necessary to evaluate that supplemental information were available electronically in the docket or by contacting EPA for this matter. For these reasons, EPA did not grant the commenter's request for an indefinite extension of the public comment period.

#### **IV. Final Action**

EPA is approving the attainment plan for the Indiana, PA SO<sub>2</sub> nonattainment area as a revision to the Pennsylvania SIP as submitted by PADEP to EPA on October 11, 2017 and supplemented on February 5, 2020. Specifically, EPA is approving the base year emissions inventory, a modeling demonstration of SO<sub>2</sub> attainment, an analysis of RACM/RACT, an RFP plan, and contingency measures for the Indiana Area and is finding that the Pennsylvania SIP

revision has met the requirements for NNSR for the 2010 1-hour SO<sub>2</sub> NAAQS. Additionally, EPA is approving into the Pennsylvania SIP the SO<sub>2</sub> emission limits and compliance parameters in the following Orders, Consent Order and Agreements (COAs) and permits: the unredacted portion of the Order between Pennsylvania and Genon NE Management Company, Conemaugh Plant; the unredacted portions of the Consent Order and COA between Pennsylvania and Homer City Generation, LP; the unredacted portions of the Order between Pennsylvania and Genon NE Management Company, Keystone Plant; the unredacted portions of the COA between Pennsylvania and Seward Generation, LLC; the unredacted portions of the Title V Permit for Conemaugh Plant (provided to EPA on May 13, 2020); the unredacted portions of the Plan Approval for Homer City (provided to EPA on May 13, 2020); and the unredacted portion of the Title V Operating Permit for Seward Station (provided to EPA on May 13, 2020).

EPA has determined that Pennsylvania's SO<sub>2</sub> attainment plan for the 2010 1-hour SO<sub>2</sub> NAAQS for the Indiana Area meets the applicable requirements of the CAA and is consistent with EPA's 2014 SO<sub>2</sub> Nonattainment Guidance where applicable. Thus, EPA is approving Pennsylvania's attainment plan for the Indiana Area as submitted on October 11, 2017 and supplemented on February 5, 2020. This final action of this SIP submittal removes EPA's duty to implement a FIP for this Area, and discharges EPA's requirement under the court order entered in *Center for Biological Diversity, et al., v. Wheeler*, No. 4:18-cv-03544 (N.D. Cal., Nov. 26, 2019) to sign final action on the SIP by October 30, 2020.

## **V. 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 Order between Pennsylvania and Genon NE

Management Company, Conemaugh Plant; the unredacted portions of the Consent Order and Agreement (COA) between Pennsylvania and Homer City Generation, LP; the unredacted portions of the Order between Pennsylvania and Genon NE Management Company, Keystone Plant; the unredacted portions of the COA between Pennsylvania and Seward Generation, LLC; the unredacted portions of the Title V Permit for Conemaugh Plant (provided to EPA on May 13, 2020); the unredacted portions of the Plan Approval for Homer City (provided to EPA on May 13, 2020); and the unredacted portion of the Title V Operating Permit for Seward Station (provided to EPA on May 13, 2020). EPA has made, and will continue to make, these materials generally available through <https://www.regulations.gov> and 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.<sup>24</sup>

## **VI. 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

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<sup>24</sup> 62 FR 27968 (May 22, 1997).

imposed by state law. For that reason, this action:

- 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 it is not a significant regulatory action 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 approving the attainment plan for the Indiana, PA SO<sub>2</sub> nonattainment area 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, Intergovernmental relations, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: October 13, 2020.

Cosmo Servidio,  
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 entries for “Conemaugh Plant, Genon NE Management Co.”, “Title V permit 32-00059”; “Conemaugh Plant, Genon NE Management Co.”, “Order”; “Homer City Generation”, “ Plan Approvals 32-00055H and 32-00055I”; “Homer City Generation”, “Consent Order and Agreement”; “Seward Station”, “Title V Permit 32-00040”; “Seward Station”, “Consent Order and Agreement”; and “Keystone Station”, “Consent Order and Agreement” 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 Indiana, 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
* * * * *					
Conemaugh Plant, Genon NE Management Co.	Title V permit 32-00059	Indiana	10/28/15	<b><u>[Insert date of publication in the Federal Register],</u></b> <b><u>[Insert Federal Register citation]</u></b>	Sulfur dioxide emission limits and associated compliance parameters in unredacted portions of the Title V permit provided to EPA on May 13, 2020
Conemaugh Plant, Genon NE Management Co.	Order	Indiana	10/11/17	<b><u>[Insert date of publication in the Federal Register],</u></b> <b><u>[Insert Federal Register citation]</u></b>	Contingency measures in unredacted portion of the Order
Homer City Generation	Plan Approvals 32-00055H and 32-00055I	Indiana	2/28/17	<b><u>[Insert date of publication in the Federal Register],</u></b> <b><u>[Insert Federal Register citation]</u></b>	Sulfur dioxide emission limits and associated compliance parameters in unredacted portions of the Plan Approvals provided to EPA on May 13, 2020
Homer City Generation	Consent Order and Agreement	Indiana	10/3/17	<b><u>[Insert date of publication in the Federal Register],</u></b> <b><u>[Insert Federal Register citation]</u></b>	Contingency measures in unredacted portion of Consent Order and Agreement
Seward Station	Title V Permit 32-00040	Indiana	4/8/16	<b><u>[Insert date of publication in the Federal Register],</u></b> <b><u>[Insert Federal Register citation]</u></b>	Sulfur dioxide emission limits and associated compliance parameters in unredacted portions of the Title V permit provided to EPA on May 13, 2020

Seward Station	Consent Order and Agreement	Indiana	10/3/17	<b><u>[Insert date of publication in the Federal Register], [Insert Federal Register citation]</u></b>	Contingency measures in unredacted portion of the Consent Order and Agreement
Keystone Plant	Consent Order	Armstrong	10/1/18	<b><u>[Insert date of publication in the Federal Register], [Insert Federal Register citation]</u></b>	Sulfur dioxide emission limits established with AERMOD modeling without AERMOIST and related parameters in unredacted portions of the Consent Order dated 10/11/17

\* \* \* \* \*

(e)\*\*\*

(1) \*\*\*

<b>Name of non-regulatory SIP revision</b>	<b>Applicable geographic area</b>	<b>State submittal date</b>	<b>EPA approval date</b>	<b>Additional explanation</b>
* * * * *				
Attainment Plan for the Indiana, Pennsylvania Nonattainment Area for the 2010 Sulfur Dioxide Primary National Ambient Air Quality Standard	Indiana County and portions of Armstrong County (Plumcreek Township, South Bend Township, and Elderton Borough)	10/11/17, Supplemental information submitted 02/05/20, redacted permits submitted on 05/13/20	<b><u>[Insert date of publication in the Federal Register], [Insert Federal Register citation]</u></b>	52.2033(f)

\* \* \* \* \*

3. Amend § 52.2033 by adding paragraph (f) to read as follows:

**§52.2033 Control strategy: Sulfur oxides.**

\* \* \* \* \*

(f) EPA approves the attainment demonstration State Implementation Plan for the Indiana, PA Nonattainment Area submitted by the Pennsylvania Department of Environmental Protection on October 11, 2017, updated on February 5, 2020, and corrected permits and plan approvals submitted on May 13, 2020.

[FR Doc. 2020-23037 Filed: 10/16/2020 8:45 am; Publication Date: 10/19/2020]