



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R03-OAR-2017-0730; FRL-10008-40-Region 3]**

**Air Plan Approval; Pennsylvania; Attainment Plan for the Allegheny 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 Pennsylvania Department of Environmental Protection (PADEP) on behalf of the Allegheny County Health Department (ACHD). The SIP revision, submitted on October 3, 2017, provides for attainment of the 2010 sulfur dioxide (SO<sub>2</sub>) primary national ambient air quality standard (NAAQS) in the Allegheny Pennsylvania SO<sub>2</sub> nonattainment area (hereafter referred to as the “Allegheny Area” or “Area”). The SIP submission includes an attainment plan, including an attainment demonstration showing SO<sub>2</sub> attainment in the Area, an analysis of reasonably available control technology (RACT) and reasonably available control measures (RACM) requirements, enforceable emission limitations and control measures, a reasonable further progress (RFP) plan, and contingency measures for the Allegheny Area. EPA is approving new SO<sub>2</sub> emission limits and associated compliance parameters for the four major sources of SO<sub>2</sub> in the Allegheny Area into the Allegheny County portion of the Pennsylvania SIP. Three of the sources (Clairton Coke Works, Edgar Thomson, and Irvin Works) are collectively known as the U.S. Steel (USS) Mon Valley Works, and the

fourth is the Harsco Metals Facility, also referred to as Braddock Recovery. EPA is also approving the base year emissions inventory for the Allegheny Area and ACHD's certification that the nonattainment new source review (NNSR) permit program meets requirements. These revisions to the Pennsylvania SIP are 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-2017-0730. All documents in the docket are listed on the <https://www.regulations.gov> website. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available through <https://www.regulations.gov>, or please contact the person identified in the **For Further Information Contact** section for additional availability information.

**FOR FURTHER INFORMATION CONTACT:** Marilyn Powers, 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) 814-2308. Ms. Powers can also be reached via electronic mail at [powers.marilyn@epa.gov](mailto:powers.marilyn@epa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **I. Background**

On June 22, 2010, (75 FR 35520) EPA promulgated a new 1-hour primary SO<sub>2</sub> NAAQS of 75 parts per billion (ppb). 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) of the CAA. On August 5, 2013 (78 FR 47191), EPA designated 29 areas of the country, including the Allegheny Area, as nonattainment for the 2010 SO<sub>2</sub> NAAQS based on violating air quality monitoring data for calendar years 2009–2011.<sup>1</sup> The Allegheny Area is entirely within Pennsylvania and is comprised of the City of Clairton, the City of Duquesne, the City of McKeesport, the Townships of Elizabeth, Forward, and North Versailles, and the following Boroughs: Braddock, Dravosburg, East McKeesport, East Pittsburgh, Elizabeth, Glassport, Jefferson Hills, Liberty, Lincoln, North Braddock, Pleasant Hills, Port Vue, Versailles, Wall, West Elizabeth, and West Mifflin.

The Allegheny Area designation became effective on October 4, 2013. Section 191(a) of the CAA directs states to submit SIP revisions for designated SO<sub>2</sub> nonattainment areas to EPA within 18 months of the effective date of the designation, *i.e.*, in this case by no later than April 4, 2015. Under CAA section 192(a), these SIP submissions are required to include measures that will bring the nonattainment area into attainment of the NAAQS as expeditiously as practicable, but no later than five years from the effective date of designation. The attainment date for the

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<sup>1</sup> EPA is continuing its designation efforts for the 2010 SO<sub>2</sub> NAAQS. Pursuant to a court order issued 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 (2015).

Allegheny Area was therefore October 4, 2018.

Attainment plans for SO<sub>2</sub> must meet sections 110, 172, 191 and 192 of the CAA. The required components of an attainment plan submittal are listed in section 172(c) of title 1, part D of the CAA. EPA's regulations governing SIPs are set forth at 40 CFR part 51, with specific procedural requirements and control strategy requirements at subparts F and G, respectively. Soon after Congress enacted the 1990 Amendments to the CAA, EPA issued comprehensive guidance on SIPs, in a document entitled "General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," published at 57 FR 13498 (April 16, 1992) (General Preamble). Among other things, the General Preamble addressed SO<sub>2</sub> SIPs and fundamental principles for SIP control strategies. *Id.* at 13545-49, 13567-68. On April 23, 2014, EPA issued recommended guidance (hereafter 2014 SO<sub>2</sub> Guidance) for how state submissions could address the statutory requirements for SO<sub>2</sub> attainment plans.<sup>2</sup> In this guidance, EPA described the statutory requirements for an attainment plan, which include: An accurate base year emissions inventory of current emissions for all sources of SO<sub>2</sub> within the nonattainment area (172(c)(3)); an attainment demonstration that includes a modeling analysis showing that the enforceable emissions limitations and other control measures taken by the state will provide for expeditious attainment of the NAAQS (172(c)); RFP (172(c)(2)); implementation of RACM, including RACT (172(c)(1)); NNSR requirements (172(c)(5)); and adequate contingency measures for the affected area (172(c)(9)).

On March 18, 2016, effective April 18, 2016, EPA published a document that Pennsylvania and

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<sup>2</sup> See "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).

other states had failed to submit the required SO<sub>2</sub> attainment plans by the April 4, 2015 submittal deadline. See 81 FR 14736. This finding initiated a deadline under CAA section 179(a) for the potential imposition of new source review and highway funding sanctions. Additionally, under CAA section 110(c), the finding triggered a requirement that EPA promulgate a federal implementation plan (FIP) within two years of the effective date of the finding unless, by that time, the state has made the necessary complete submittal and EPA has approved the submittal as meeting applicable requirements before the Administrator promulgates a FIP. Following Pennsylvania's submittal of ACHD's attainment plan SIP on October 3, 2017, EPA sent a letter dated October 6, 2017 to Pennsylvania finding the submittal was complete and therefore the sanctions deadline no longer applied and sanctions under section 179(a) would not be imposed as a consequence of Pennsylvania's having missed the original deadline.

## **II. Summary of EPA's Notice of Proposed Rulemaking**

On November 19, 2018 (83 FR 58206), EPA proposed approval of Pennsylvania's October 3, 2017 SO<sub>2</sub> attainment plan submittal for the Allegheny Area. The notice of proposed rulemaking (NPRM) described the requirements that nonattainment plans are designed to meet and provided extensive discussion of EPA's rationale for proposing to approve the Pennsylvania submittal as meeting these requirements. Notably, the Allegheny Area attainment plan included 30-day rolling average hourly SO<sub>2</sub> emission limits for the following sources: Clairton Coke Works, Edgar Thomson, Irvin Works, and Harsco Metals. The NPRM included an extensive discussion of EPA's 2014 SO<sub>2</sub> Guidance allowing the use of 30-day rolling average hourly SO<sub>2</sub> emission limits, including a full discussion of EPA's rationale for concluding that properly set longer-term average SO<sub>2</sub> emission limits of up to 30 days (in particular, longer-term emission limits that are comparably stringent to the 1-hour limits that would otherwise be established) can be effective in

providing for attainment. The NPRM then described EPA's review of the modeling that Pennsylvania submitted to demonstrate that the limits adopted by ACHD would provide for attainment of the 2010 SO<sub>2</sub> NAAQS and described EPA's review of whether the submittals met other applicable requirements, such as the requirements for an emissions inventory, RFP, NNSR, and contingency measures. On this basis, EPA proposed to conclude that the SO<sub>2</sub> emission limits established for Clairton, Edgar Thomson, Irvin, and Harsco Metals assure attainment in the Allegheny Area. More generally, EPA proposed to approve Pennsylvania's SIP submittal as addressing the nonattainment planning requirements. The specific attainment plan requirements and EPA's rationale for proposing approval of the Allegheny Area attainment plan are explained in detail in the NPRM and will not be restated here. Five commenters submitted comments on the NPRM. One commenter supported the proposal, and one commenter provided comments that were not germane to the proposed rulemaking. The remaining three commenters submitted adverse comments that are addressed in the next section. All of the comments are included in the Docket for this rulemaking at <https://www.regulations.gov>, Docket ID Number EPA-R03-OAR-2017-0730.

### **III. Comments and EPA Responses**

Three comment letters - one anonymous, one from the Sierra Club and one from the Clean Air Council - provided comments relevant to this rulemaking. The comments submitted by the Clean Air Council included comments that were originally submitted to ACHD in response to ACHD's proposal of the Allegheny Area attainment plan, which the Clean Air Council believed were not adequately addressed by ACHD.

*Comment 1:* The commenter noted that the attainment SIP for the Allegheny Area was due in

April 2015, which Pennsylvania failed to meet, and that EPA subsequently issued a finding of failure to submit the SIP in March 2016. The commenter asserts that the finding triggered a requirement that EPA promulgate a FIP by March 2018, and that not only has EPA failed to issue a FIP, but EPA has also failed to enforce applicable sanctions against the State.<sup>3</sup>

*Response 1:* Pennsylvania submitted an attainment plan SIP for the Allegheny SO<sub>2</sub> nonattainment area on October 3, 2017. EPA had an obligation to take action on the submittal or promulgate a FIP by April 18, 2018, as required under CAA section 110(c)(1)(A). EPA acknowledges that it did not approve the SIP revision or promulgate a FIP for the Allegheny Area by this date, as noted by the commenter. EPA also notes that since issuing its proposed approval of the SIP, EPA has become subject to a court order directing it to take final action on the SIP no later than April 30, 2020. See *Center for Biological Diversity, et al. v. Wheeler*, No. 4:18-cv-03544 (November 26, 2019). EPA believes that the most expeditious way to bring this area into attainment is to approve the submitted SIP with the limits and restrictions adopted by ACHD, making those limits and restrictions Federally-enforceable. Completion of our proposed action to approve the SIP, which contains emissions limits and requirements that are already effective and which the subject sources are already meeting, will result in achieving Federally-enforceable emissions reductions needed to attain the NAAQS far faster than would starting from scratch to develop, adopt, and apply new emissions limits and requirements in a FIP, the requirement for which would in any case be mooted by our final approval of the SIP. Thus, it is reasonable to use the most expeditious approach to a Federally-enforceable plan to bring the Area into attainment, and that is to approve this SIP rather than promulgate a FIP. With this final

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<sup>3</sup> The commenter cited a FIP deadline of March 2018, however the FIP deadline was actually 24 months after the effective date of the finding, or April 18, 2018.

action to approve the Allegheny SO<sub>2</sub> attainment plan SIP, we are discharging our statutory obligation under CAA section 110(k)(2) to act on the SIP, and such approval terminates our FIP obligation under section 110(c)(1)(A) for the Allegheny SO<sub>2</sub> nonattainment area. We are also discharging our requirement under the court order to take final action on the SIP by April 30, 2020.

EPA disagrees that sanctions are applicable in the Allegheny Area. As discussed in the **Background** section of this preamble, Pennsylvania submitted the Allegheny attainment SIP on October 3, 2017, which was before the deadline of October 18, 2017 for the State to correct the deficiency that started the sanctions clock. CAA section 179(a). EPA's letter dated October 6, 2017 to Pennsylvania indicated that the submittal met the completeness criteria under 40 CFR part 51, and corrected the deficiency identified in EPA's March 18, 2016 finding of failure to submit SO<sub>2</sub> SIPs. Under EPA's regulations implementing mandatory sanctions clocks, as of October 6, 2017, the sanctions clock for the Allegheny Area was stopped; therefore, the sanctions under section 179(a) were not imposed as a consequence of Pennsylvania having missed the original deadline for submittal of the SIP. See 40 CFR 52.31(d)(5).

*Comment 2:* The commenter states that under the Clean Air Act, the NAAQS "compliance" deadline for this area was October 4, 2018, and that it is unclear how the SIP can meet the past compliance deadline when even those limits proposed in the ACHD submission are not presently Federally-enforceable. The commenter also states that the Allegheny nonattainment area is still failing to attain the standard over five years after designation, and that EPA cannot approve an attainment plan for an area that is "demonstrably failing to attain the standard, well-after the attainment deadline." The commenter cites to EPA data that shows the 2015–2017 design value

as 97 ppb, or roughly 30 percent above the NAAQS, and that the “current” 99<sup>th</sup> percentile SO<sub>2</sub> hourly concentration for the Allegheny Area is 130 ppb, which would result in a 2016–2018 design value of at least 103 ppb. The commenter points out that the 99<sup>th</sup> percentile hours for 2017 and 2018 are so high that Allegheny cannot come into attainment even if the monitor shows zero SO<sub>2</sub> emissions for every hour in 2019, and that EPA “confusingly states that the plan will somehow ‘ensure ongoing attainment’ and that the chosen control strategies ‘will bring the Area into attainment by the statutory attainment date of October 4, 2018.’” The commenter also says that EPA never addresses monitor data at all, except where monitored data plays a factor in the contingency measures for the area, and that EPA cannot approve an attainment plan that fails to actually attain the standard by the statutorily mandated deadline of October 4, 2018.

*Response 2:* The commenter makes an assertion that is incorrect – the CAA does not require that, before EPA can approve a SIP that provides for attainment, it must first find that the area factually attained the NAAQS as a result of the control strategy in the SIP. Nor does the CAA preclude approval of a control strategy that modeling shows will achieve NAAQS-attaining air quality merely because monitoring of historical air quality that preceded the implementation of controls that went into force still produces design values that do not reflect emissions reductions from those controls and that are consequently still above the NAAQS. Sections 172 and 192 of the CAA require states to submit SIP revisions that “provide for attainment” of the SO<sub>2</sub> NAAQS by the attainment date. In our proposal, we described the measures, supporting analyses, and the rationale for finding that the SO<sub>2</sub> attainment plan for the Allegheny Area submitted by Pennsylvania does provide for attainment. In particular, Pennsylvania’s submittal provides modeling-based evidence that establishes that the control measures required on the sources of emissions in the Allegheny Area are sufficient to yield air quality that attains the NAAQS by the

attainment deadline. As discussed in the proposal, the permits required that the Mon Valley Works facilities and the Harsco facility comply with the control measures needed for attainment by October 4, 2018.

The commenter submitted data showing monitored 99<sup>th</sup> percentile SO<sub>2</sub> concentrations from 2016 to 2018 (64 ppb, 116 ppb, and 130 ppb, respectively) that results in a design value for this three-year period of 103 ppb. The commenter further stated that regardless of the monitored values for 2019, the Area would not come into attainment because of the high 99<sup>th</sup> percentile concentrations for 2017 and 2018. The monitoring data in 2017 and 2018 cited by the commenter are accurate. However, the available monitoring data should not be interpreted as indicating that the attainment plan will fail to provide for timely attainment. The monitoring data cited by the commenter were collected before the full implementation of the measures in the Allegheny SO<sub>2</sub> attainment plan, which occurred by October 4, 2018. Therefore, these data measuring the air quality prior to full implementation of the measures reflected in the modeling demonstration are not a reliable indicator of whether air quality, after implementation of all modeled relevant control measures, would be expected to meet the standard at the attainment deadline. In other words, these data are not indicative of the adequacy of the plan and its modeling demonstration to provide for NAAQS attainment. Instead, as EPA explained in our 2014 SO<sub>2</sub> Guidance and in numerous proposed and final SIP actions implementing the SO<sub>2</sub> NAAQS, a key element of an approvable SO<sub>2</sub> attainment SIP is the required modeling demonstration showing that the remedial control measures and strategy are adequate to bring a previously or currently violating area into attainment.<sup>4</sup> Given the form of the 2010 SO<sub>2</sub> NAAQS as the 3-year average of the 99<sup>th</sup>

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<sup>4</sup> Air Plan Approval; KY; Attainment Plan for Jefferson County SO<sub>2</sub> Nonattainment Area, (Proposed rule 83 FR 56002, November 9, 2018; Final rule 84 FR 30921, June 28, 2019), and Approval and Promulgation of Air Quality

percentile of the yearly distribution of 1-hour daily maximum SO<sub>2</sub> concentrations, it is often possible that the three-year period of monitored data will not reflect the actual air quality levels resulting from implementation of the newer remedial control measures implemented within that period. In such cases, as it is here, the more complete and representative analysis for informing action on a submitted SIP should focus on the results of newly implemented control measures required under the plan, rather than historical concentrations that do not reflect the results of the plan's required control measures. The former analysis explicitly addresses whether air quality will be attaining (as required) under the state's submitted plan, whereas the latter analysis may have little to no bearing on what will happen as a result of the plan. Therefore, in the context of reviewing the adequacy of those newer control measures to provide for newly attaining air quality under sections 172 and 192 of the CAA, we conclude that it is reasonable to focus on the modeling results that specifically account for those control measures and the resulting reductions in SO<sub>2</sub> emissions, rather than on monitored data that, in this case, do not represent air quality levels resulting from full implementation of the control measures in the attainment plan. In the Allegheny SO<sub>2</sub> attainment plan, ACHD's modeling shows that implementation of the measures included in the plan result in air quality that attains the NAAQS, and those measures are being met by the subject sources by the October 4, 2018 attainment date. Therefore, the SIP meets the requirement to demonstrate that it provides for timely attainment.

While the submitted modeling demonstrates attainment for the area, EPA acknowledges that some SO<sub>2</sub> exceedances were monitored in 2018 and 2019 that EPA believes were the result of a December 24, 2018 fire at the Clairton Coke Works which required the immediate shut down of

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Implementation Plans; Arizona; Nonattainment Plan for the Miami SO<sub>2</sub> Nonattainment Area (Proposed rule 83 FR 27938, June 15, 2018; Final rule 84 FR 8813, March 12, 2019).

No. 2 and No. 5 control rooms. The shutdown of the two control rooms resulted in the diversion of coke oven gas (COG) away from the desulfurization process within the facility's by-products operation, allowing SO<sub>2</sub> to be released from various flaring stacks into the ambient air. To mitigate the release of pollutants into the air, U.S. Steel, owner of the Clairton Coke Works, took remedial action to mitigate SO<sub>2</sub> emissions by using COG diluted with natural gas in the boilers. ACHD conducted a review of operational data for the period following the fire and determined that the facility was in violation of its hydrogen sulfide (H<sub>2</sub>S) permit limit. ACHD's review of monitor data for the period following the fire showed monitored violations. ACHD concluded that the mitigation efforts by U.S. Steel did not fully compensate for the shutdown of the two control rooms and the bypass of the desulfurization process. Therefore, on February 28, 2019, ACHD issued an Enforcement Order requiring U.S. Steel to extend coking times at all the Clairton batteries, reduce usage of COG at boilers located at the Edgar Thomson facility, and reduce the SO<sub>2</sub> emissions from coke oven batteries, boilers, and emissions stacks from all of the Mon Valley Works facilities by either one or a combination of reducing the volume of coal in each oven, extending the coking time further, limiting production at coke oven batteries by temporarily hot idling coke ovens, or some other plan submitted to ACHD to meet ACHD's stipulated reduction of SO<sub>2</sub> emissions from the facility. The enforcement order required weekly compliance reports to ACHD until all repairs were completed to No. 2 and No. 5 control rooms, and 100 percent of the COG exiting the control rooms was again being desulfurized, or until June 30, 2019, whichever was later. On March 12, 2019, following discussions with U.S. Steel, ACHD issued an amended order (Enforcement Order #190202A) compelling U.S. Steel to extend the time of the coking process. The control rooms were repaired and resumed operation on April 15, 2019, and COG was again sent to the desulfurization units on that date. A second

fire occurred on the morning of June 17, 2019. The second fire again shut down the No. 2 and No. 5 control rooms, but both control rooms were back in operation by the evening of the same day. The data in EPA’s Air Quality Systems (AQS) database for all of 2018 and 2019 shows three exceedances of the NAAQS in December 2018<sup>5</sup> and seven exceedances in early 2019, shown in Table 1 as follows:

Table 1. Monitored SO<sub>2</sub> exceedances at Liberty and North Braddock monitors

Monitor	AQS Monitor	Date of Exceedance	Occurrence (hour)	Concentration, parts per million (ppm)
Liberty McKeesport, PA	42-003-0064	12/26/18	10:00	0.079
		12/26/18	11:00	0.08
		12/28/18	10:00	0.145
		1/2/19	21:00	0.081
		1/3/19	23:00	0.085
		1/8/19	4:00	0.076
		1/8/19	0:00	0.08
		3/28/19	3:00	0.082
		North Braddock Braddock, PA	42-003-1301	1/7/2019
2/4/2019	22.00	0.082		

As shown in Table 1, the monitored exceedances occurred at the Liberty and North Braddock monitors between December 26, 2018 and March 28, 2019, during the time when the desulfurization units were off-line. There were no monitored exceedances that occurred that correlate to the June 2019 fire. From October 2018, when compliance with the new measures was required at the affected facilities, until the December 2018 fire, no exceedances of the

<sup>5</sup> Nine other monitored exceedances occurred between February through August 2018, however, these exceedances happened prior to the establishment of new limits, and occurred prior to and are not related to the fires at Clairton, which occurred outside of these time frames. The reports showing the exceedances in Table 1 have been added to the docket for this rulemaking action.

standard were monitored. Based on EPA's preliminary data for 2019, since April 15, 2019, when the desulfurization units resumed operation, to the end of 2019, no additional exceedances have been monitored.<sup>6</sup> This indicates that the additional measures required by ACHD to achieve attainment in the Area are in fact adequate to provide for attainment.<sup>7</sup>

Under the CAA, a determination of whether an area has failed to attain is a separate action from the review of an attainment demonstration SIP. EPA's attainment SIP review for SO<sub>2</sub> occurs under CAA sections 110(k), 172(c) and 192(a), while a determination of whether an SO<sub>2</sub> nonattainment area has failed to attain is governed by CAA section 179(c)(1). Under section 110(k)(3), EPA is required to approve a SIP submission that meets all applicable requirements of the CAA. For the reasons described in our proposal and elsewhere in this action, we have concluded that the Allegheny SO<sub>2</sub> attainment plan meets all such requirements, including the requirement in 172(c) and 192(a) to provide for attainment by the attainment date. This is the determination that is the subject of this final SIP approval action.

Separately, in a different action under section 179(c)(1) that is beyond the scope of this final SIP approval action, EPA must determine within six months of the attainment date whether an area has attained the NAAQS based on the area's air quality as of the attainment date. Accordingly, EPA will take a separate action to analyze the pertinent information and determine whether the Allegheny SO<sub>2</sub> Area attained the NAAQS by the attainment date in accordance with section 179(c)(1).

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<sup>6</sup> The 2019 data is preliminary and will not be certified until May 2020.

<sup>7</sup> 2018 fourth quarter reports for Clairton, Edgar Thompson, and Irvin showing no deviations from permit requirements (except for the period during the December 2018 fire) are provided in the docket. The Clairton report shows that the COG provided to the pipeline to fuel the other facilities, including Harsco Metals, met the permit limit.

*Comment 3:* One commenter states that the contingency measures in the attainment plan are “hazy and unspecified” and that the “thorough analysis to identify the sources of the violation and bring the area back into compliance with the NAAQS” is “wholly insufficient to address NAAQS exceedances and ensure attainment, and that EPA nowhere explains why such contingency measures are not already triggered by the continuing levels of SO<sub>2</sub> in the Allegheny area.” Another commenter states that ACHD should do more than what is described in its contingency measures, particularly as the 2014 SO<sub>2</sub> Guidance states that an air agency is not precluded from requiring additional contingency measures that are enforceable and appropriate for a particular source category, and should include a “comprehensive program to identify sources of violations and undertake an aggressive follow-up for compliance and enforcement, provide specific contingency measures, as well as including specific contingency measures.”

*Response 3:* As EPA explained in the 2014 SO<sub>2</sub> Guidance, SO<sub>2</sub> presents special considerations, compared to other criteria pollutants.<sup>8</sup> First, for some of the other criteria pollutants, the analytical tools for quantifying the relationship between reductions in precursor emissions and resulting air quality improvements remain subject to significant uncertainties, in contrast with procedures for directly-emitted pollutants such as SO<sub>2</sub>. Second, emission estimates and attainment analyses for other criteria pollutants can be strongly influenced by overly optimistic assumptions about control efficiency and rates of compliance for many small sources. This is not the case for SO<sub>2</sub>.

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<sup>8</sup> See EPA’s 2014 SO<sub>2</sub> Nonattainment Guidance, p. 41. See also SO<sub>2</sub> Guideline Document, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, EPA-452/R-94-008, February 1994, p. 6-40. See General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990 at 57 FR 13498 (April 16, 1992).

In contrast, the control efficiencies for SO<sub>2</sub> control measures are well understood and are far less prone to uncertainty. Because SO<sub>2</sub> control measures are, by definition, 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. 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.<sup>9</sup>

As noted in the NPRM, Section 7 of the Allegheny attainment plan details the requirements whenever the SO<sub>2</sub> NAAQS is exceeded. It requires ACHD to, within 10 days of a violation, complete an analysis to determine the source and the conditions that contributed to the violation. The culpable source would then be required to submit, within 10 days of notification by ACHD, a written system audit report that details the operating parameters of all SO<sub>2</sub> emissions units for the time periods during which the violation occurred, along with recommended control strategies for any unit that may have contributed to the violation. Following a 30-day evaluation period and a 30-day consultation period with the source, additional control measures will be implemented as expeditiously as possible to return the area to compliance. Further, the installation permits for the four sources of SO<sub>2</sub> in the Area, which are incorporated by reference into the Allegheny portion of the Pennsylvania SIP, require SO<sub>2</sub> compliance testing, monitoring,

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<sup>9</sup> See EPA’s 2014 SO<sub>2</sub> Nonattainment Guidance, p. 41.

and reporting to assure compliance with the permit limits, including any instances of non-compliance with the conditions of the permit and the corrective action taken to restore compliance.

Also, ACHD has a comprehensive program to identify potential sources causing SO<sub>2</sub> NAAQS violations, as specified in ACHD Article XXI, Part I, Regulations 2109.01 through 2901.06, and 2901.10 (Enforcement). Under these regulations, ACHD is authorized to take any action it deems necessary or proper for the effective enforcement of any provision of Article XXI and the rules and regulations promulgated under the article. Any violation authorizes ACHD to pursue the issuance of an enforcement order as authorized under the Article (for corrective action or shut down of a source or part of a source), the revocation of any applicable license or installation or operating permit, or initiation of criminal proceedings, civil penalty, or injunctive relief. Also, the permits for the four main sources of SO<sub>2</sub> include a requirement to record all instances of non-compliance with the conditions of the permits upon occurrence along with the corrective action taken to restore compliance. As explained in response to comment 2 of this action, following implementation of all the control measures contained in this attainment plan on October 4, 2018, the Allegheny Area did not experience any SO<sub>2</sub> NAAQS exceedances except for those exceedances directly traceable to the two fires and shutdowns of the desulfurization unit at the Clairton Coke Works. ACHD took immediate enforcement action to minimize emissions resulting from the first fire, in accordance with the contingency measures outlined in its attainment plan, and the desulfurization unit shutdown because of the second fire lasted only a few hours. ACHD's implementation of some of the contingency measures contained in its attainment plan in response to the first fire at Clairton shows that the source-specific enforcement response in the plan can be effective at preventing further exceedances of the SO<sub>2</sub> NAAQS.

Since the restart of the desulfurization unit at Clairton and the return to typical operations at Clairton, there have been no further recorded exceedances of the SO<sub>2</sub> NAAQS in the Allegheny Area. Thus, the Allegheny Area is currently meeting the 2010 SO<sub>2</sub> NAAQS without implementation of the contingency measures in the plan, so there is no need to trigger contingency measures at this time. If there are no further unforeseen breakdowns in SO<sub>2</sub> emission controls at the four facilities, the modeling shows that the existing control measures in the plan are adequate to ensure attainment of the 2010 SO<sub>2</sub> NAAQS.

*Comment 4:* The commenter asserts that EPA's reliance on long-term emission limits ensures that attainment will not be achieved because the 2010 SO<sub>2</sub> NAAQS is a short-term, 1-hour standard, and the proposed 30-day averaging period for the Clairton and Irvin Plants are fundamentally incapable of protecting the standard. The commenter asserts that because the NAAQS is evaluated through reference to the 4<sup>th</sup>-highest daily maximum ambient concentration annually, ambient air quality conditions can be rendered unsafe by as few as four hours of elevated emissions over the course of a year, thus making an emission limit with an averaging period of longer than one hour unlikely to be able to protect this short-term standard. The commenter argued that 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 longer periods such that the 30-day average permit limit is "complied" with. To support this contention, the commenter provided language making similar points excerpted from two EPA letters that were included in the attachments to the commenter's December 19, 2018 comment letter on the NPRM, specifically an August 12, 2010 comment letter from EPA Region 7 to Kansas regarding the Sunflower Holcomb Station Expansion Project, and a February 1, 2012 comment letter from EPA Region 5 to Michigan regarding a draft construction permit for the Detroit Edison Monroe

Power Plant. The commenter concluded that the 30-day average emission limit proposed for the major sources are 720 times the NAAQS and should be revised to adequately protect the NAAQS. The commenter states the proposed long-term limits should be rejected in favor of a plan with 1-hour emission limits to protect the 1-hour NAAQS.

*Response 4:* EPA disagrees with the commenter's statement that the proposed 30-day limits at Clairton and Irvin are fundamentally incapable of protecting the 1-hour SO<sub>2</sub> NAAQS. EPA believes as a general matter that properly set, longer-term average limits are comparably effective in providing for attainment of the 1-hour SO<sub>2</sub> standard as are 1-hour limits. EPA's 2014 SO<sub>2</sub> Guidance sets forth in detail the reasoning supporting its conclusion that the distribution of emissions that can be expected in compliance with a properly set longer-term average limit is likely to yield overall air quality protection that is as good as a corresponding hourly emissions limit set at a level that provides for attainment.

EPA's 2014 SO<sub>2</sub> Guidance specifically addressed this issue as it pertains to requirements for SIPs for SO<sub>2</sub> nonattainment areas under the 2010 NAAQS, especially with regard to the use of appropriately set comparably stringent limitations based on averaging times as long as 30 days. EPA found that a longer-term average limit which is comparably stringent to a short-term average limit is likely to yield comparable air quality; and that the net effect of allowing emissions variability over time but requiring a lower average emission level is that the resulting worst-case air quality is likely to be comparable to the worst-case air quality resulting from the corresponding higher short-term emission limit without variability. See 2014 SO<sub>2</sub> Guidance.

Any accounting of whether a 30-day average limit provides for attainment must consider factors reducing the likelihood of exceedances as well as factors creating risk of additional exceedances.

To facilitate this analysis, EPA used the concept of a critical emission value (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 is expected to provide for the average annual 99<sup>th</sup> percentile maximum daily 1-hour concentration to be 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> Guidance.

EPA recognizes that a 30-day limit can allow occasions in which emissions exceed the CEV, and such occasions yield the possibility of exceedances occurring that would not be expected if emissions were always at the CEV. At the same time, the establishment of the 30-day average limit at a level below the CEV means that emissions must routinely be lower than they would be required to be with a 1-hour emission limit at the CEV. On those critical modeled days in which emissions at the CEV are expected to result in concentrations exceeding 75 ppb, emissions set to comply with a 30-day average level which is below the CEV may well result in concentrations below 75 ppb. Requiring emissions on average to be below the CEV introduces significant chances that emissions will be below the CEV on critical days, so that such a requirement creates significant chances that air quality would be better than 75 ppb on days that, with emissions at the CEV, would have exceeded 75 ppb.

The NPRM provides an illustrative example of the effect that application of a limit with an averaging time longer than one hour can have on air quality.<sup>10</sup> This example illustrates both 1) the possibility of elevated emissions (emissions above the CEV) causing exceedances not

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<sup>10</sup> For the full discussion of the hypothetical example, see NPRM, November 19, 2018 (83 FR 58206) at page 58209 at <https://www.regulations.gov>, Docket ID Number EPA-R03-OAR-2017-0730.

expected with emissions at or below the CEV and 2) the possibility that the requirement for routinely lower emissions would result in avoiding exceedances that would be expected with emissions at the CEV. In this example, moving from a 1-hour limit to a 30-day average limit results in one day that exceeds 75 ppb that would otherwise be below 75 ppb, one day that is below 75 ppb that would otherwise be above 75 ppb, and one day that is below 75 ppb that would otherwise be at 75 ppb. In net, the 99<sup>th</sup> percentile of the 30-day average limit scenario is lower than that of the 1-hour limit scenario, with a design value of 67.5 ppb rather than 75 ppb. Stated more generally, this example illustrates several points: 1) the variations in emissions that are accounted for with a longer-term average limit can yield higher concentrations on some days and lower concentrations on other days, as determined by the factors influencing dispersion on each day, 2) one must account for both possibilities, and 3) accounting for both effects can yield the conclusion that a properly set longer-term average limit can provide as good or better air quality than allowing constant emissions at a higher level. As noted in the NPRM, and as described in Appendix B of the 2014 SO<sub>2</sub> Guidance, EPA expects that an emission profile with a comparably stringent 30-day average limit is likely to have a net effect of having a lower number of exceedances and better air quality than an emissions profile with maximum allowable emissions under a 1-hour emission limit at the critical emission value. Thus, EPA continues to assert that appropriately set 30-day emission limits can be protective of the 1-hour SO<sub>2</sub> standard.

Regarding the examples cited by the commenter to support the contention that only one-hour limits are protective of the NAAQS, EPA's April 2014 guidance acknowledges that EPA had previously recommended that averaging times in SIP emission limits should not exceed the averaging time of the applicable NAAQS. The specific examples of earlier EPA statements cited by the commenter (*i.e.*, those contained in Exhibits 1 and 2 of Appendix A of the comment

submission) all pre-date the release of EPA's April 2014 SO<sub>2</sub> 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 their own issuance. At the time of their issuance, EPA had not yet addressed the specific question of whether it might be possible to devise an emission limit with an averaging period longer than 1-hour, with appropriate adjustments that would make it comparably stringent to an emission limit shown to attain 1-hour emission levels, that could adequately ensure attainment of the 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. However, EPA's April 2014 guidance specifically addressed this issue as it pertains to requirements for SIPs for SO<sub>2</sub> nonattainment areas under the 2010 NAAQS, especially with regard to the use of appropriately set comparably stringent limitations based on averaging times as long as 30 days (see p. 2). EPA developed this guidance pursuant to a lengthy stakeholder outreach process regarding implementation strategies for the 2010 NAAQS, which had not yet concluded (or in some cases even begun) when the documents cited by the commenter were issued. As such, EPA's April 2014 Guidance was the first instance in which the Agency provided recommended guidance for that component of this action. Consequently, EPA does not view those prior EPA statements as conflicting with the Agency's guidance addressing this specific question of how to devise a longer-term limit that is comparably stringent to a 1-hour CEV that has been modeled to attain the NAAQS. Moreover, EPA notes that the commenter has not raised specific objections to the general policy and technical rationale EPA provided in its proposed approval or in EPA's April 2014 SO<sub>2</sub> Guidance for why such longer-term averaging-based limits may in specific cases be adequate to ensure NAAQS attainment.

Additionally, ACHD requires supplementary limits to restrict excessive frequency or magnitude

of elevated emissions. As explained in the April 2014 SO<sub>2</sub> Guidance, in addition to establishing a rate that is comparably stringent to the 1-hour average emission limit, a second important factor in assessing whether a longer-term average limit provides appropriate protection against NAAQS violations is whether the source can be expected to comply with a long term average limit in a manner that minimizes the frequency of occasions with elevated emissions and magnitude of emissions on those occasions. The 2014 SO<sub>2</sub> Guidance states that use of long term average limits is most defensible if the frequency and magnitude of such occasions of elevated emissions will be minimal, and that supplemental limits on the frequency and/or magnitude of occasions of elevated emissions can be a valuable element of a plan that protects against NAAQS violations. Limits against excessive frequency and/or magnitude of elevated emissions could further strengthen the justification for the use of longer-term average limits, with one option being shorter averaging times. Towards this end, ACHD established 24-hour average limits to supplement the 30-day average limits. A discussion of ACHD's evaluation of the limits and a tabular comparison of hourly emissions values to the 30-day, the 24-hour, and CEV limits may be found in the NPRM.

*Comment 5:* EPA relies on conversion factors from CEV calculated by reference to the sulfur content of the fuel the facilities use. Such content can vary widely, depending on the fuel mix the facility chooses to buy. However, nothing in the proposal requires that the historical fuel mix be maintained, meaning that variability could increase, and increase substantially, in the future, underscoring the inadequacy of long-term emission limits.

*Response 5:* In the 2014 SO<sub>2</sub> Guidance, EPA notes that it is important to recognize that some sources may have variable emissions, for example due to variations in fuel sulfur content as the

commenter notes, that can make it extremely difficult, even with a well-designed control strategy, to ensure in practice that stringent hourly limits are never exceeded. It is this variability in emissions that EPA believes justifies the use of longer-term average limits.

EPA guidance provides for states to use historic data to assess the emissions variability that can be anticipated upon implementation of the plan. The state is to analyze these data to obtain a best estimate of the degree of adjustment needed for the state's longer-term limit to be comparably stringent to the one-hour limit that it would otherwise be adopting. EPA does not believe that imposing limits on variability is either appropriate or feasible. First, EPA's guidance for assessing variability is to use three to five years of data, which suggests that a limit on variability might require a similar amount of data. A limit based on three to five years of data would almost certainly not be practically enforceable. Second, a limit on variability would necessarily impose limits on the operation of the facility. As a general matter, EPA prefers to avoid restricting the operation of facilities, so long as EPA has reasonable confidence that air quality requirements are being met. The commenter gives no reason to believe that variability will increase and provides no recommendations on how to address the practical problems that limiting variability would entail. Furthermore, page 31 of EPA's 2014 SO<sub>2</sub> Guidance acknowledges the possibility that variability can change and provides EPA's views on how to address such situations: "If the EPA approves an attainment plan but subsequently learns that emissions variability at a source is exceeding the expected variability, such that the plan proves not to provide the expected confidence that the NAAQS is being attained, the EPA will use its available authority to pursue any necessary corrections of the plan." However, at this time, EPA believes that ACHD has identified 1-hour limits that would provide for attainment and has submitted 30-day average limits (supplemented with 24-hour limits) that present evidence

indicates are comparably stringent, and so EPA is concluding that these limits suffice to assure attainment.

*Comment 6:* The commenter expresses bafflement as to why EPA's November 19, 2018 NPRM did not definitively verify that certain controls required by the plan to be installed and operational no later than October 4, 2018 were actually installed and operating, especially when EPA relied upon the installation and operation of these controls when approving the attainment plan.

*Response 6:* The ACHD installation permits for Clairton, Edgar Thomson, Irvin, and Harsco required compliance on or before October 4, 2018. These facilities were required by that date to comply with the SO<sub>2</sub> emission limitations and other requirements for monitoring and recordkeeping set forth in the permits. The NPRM for this action did not include information on the sources' actual compliance with the required permit limits as of October 4, 2018. However, the issue in this rulemaking is whether compliance with the plan would result in timely attainment, as shown by the modeling. Whether such compliance or such attainment actually occurred is best addressed by the Clean Air Act's enforcement authorities and a determination of attainment under section 179(c)(1) of the CAA.

*Comment 7:* A commenter states that section V.D. of the proposed SIP requires Vacuum Carbonate Units (VCU) to be implemented at only two facilities, rather than at all facilities in the Allegheny Area, and opines that though this would allow the Area to meet the requirement for compliance, it does not comprise all reasonably available control measures on SO<sub>2</sub> emissions. The commenter further states that if a VCU is a reasonably available measure for some plants, it should be reasonable to many, if not all, of the facilities in the Area. To protect the nearby

residents, the commenter thinks that as a minimum, all measures which can be reasonably enforced should be applied to all emitting facilities in the Allegheny Area.

*Response 7:* Section 172 (c)(1) of the CAA provides that “Such plan shall provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology) and shall provide for attainment of the national primary ambient air quality standards.” EPA intends to continue defining RACT for SO<sub>2</sub> as that control technology which will achieve the NAAQS within statutory timeframes. See General Preamble at 57 FR 13498, 13547 (April 16, 1992). CAA section 172(c)(6) requires plans to include enforceable emission limitations and control measures as may be necessary or appropriate to provide for attainment by the attainment date. The commenter has failed to consider that VCUs were already pre-existing at these process lines and that RACT for SO<sub>2</sub> is that which is necessary to attain the NAAQS. While additional controls may be reasonably available at other plants, the VCU upgrades at the two process lines at the Clairton facility show attainment of the 2010 SO<sub>2</sub> NAAQS by the attainment date, and thus further controls are not necessary to satisfy the requirement for RACT.

Emission reductions needed to reach attainment in the Allegheny Area, as determined through air dispersion modeling, are dependent on the control measures implemented at the existing sources at USS Mon Valley Works (upon which property Harsco Metals is located), which are the primary sources of SO<sub>2</sub> in the nonattainment area. The 100 and 600 VCU upgrade was initiated at the Clairton Coke Works to reduce the content of H<sub>2</sub>S in the COG sent to all the Mon Valley Works plants and Harsco. The 100 VCU upgrade was completed at the Clairton Coke Works in

2016, leading to significant decreases in sulfur content in COG. An upgrade for the 600 VCU added redundant controls for the COG line. All the USS Mon Valley Works facilities and Harsco must also provide source monitoring results to demonstrate continuous efficient operation of the VCU system. The reduction of H<sub>2</sub>S content in the COG produced at Clairton was needed for the USS Mon Valley Works plants and Harsco to comply with their permit limits. Emission limits at all four facilities were established through enforceable installation permits (See Appendix K of Pennsylvania's October 3, 2017 SIP submittal).<sup>11</sup> The collective emission limits and related compliance parameters (i.e., testing, monitoring, record keeping and reporting) will be incorporated into the SIP as part of the attainment plan in accordance with CAA section 172. The emission limits for each of the SO<sub>2</sub>-emitting USS Mon Valley and Harsco facilities are listed in Tables 3, 4 and 5 of the proposal. The compliance parameters include continuous process monitoring of H<sub>2</sub>S content and flow rate of the COG at the Clairton facility and the four lines which feed the Edgar Thompson, Irvin, and Harsco facilities, as well as record-keeping, reporting, and stack testing requirements at all facilities.

ACHD nonetheless evaluated potential RACT at other sources in the Allegheny Area including Koppers Inc. – Clairton Plant, Clairton Slag – West Elizabeth Plant, Eastman Chemical Resins Inc. – Jefferson Plant, and Kelly Run Sanitation – Forward Township, each of which have less than 5 tons per year (tpy) of allowable SO<sub>2</sub> emissions. In addition, ACHD examined several RACM options for area, nonroad and mobile sources of SO<sub>2</sub> in the Area. ACHD determined that no additional controls beyond the emission limits at the four main SO<sub>2</sub>-emitting facilities in the Allegheny Area are needed to provide for attainment of the SO<sub>2</sub> NAAQS in the Area. Because

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<sup>11</sup> ACHD's SIP submittal can be found at <https://www.regulations.gov>, Docket ID Number EPA-R03-OAR-2017-0730.

of this, additional controls on other SO<sub>2</sub> sources in the Area are not required RACT for the Allegheny Area.<sup>12</sup>

*Comment 8:* The commenter believes that the boundaries of the Allegheny Area may be drawn too narrowly, due to insufficient monitoring for SO<sub>2</sub> throughout Allegheny County. The commenter specifically notes that there is no monitoring station for SO<sub>2</sub> near Springdale, where the Cheswick Generating Station, the largest source of SO<sub>2</sub> in the County, is located. The commenter believes that ACHD's continuing failure to address the insufficient monitoring in Allegheny County means that the monitoring data is not fully representative of air quality in the nonattainment area. The commenter asks EPA to require ACHD to gather sufficient information regarding ambient levels of SO<sub>2</sub> near Springdale, or otherwise provide sufficient evidence that there is no possibility of the Area being in nonattainment with the NAAQS.

*Response 8:* EPA notes that the boundaries of the Allegheny Area were determined in 2013 as part of the process of designating the Area as nonattainment, and therefore the boundaries of the Area are not being reconsidered in this action. EPA issued its final rule identifying the first round of designations for the 2010 SO<sub>2</sub> NAAQS on August 5, 2013 (78 FR 47191). In the first round of SO<sub>2</sub> designations, EPA explained that the designations were based on recorded air quality monitoring data at existing monitor locations. Areas designated as nonattainment with the NAAQS were designated based on the design value at existing monitors that showed violations of the 1-hour SO<sub>2</sub> standard during the three-year period of 2009–2011. EPA designated as nonattainment 29 areas, including the Allegheny Area, in the August 5, 2013 action. In accordance with section 107(d)(1)(B)(ii) of the CAA, the boundaries of the Allegheny

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<sup>12</sup> See Footnote 8 of this preamble.

Area were also determined as part of the designations process. EPA determined at that time that the Allegheny Area should not include the portion of the County containing the Cheswick plant. EPA's technical support document (TSD) for the August 5, 2013 final rule provides the rationale for determining both the nonattainment designation and the boundaries of the Allegheny County area. As explained in the TSD, the Liberty monitor in Allegheny County showed violations of the 2010 SO<sub>2</sub> NAAQS, based on certified 2009–2011 air quality data and additional data from 2012 provided by Pennsylvania and ACHD. EPA concluded that, based on the supporting information relating to emissions, air quality data, meteorology, geography and jurisdictional boundaries provided by Pennsylvania and ACHD in response to EPA's 120-day letters, only a portion of Allegheny County should be initially included in the Allegheny Area, and that the remaining portion of the Area would be evaluated in a separate round of designations. Prior to finalizing the Round 1 designations, EPA provided the public with an opportunity to comment upon the proposed designations, including the boundaries of the designated area. 78 FR 11124, 11125-26 (February 15, 2013). The commenter's opportunity to express concerns about the boundaries of the Allegheny Area was during this public comment period, and therefore this comment is untimely and not germane to this final action. The commenter was again given an opportunity to comment on the air quality status of the remaining portion of Allegheny County that was not included in the Round 1 designation when EPA sought public input on the "Round 3" designations for SO<sub>2</sub>, which included the portion of Allegheny County containing the Cheswick plant. 82 FR 41903, 41905 (September 5, 2017).

On January 9, 2018 at 83 FR 1098, EPA published in the Federal Register, a final rule with Round 3 designations for the 2010 SO<sub>2</sub> NAAQS for numerous areas of the U.S, including the remaining portion of Allegheny County where the Cheswick plant is located. EPA designated

this remaining portion as “unclassifiable,” meaning that under CAA section 107(d)(1) the area cannot be classified as meeting or not meeting the NAAQS or as contributing to a nearby area that does not meet the NAAQS based on available information. 834 FR 1154 January 9, 2018; 40 CFR 81.339. No one challenged EPA’s designation of the remaining portion of Allegheny County. Therefore, EPA believes that this comment regarding the boundaries of the Allegheny Area is untimely and not germane to this rule.

Regarding the portion of the comment questioning the sufficiency of the SO<sub>2</sub> monitoring network in Allegheny County, and in particular near the Cheswick plant, EPA notes that the proper place to challenge any lack of monitors is when ACHD public notices its Annual Network Monitoring Plan for public comment. This action does not reopen EPA’s previous designations made under the 2010 SO<sub>2</sub> standard, however, for informational purposes only, the following information from the 2013 Allegheny Area Round 1 designations TSD is provided herein. As part of the analysis for the 2013 Round 1 designation of the Allegheny Area, EPA evaluated the Cheswick Power Plant. Cheswick’s emissions have been significantly reduced since installation and operation of its SO<sub>2</sub> control equipment, comprised of a wet flue gas desulfurization (FGD) unit installed in 2010. In the analysis, EPA looked at Cheswick’s 2011 and 2012 SO<sub>2</sub> emissions from the Clean Air Markets Division (CAMD) database, which indicated a large decrease in annual SO<sub>2</sub> emissions between 2011 and 2012, primarily due to increased control efficiency at the plant. In 2011, Cheswick’s coal-fired unit ran for 6,160 hours at an annually averaged emission rate of 0.71 pounds per Million british thermal units (lbs/MMbtu). In 2012, Cheswick’s coal unit ran slightly less at 5,715 hours with an annually averaged emission rate of 0.15 lbs/MMbtu. In light of Cheswick’s lower emission rates, its distance of approximately 24 kilometers from the Liberty monitor, and minimal change in the monitored values at the Liberty

monitor, EPA did not include this source in the Allegheny nonattainment area. EPA therefore defined the nonattainment area boundaries for the Allegheny Area based on the information available at the time of the initial designations and is not reopening that designation in this final SIP approval for the Allegheny area.

*Comment 9:* The commenter believes that ACHD should install and operate an SO<sub>2</sub> monitor at the Glassport location, which was discontinued in 2006 but showed higher levels of SO<sub>2</sub> than the Liberty monitor while it was operating. The commenter states that the lack of a monitor at this location could become material to whether the area is determined to be in attainment, and that while EPA prefers air modeling over air monitoring for purposes of SO<sub>2</sub> attainment demonstrations, this does not apply to attainment determinations. The commenter cites EPA's Final rule for the SO<sub>2</sub> NAAQS, at 75 FR 35520, 35553 (June 22, 2010), in which EPA indicated it was still considering under what circumstances it may be appropriate to rely on monitoring data alone to make attainment determinations. The commenter refers to the requirement that design values for purposes of an attainment determination are necessarily based on actual data from an ambient air quality monitoring site, thus the failure to reactivate the Glassport monitor may become relevant to an accurate determination of air quality in this area.

*Response 9:* As noted in EPA's response to comment 2 of this action, a determination of whether an area has attained or failed to attain the NAAQS is a separate action from the review of an attainment demonstration SIP and is outside the scope of this action approving the SIP. EPA's SO<sub>2</sub> attainment SIP review occurs under CAA sections 110(k), 172(c) and 192(a), while a determination of attainment/nonattainment of the NAAQS is governed by CAA section 179(c)(1). Under section 110(k)(3), EPA is required to approve a SIP submission that meets all

applicable requirements of the CAA. For the reasons described in our proposal and elsewhere in this action, we have concluded that the Allegheny Area attainment plan meets all such requirements, including the requirement in 172(c) and 192(a) to provide for attainment by the attainment date. This is the determination that is the subject of this final SIP approval action. EPA will take a separate action to analyze the pertinent information and determine whether the Allegheny Area attained the NAAQS by the attainment date, in accordance with section 179(c)(1) of the CAA

Also, although the former Glassport monitor may have recorded higher levels of ambient SO<sub>2</sub> emissions than the Liberty monitor, those readings were taken before the new SO<sub>2</sub> limits were imposed on the USS Mon Valley Works and Harsco facilities as part of the attainment plan. The modeling analysis submitted by ACHD with its attainment plan shows that with these new limits at these facilities, the entire nonattainment area would attain the 2010 SO<sub>2</sub> NAAQS, including at the former Glassport monitor location.

*Comment 10:* A commenter claims that ACHD should evaluate impacts of its transported emissions of SO<sub>2</sub> on other states' attainment with the NAAQS, and that SO<sub>2</sub> is a precursor to the formation of fine particulates (PM<sub>2.5</sub>). The commenter claims that "the Department", i.e. ACHD, does not discuss the impact of sources in Allegheny County on levels of SO<sub>2</sub> or PM<sub>2.5</sub> outside this nonattainment area, but does discuss the impact of upwind sources (outside the County) on SO<sub>2</sub> levels in the Allegheny County nonattainment area. In addition, ACHD also included modeling of upwind sources outside the nonattainment area. The commenter cites to the attainment plan's statement that some sources outside of the NAA have been included in the modeling demonstration in order to properly account for transported emissions into the

nonattainment area. The commenter states that a plan must include adequate provisions prohibiting any source from emitting any air pollutant in amounts which will contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to a NAAQS as required under section 110(a)(2)(D) of the CAA. In ACHD's Response to Comments document dated June 13, 2017, the commenter claims that the Department avoids the question by asserting that "SO<sub>2</sub> as a precursor to PM<sub>2.5</sub> is better addressed via PM<sub>2.5</sub> modeling using photochemical modeling, and development of an attainment demonstration for the 2012 PM<sub>2.5</sub> NAAQS for Allegheny County is underway." Comment #45, page 19-20. The commenter also states that ACHD incorrectly made an assertion that the PM<sub>2.5</sub> attainment plan was underway when responding to comments concerning transported emissions from Allegheny County during the state public comment period, and that ACHD was over two years late in meeting the CAA requirements to address the nonattainment with the 2012 PM<sub>2.5</sub> standard, asserting that ACHD only made revisions to its NNSR regulations after EPA issued a finding of failure to submit required nonattainment area requirements.

*Response 10:* Because the comment pertains to emissions that contribute significantly to nonattainment in, or interfere with maintenance by, any other state, EPA assumes that the commenter is referring specifically to the CAA requirements under section 110(a)(2)(D)(i)(I), and not the other elements of section 110(a)(2)(D) (namely 110(a)(2)(D)(i)(II), which pertains to measures required under part C to prevent significant deterioration of air quality or to protect visibility, and 110(a)(2)(D)(ii), which pertains to requirements for interstate and international pollution abatement). Section 110(a)(2)(D)(i)(I) of the CAA requires that SIPs contain adequate provisions to prohibit any emissions source or activity in a state from contributing significantly to nonattainment in, or interfering with maintenance by, any *other state* with respect to a primary

or secondary NAAQS. The section 110(a)(2)(D)(i)(I) requirements for a state are not linked with a particular nonattainment area's designation and classification in that state. The requirements under section 110(a)(2)(D)(i)(I), where applicable, continue to apply to a state regardless of the designation of any one particular area in the state. Therefore, for the purposes of an attainment plan, EPA disagrees that the showing of noninterference with another state's SIP under CAA 110(a)(2)(D)(i)(I) is an element that must be addressed in a section 172(c) plan submitted for the purpose of attainment of a NAAQS within that state. EPA believes that the requirements linked with a particular nonattainment area's designation and classifications are the relevant measures to evaluate in reviewing an attainment plan. Thus, EPA does not believe that the CAA's section 110(a)(2)(D)(i)(I) interstate transport requirements should be construed to be applicable requirements for purposes of approval of the Allegheny Area attainment SIP submittal.

The requirements for nonattainment area SIPs are addressed in CAA sections 110(k), 172(a), and 192(a), and consist of an attainment plan, including an attainment demonstration, a base year emissions inventory, RFP, RACM/RACT, and contingency measures. EPA's evaluation of whether an attainment plan submittal is approvable hinges on the approvability of these nonattainment area requirements. In taking action on infrastructure SIPs under section 110(a)(2) of the CAA, of which the transport element is a part, EPA has long noted the separate requirements and the different time frames for submission of infrastructure SIPs and nonattainment area SIPs. In its attainment SIP, ACHD appropriately considered emissions from outside the nonattainment area in the modeling analysis to determine necessary limits at the SO<sub>2</sub> emitting facilities within the Allegheny County nonattainment area. However, an analysis of the impacts of any SO<sub>2</sub> or PM<sub>2.5</sub> emissions from sources in the Allegheny Area upon downwind

areas in other states, is outside the scope of this action to approve the Allegheny Area attainment plan for the SO<sub>2</sub> NAAQS. Such an analysis would be a required part of any Pennsylvania submittal for an infrastructure SIP under section 110(a)(2). Thus, EPA does not believe that the CAA's interstate transport requirements should be construed to be applicable requirements for purposes of approval of an attainment plan.

EPA also disagrees that nonattainment area requirements related to the PM<sub>2.5</sub> NAAQS must be addressed in the Allegheny Area's SO<sub>2</sub> attainment plan. While SO<sub>2</sub> is a precursor to PM<sub>2.5</sub>, the SO<sub>2</sub> attainment plan was submitted and is being approved to show attainment with the 2010 1-hour SO<sub>2</sub> NAAQS. EPA agrees with ACHD's response to the comment that the PM<sub>2.5</sub> attainment plan will have to address all PM<sub>2.5</sub> precursors, including SO<sub>2</sub>, and that the PM<sub>2.5</sub> modeling analysis is better suited to determining SO<sub>2</sub>'s impact as a precursor to PM<sub>2.5</sub> when analyzing what is needed for PM<sub>2.5</sub> attainment. Finally, EPA's findings of failure to submit the PM<sub>2.5</sub> attainment plan for the 2012 PM<sub>2.5</sub> NAAQS, and whether or not attainment planning for PM<sub>2.5</sub> in Allegheny County is underway, are not relevant to this action to approve the Allegheny Area attainment plan for SO<sub>2</sub>.

*Comment 11:* The commenter suggested that there may be other measures and control strategies to facilitate attainment of the SO<sub>2</sub> NAAQS, and that EPA should require ACHD to develop additional requirements for emissions reductions from these facilities. The commenter included several suggestions for additional emission reductions, including the use of lower-sulfur coal, a lower percentage of allowable leaking doors at the Clairton facility, and efficiency initiatives.

*Response 11:* EPA agrees that it may be appropriate for the facilities to continue exploring operational and process improvements to reduce SO<sub>2</sub> emissions. However, EPA has determined

that the submittal, including the measures in the facility permits submitted by Pennsylvania for incorporation into the Allegheny County portion of the Pennsylvania SIP, represent the level of controls and measures *necessary* for the Allegheny Area to attain the SO<sub>2</sub> NAAQS, and it is therefore not necessary to compel adoption of additional measures in order to approve the SIP. ACHD's modeling analysis shows these measures will achieve attainment of the SO<sub>2</sub> NAAQS in the Allegheny Area. See also the discussion of RACM/RACT for the Allegheny Area in EPA's response to comment 7 of this action.

*Comment 12:* ACHD should have imposed immediate deadlines for implementing proposed control strategies and should not have waited until the attainment date. This postponement of compliance with control strategies until the exact attainment date contradicts EPA's policy relating to attainment plans. The commenter claims that EPA requires the state permitting agency to generate at least one calendar year of compliance information, prior to the attainment date. The commenter referenced EPA's 2014 SO<sub>2</sub> Guidance, which states that "EPA would expect states to require sources to begin complying with the attainment strategy in the SIP no later than January 1, 2017. By this means, the plans would be able to provide at least 1 calendar year of air quality monitoring data (and at least 1 calendar year of compliance information which, when modeled, would show attainment) before the applicable attainment deadline, indicating that the plan is in fact providing for attainment." In ACHD's Response to Comments document dated June 13, 2017, it states that "[t]he design, construction, and implementation of all projects for this SIP necessitate the longer schedule than prescribed by the general NAAQS schedule," without citing any evidence. EPA should require more of an explanation from the Department for the delay in requiring control measures, which is inconsistent with EPA's guidance document.

*Response 12:* EPA's 2014 SO<sub>2</sub> Guidance, as cited by the commenter, sets forth the expectation that one year of compliance or monitored data would be available as supporting evidence that modeling performed for the attainment plan, and the control measures adopted by the attainment plan, provide for attainment. In the case of the measures for the sources in the Allegheny Area that were needed for attainment, EPA proposed approval of the plan based on ACHD's submitted modeling demonstration showing that the measures would provide for attainment. Although one year of compliance data was not available at the time of the proposal, EPA believes it was appropriate, despite the Guidance recommendation on monitoring and compliance data, to propose our action. As explained in our 2014 SO<sub>2</sub> Guidance and in numerous proposed and final SIP actions implementing the SO<sub>2</sub> NAAQS, a key element of an approvable SIP is the required modeling demonstration showing that the remedial control measures and strategy are adequate to bring a previously or currently violating area into attainment.<sup>13</sup> The 2014 SO<sub>2</sub> Guidance addresses the best case scenario, but does not fit the current situation, so EPA has to use its judgment as to whether the lack of one year of monitored data which reflects the implementation of the control measures prior to the attainment date, under these circumstances, invalidates the modeling showing that these controls can achieve attainment. As part of this analysis, EPA looked at the AQS data for the Liberty monitor, which is included in the docket for this final rule. This data shows that after October 4, 2018, the date by which the control measures in the attainment plan were required at the Mon Valley Works and Harsco facilities, there were no exceedances between October 4, 2018 and December 23, 2018, which was the day just preceding the day of the fire at the Clairton Plant. As discussed previously, outside of the time frame during which the desulfurization plant at Clairton was not

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<sup>13</sup> See 2014 SO<sub>2</sub> Guidance, p. 9.

operational due to the fire on December 24, 2018, there were no monitored violations at the Liberty monitor. Preliminary data for 2019 also shows that outside of the time frame for the control outage from the December 2018 fire, no monitored violations have occurred. EPA believes that although the 2019 data is preliminary, the October through December 2018 data and the 2019 preliminary data suggests that compliance with the measures have been effective in showing that the measures provide for attainment. The three quarters of preliminary data for 2019 is included in the docket for this final rule. Fourth quarter 2019 data is normally submitted into AQS by March 31, 2020, and certification of data is required by May 1, 2020. Because actual monitored data (that was not impacted by the fires) show no exceedances after the October 4, 2018 deadline to meet the new measures, it is not necessary or useful to look back at the reasons the measures were not required sooner.

The portion of the 2014 SO<sub>2</sub> Guidance referenced by the commenter is there for the purpose of recommending what is preferred for a determination of attainment under CAA section 179(c), rather than what is necessary for assessing whether an attainment plan would provide for attainment by the attainment date under section 172(c) of the CAA. Therefore, the lack of one year of monitored data before the attainment date does not invalidate this attainment plan approval action.

*Comment 13:* The commenter provided a preliminary evaluation of ambient air quality monitoring data for the three-year period of 2016–2018, which suggests that the Allegheny Area will be in nonattainment due to data at the Liberty monitor. The commenter cites a predicted design value of 101 ppb, based on the average of the fourth-highest maximum hourly values for 2016, 2017, and 2018. The commenter asked EPA to provide an evaluation whether the design

value for 2016–2018 will in fact be below the NAAQS, as anticipated by ACHD. This should include substantiation regarding its projection of what the design value will be, based on monitored data. If the numbers demonstrate that it will exceed the standard, the commenter states that the Department should revise the state implementation plan to require additional emissions reductions sufficient to meet the standard.

*Response 13:* Although this design value was not as anticipated by ACHD when it responded to comments received on the proposed Allegheny Area attainment plan, the monitoring data available at that time should not be interpreted as indicating that the attainment plan fails to provide for attainment. The monitoring data cited by the commenter were collected before the full implementation of the measures in the Allegheny SO<sub>2</sub> attainment plan on October 4, 2018. Therefore, these data do not show the improvement in air quality and monitored values which were expected from full implementation of the measures used in the modeling demonstration. As such, these data are not a reliable indicator of whether air quality, after implementation of all modeled, relevant control measures, would be expected to meet the standard at the attainment deadline. In other words, these data are not indicative of the adequacy of the plan and its modeling demonstration to provide for NAAQS attainment. As noted previously, EPA's 2014 SO<sub>2</sub> Guidance and actions implementing the SO<sub>2</sub> NAAQS explain that a key element of an approvable SIP is the required modeling demonstration showing that the remedial control measures and strategy are adequate to bring a previously or currently violating area into attainment. Given the form of the 2010 NAAQS as the three-year average of the 99<sup>th</sup> percentile of the yearly distribution of 1-hour daily maximum SO<sub>2</sub> concentrations, it is often possible that the three-year period of monitored data will contain some monitored results which preceded implementation of the newer remedial control measures. These monitored results would not

reflect the air quality levels resulting from implementation of the attainment plan control measures. In such cases, as it is here, the more complete and representative analysis for informing action on a submitted SIP should focus on the results of newly implemented control measures required under the plan and the modeling demonstration based on those control measures, rather than pre-control, measured concentrations that do not reflect the results of the plan's required control measures. The former analysis explicitly addresses whether air quality will be attaining (as required) under the state's submitted plan, whereas the latter analysis may have little to no bearing on what will happen as a result of the plan. Therefore, in the context of reviewing the adequacy of those newer control measures to provide for newly attaining air quality under sections 172 and 192 of the CAA, we conclude that it is reasonable to rely on the modeling results that specifically account for those control measures and the resulting reductions in SO<sub>2</sub> emissions, rather than on monitored data that, in this case, do not represent air quality levels resulting from full implementation of the control measures in the attainment plan. In the Allegheny SO<sub>2</sub> attainment plan, ACHD's modeling shows that implementation of the measures included in the plan result in air quality that attains the NAAQS.

*Comment 14:* The commenter claims that the Department (or ACHD) did not adequately address the problems in the proposed revision. ACHD correctly states that "reasonable further progress" contemplates "annual incremental reductions in emissions." However, the data provided in this section only demonstrates overall ambient reduction in SO<sub>2</sub> at the Liberty monitor. The data would have to show annual incremental reductions in SO<sub>2</sub> emissions specifically at each source, in order to demonstrate reasonable further progress. See 42 U.S.C. 7501(1). The Department confuses the concept of "reasonable further progress" by setting forth a chart showing declining concentrations of SO<sub>2</sub> at a monitoring site. But as set forth above, that is not what the statute

calls “reasonable further progress.” See 42 U.S.C. 7501(1). The Department provides further evidence of this confusion when it asserts that “[the] shutdown of Guardian Industries in 2015 is an additional decrease in emissions for the NAA ....” Id., page 32. Comparing decreases in ambient concentrations with decreases in source emissions is like comparing apples to oranges.

At best, the Department implies there have been some emissions reductions “due to partially-completed projects by USS (including projects that have not been quantified for this SIP).” See Id. But the Department must quantify those emissions, and it must demonstrate “reasonable further progress” in this proposed plan revision. The fact that projects are only “partially-completed,” and the Department has not even quantified them for this plan, demonstrates that the Department has failed to show “reasonable further progress.” See Id.

ACHD’s response to the commenter was that, for RFP, “the definition is generally less pertinent to pollutants like SO<sub>2</sub> that usually have a limited number of sources affecting areas of air quality which are relatively well defined, and emissions control measures for such sources result in swift and dramatic improvement in air quality.... Given that source controls are in effect ‘single steps’ for RFP for SO<sub>2</sub>, and the initial controls are only partially in place (for an 8-month period in 2016 for the VCU upgrades), incremental reductions cannot be classified. Emission reductions cannot be double counted by applying them to both the control strategy and RFP. As a method to indicate downward progress, concentration data was used along with quantifiable reductions in emissions.”<sup>14</sup>

The commenter asserts that ACHD’s argument is flawed because it is premised on the notion that there will be a swift and dramatic improvement in air quality, which remains to be seen, and

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<sup>14</sup> See October 3, 2017 Pennsylvania submittal, p. 79.

also because emissions reductions cannot be double-counted by applying them to both the control strategy and RFP, and is not a defense to not doing single-counting of additional emissions reductions from means other than VCU upgrades, such as limiting leaking doors. Stated differently, just because a facility has invested in an item of capital equipment to reduce emissions does not mean that it should not be required to explore other opportunities for emissions reductions. The commenter believes that EPA should require more from ACHD by way of RFP and require additional emissions reductions above and beyond those achievable through recent projects.

*Response 14:* ACHD's response to comments on its proposed attainment plan relies on EPA's 2014 SO<sub>2</sub> Guidance and the discussion of the RFP requirement. As explained in the 2014 SO<sub>2</sub> Guidance, section 171(1) of the CAA defines RFP as "such annual incremental reductions in emissions of the relevant air pollutant as are required by this part (part D) or may reasonably be required by the EPA for the purpose of ensuring attainment of the applicable NAAQS by the applicable attainment date." 2014 SO<sub>2</sub> Guidance, pp. 40 and 41. The 2014 SO<sub>2</sub> Guidance goes on to explain that "[a]s EPA has previously explained, this definition is most appropriate for pollutants that are emitted by numerous and diverse sources, where the relationship between any individual source and the overall air quality is not explicitly quantified, and where the emission reductions necessary to attain the NAAQS are inventory-wide. We have also previously explained that the definition is generally less pertinent to pollutants like SO<sub>2</sub> that usually have a limited number of sources affecting areas of air quality which are relatively well defined, and emissions control measures for such sources result in swift and dramatic improvement in air quality. That is, for SO<sub>2</sub>, there is usually a single 'step' between pre-control nonattainment and post-control attainment, thus annual incremental reductions that would be required for some

other pollutants, as discussed in the 2014 Guidance, would not be necessary prior to attainment. Therefore, for SO<sub>2</sub>, with its discernible relationship between emissions and air quality, and significant and immediate air quality improvements, we explained in the General Preamble that RFP is best construed as ‘adherence to an ambitious compliance schedule.’ See 74 FR 13547, April 16, 1992. This means that the air agency needs to ensure that affected sources implement appropriate control measures as expeditiously as practicable in order to ensure attainment of the standard by the applicable attainment date.” Id. The Guidance further states that, by definition, the RFP provision requires only such reductions in emissions as are necessary to attain the NAAQS. If a modeling analysis for an area shows that the SIP will timely attain the NAAQS, then the purpose of the RFP requirement will have been fulfilled, and since the modeling for this area makes that demonstration, additionally showing that the area will make RFP toward attainment has no further utility. We took this view with respect to the general RFP requirement under CAA section 172(c)(2) in the “General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990” (General Preamble) (see 57 FR 13498, 13564, April 16, 1992). See 72 FR at 20604, 2014 SO<sub>2</sub> Guidance, p. 54. The modeling demonstration, which takes into account the new SO<sub>2</sub> reduction measures at the four facilities in the Area that were required no later than October 4, 2018, shows that the SIP provides for the Allegheny Area to attain the 2010 SO<sub>2</sub> NAAQS by October 4, 2018. Because the modeling for the Area shows attainment of the NAAQS by the attainment date through timely compliance with the new emission limits in the permits, RFP, as interpreted for the purpose of SO<sub>2</sub>, has been met in this Area.

Further, as noted in EPA’s response to comment 2 of this action, preliminary monitoring data for 2019 (excluding the monitoring data collected during the control outage caused by the December

2018 fire at Clairton Coke Works) supports the modeling results that the SIP provides for attainment of the Area with respect to the 2010 SO<sub>2</sub> NAAQS.

*Comment 15:* The commenter believes that there should be no averaging period at all, given the complexity of the air shed in the nonattainment area, and that long-term averaging for the VCU at the Clairton facility should be rejected. The commenter also states that a better explanation of the calculations and analysis regarding the CEV should have been included in the submittal to provide EPA and the public an opportunity to assess whether the long-term average is appropriate in this case. The 2014 SO<sub>2</sub> Guidance sets forth the steps to establish longer-term limits that are comparably stringent, including determination of a CEV; each of these steps should be shown in the submittal to accurately assess whether there is comparable stringency. The commenter also stated that ACHD did not have enough data for its B Line VCU upgrade to determine comparable stringency values. The commenter believes that ACHD used eight months of data for this line, projected out to three to five years, as the basis of its calculations of an adjustment factor for determining long term average limits that would be comparably stringent to 1-hour limits at the CEV. The commenter believes that this amount of data is inadequate for this purpose and believes that ACHD should have used data from a comparable site having three to five years of operating data.

*Response 15:* The validity of long-term average limits is addressed in EPA's response to comment 4 of this action. With regard to the data used in the calculations for the determination of the CEV value, Appendix C of the 2014 SO<sub>2</sub> Guidance shows an example calculation and the steps needed to determine a longer-term average emission limit. Step 1 of the calculation is to conduct dispersion modeling to determine a source's 1-hour CEV that could be used as a

baseline for determination of a longer-term average limit that is comparably stringent to the CEV. These values are shown in Tables 3-1 and 3-3 of the Commonwealth's submittal. Step 2 is to compile emissions data reflecting the distribution of emissions that is expected once the attainment plan is implemented. Emission distributions describe the frequency with which different emission levels occur, which may be depicted by graphing the number of hours per year (for example) that emissions are within a particular range, as a function of emission level. A key element of this step is selection of an appropriate emissions data set. This step is especially important if the attainment plan is expected to involve installation of control equipment or other similarly significant changes in operations. The choice of control strategy can have a significant effect on the emission distribution. For example, installation and operation of flue gas desulfurization equipment, particularly in the absence of requirements for continuous operation of the equipment, can lead to an emission distribution in which most emission values are significantly lower but occasional values remain relatively high, thus enlarging the difference between peak emission values and longer-term average emission values. Consequently, if the source being addressed does not currently operate flue gas desulfurization equipment but the attainment plan is likely to involve installation and operation of such equipment, the current emissions profile data for the source may not provide a suitable representation of the variability of emissions that might be expected after the attainment plan controls are in place.

The 2014 SO<sub>2</sub> Guidance states that in such cases, as suggested by the commenter, Step 2 would involve identifying another set of data that better reflects the source's expected emission variability, presumably from another comparable source that is already implementing the control strategy that the target source anticipates using. In other cases, the 2014 SO<sub>2</sub> Guidance states that "the air agency may determine that an area could attain through a control strategy that will

not significantly change the emission distribution. Where the control strategy does not significantly change the distribution, the source's current emission distribution may be the best indicator of the source's post-control emission distribution. Irrespective of whether the future emissions variability does or does not match the historic emissions variability at a source, a critical element of Step 2 is to assure that the data used to analyze prospective emissions variability at the source properly reflects the emissions variability that might be expected at the source once the SIP is implemented". See 2014 SO<sub>2</sub> Guidance, pp 31 - 32.

Clairton Works is a distinctive source, being the nation's largest coke works and being relatively well controlled. Thus, EPA believes that no other source could provide a data set that could represent the emissions variability resulting from burning COG from Clairton Works better than data from Clairton Works itself.

As described in Appendix D of its documentation, ACHD analyzes 2014 to 2016 data from four units at Clairton Works: Unit 1, Unit 2, Line A, and Line B. The commenter focuses in particular on the calculations for Line B, which the commenter incorrectly states are based on data for the eight months in this period after an upgrade to its sulfur removal equipment. In fact, these calculations are based on data for the entire 3-year period. EPA's 2014 SO<sub>2</sub> Guidance, at page 29, states, "The EPA anticipates that data sets reflecting hourly data for at least three to five years of stable operation (i.e., without changes that significantly alter emissions variability) would be needed to obtain a suitably reliable analysis." Thus, for Line B, the ideal data set would have reflected three to five years of data following implementation of the control upgrade. However, such a data base, by definition including data at least through April 2019, was not available to ACHD for its October 2017 submittal. Almost as good would have been a data base

reflecting three to five years of data from before the control upgrade, so long as the data could be demonstrated to be reflective of variability after implementation of the control upgrade. ACHD did not explain whether or why such a data base was not available. However, ACHD did compare the emissions distributions before and after the control upgrade, concluding that the emissions after the control upgrade exhibit similar variability (albeit at around one fourth the levels) as emissions before the control upgrade. ACHD justified the use of data from the entirety of 2014 to 2016 on this basis.

As a general matter, EPA's recommendation to use data from a period without significant changes in controls is intended in part to assure that the data base purely represents variability of emissions within a specific control regime, not variability from one control regime to another. Although ACHD has provided information to support its assertions that the variability of emissions at the Line B after the control upgrade are similar to their variability before the control upgrade, this information does not address concerns about using a data base that mixes 28 months of relatively high (pre-upgrade) data with eight months of relatively low (post-upgrade) data.

EPA conducted additional analyses of ACHD's data to evaluate whether, despite these concerns, the results of ACHD's analysis of the Line B data might nevertheless provide a suitable estimation of the degree of adjustment warranted to determine comparably stringent longer-term average limits. EPA computed adjustment factors using 2014 SO<sub>2</sub> Guidance Appendix C methods for three scenarios: 1) using all pertinent data for the full three years (as was done by ACHD), 2) using only pre-upgrade data, and 3) using a three year data set in which the post-upgrade data are adjusted according to the average emission reduction from the upgrade, to

simulate a three-year pre-upgrade data base. A spreadsheet showing these computations is provided in the docket, and the results for these three scenarios are shown in Table 2.

Table 2. Adjustment factors for Line B COG using alternative data sets

Scenario:	36 Months of Unadjusted Data (ACHD Approach)	28 Months of Pre-Upgrade Data	36 Months, with Adjustment of Post-Upgrade Data
30-day average	83.4%	82.2%	78.3%
24-hour average	94.4%	94.2%	93.5%

As these results show, ACHD’s results are similar to the results they would have obtained either using a 28-month data base using only pre-upgrade data or using a data base with adjustments as if all 36 months of data were at pre-upgrade levels. The data suggest that the 99<sup>th</sup> percentile values for all averaging times are, not surprisingly, during the higher, pre-upgrade period; in this respect, the analysis appears to be more sensitive to pre-upgrade variability than to post-upgrade variability, and the analysis predominantly reflects variability during a 28-month period and thus is a potentially less robust result than would be obtained with three years of data with a constant control regime. Nevertheless, these data support ACHD’s assertion that post-upgrade variability is similar to pre-upgrade variability, and EPA believes more broadly that ACHD’s results provide a suitable adjustment factor for determining the longer-term limits for units firing B Line COG that are comparably stringent to the 1-hour limits that otherwise would have been set.

Step 3 of EPA’s recommended procedure is to use the selected data set to compute longer-term (in this case 30-day and 24-hour) average values. Step 4 is to determine the 99<sup>th</sup> percentile of the 1-hour and longer-term average values. Step 5 is to calculate the ratio of the values determined in Step 4, to be used as an adjustment factor. The values that ACHD obtained through these steps are documented in Appendix D Tables D-4-2, D-4-3, and D-4-4. The application of these adjustment factors to limits for units that fire COG from these four sources are shown in Table 3-

3 of the main SIP document.

The commenter expresses concern that EPA does not have estimates of the expected frequency or magnitude of emissions in excess of the CEV. Such an analysis is complicated by the number of different emission units that burn COG from these four sets of COG origins. Nevertheless, as stated in the NPRM, the application of 24-hour average limits as well as 30-day limits will help assure that the frequency and magnitude of emissions above the CEV will be modest. If the facility has no values that exceed the 30-day and 24-hour average limits (i.e., if the facility complies with the SIP limits), then EPA expects correspondingly few values above the corresponding 1-hour value (i.e., the CEV) as well.

*Comment 16:* The commenter requested that EPA substantially revise the NPRM before finalizing and should ensure attainment without ignoring monitor data showing nonattainment with the standard.

*Response 16:* EPA has concluded that a revised NPRM is not warranted because the comments do not identify a flaw in ACHD's plan which would require a plan revision in order to meet the requirements of the CAA. As previously explained in our response to comments 2 and 13 of this action, in the context of reviewing the adequacy of newer control measures to provide for newly attaining air quality under sections 172 and 192 of the CAA, we conclude that it is reasonable to focus on the modeling results that specifically account for those control measures and the resulting reductions in SO<sub>2</sub> emissions, rather than on monitored data that, in this case, do not represent air quality levels resulting from full implementation of the control measures in the attainment plan, which ACHD's modeling shows result in air quality that attains the NAAQS. For the reasons described in our proposal and in the preceding responses to comments, we find

that the Allegheny SO<sub>2</sub> attainment plan meets all applicable requirements under the CAA and EPA's implementing regulations. Accordingly, we are finalizing our approval of the Allegheny SO<sub>2</sub> attainment plan.

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

EPA is approving Pennsylvania's attainment plan SIP revision for the Allegheny Area, as submitted by ACHD through PADEP to EPA on October 3, 2017, for the purpose of demonstrating attainment of the 2010 1-hour SO<sub>2</sub> NAAQS. 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 Allegheny Area and 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 Allegheny County portion of the Pennsylvania SIP the SO<sub>2</sub> emission limits and compliance parameters in the following permits, all of which are dated September 14, 2017: ACHD Permit 0052-1017 for the Clairton Plant; ACHD Permit 0051-1006 for the Edgar Thomson Plant; ACHD Permit 0050-1008 for the Irvin Plant, and ACHD Permit 0265-1001 for Braddock Recovery/Harsco Metals.

EPA has determined that Pennsylvania's SO<sub>2</sub> attainment plan for the 2010 1-hour SO<sub>2</sub> NAAQS for the Allegheny Area meets the applicable requirements of the CAA and is consistent with EPA's 2014 SO<sub>2</sub> Guidance. Thus, EPA is approving Pennsylvania's attainment plan for the Allegheny Area as submitted on October 3, 2017. 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 to take final action on the SIP by April 30, 2020.

#### **V. Incorporation by Reference**

In this document, EPA is finalizing regulatory text that includes incorporation by reference. In accordance with the requirements of 1 CFR 51.5, EPA is finalizing the incorporation by reference of SO<sub>2</sub> emission limits and compliance parameters in ACHD permits. EPA has made, and will continue to make, these materials generally available 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>15</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 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

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<sup>15</sup> 62 FR 27968 (May 22, 1997).

SIP approvals are exempted under Executive Order 12866.

- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country

located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

*B. Submission to Congress and the Comptroller General*

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

*C. Petitions for Judicial Review*

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by [**insert date 60 days after date of publication in the Federal Register**]. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action approving the Allegheny Area attainment plan for the 2010 SO<sub>2</sub> NAAQS may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

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

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

Dated: April 17, 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 “U.S. Steel Clairton”, “U.S. Steel Edgar Thomson”, “U.S. Steel Irvin”, and “Braddock Recovery/Harsco Metals” at the end of the table; and
- b. The table in paragraph (e)(1) is amended by adding an entry for “Allegheny Area 2010 SO<sub>2</sub> attainment plan and base year emissions inventory” 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
* * * * *	*				
U. S. Steel Clairton	Redacted Installation Permit 0052-1017	Allegheny	9/14/17	[insert date of publication in the Federal Register], [insert Federal Register citation]	Sulfur dioxide emission limits and related parameters in unredacted portions of the Installation Permit.
U. S. Steel Edgar Thomson	Redacted Installation Permit 0051-1006	Allegheny	9/14/17	[insert date of publication in the Federal Register], [insert Federal Register citation]	Sulfur dioxide emission limits and related parameters in unredacted portions of the Installation Permit.
U.S. Steel Irvin	Redacted Installation Permit 0050-1008	Allegheny	9/14/17	[insert date of publication in the Federal Register], [insert Federal Register citation]	Sulfur dioxide emission limits and related parameters in unredacted portions of the Installation Permit.

Braddock Recovery/Harsco Metals	Redacted Installation Permit 0265-1001	Allegheny	9/14/17	[insert date of publication in the Federal Register], [insert Federal Register citation]	Sulfur dioxide emission limits and related parameters in unredacted portions of the Installation Permit.
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\* \* \* \* \*

(e)\*\*\*

(1) \*\*\*

Name of non-regulatory SIP revision	Applicable geographic area	State submit date	EPA approval date	Additional explanation
* * * * *				
Allegheny Area 2010 SO <sub>2</sub> attainment plan and base year emissions inventory	Cities of Clairton, Duquesne, and McKeesport; the Townships of Elizabeth, Forward, and North Versailles, and the following Boroughs: Braddock, Dravosburg, East McKeesport, East Pittsburgh, Elizabeth, Glassport, Jefferson Hills, Liberty, Lincoln, North Braddock, Pleasant Hills, Port Vue, Versailles, Wall, West Elizabeth, and West Mifflin.	10/03/17	[insert date of publication in the Federal Register], [insert Federal Register citation]	Also see: 52.2033(d) and EPA-approved redacted permits for: U.S. Steel Clairton (0052-1017); U.S. Steel Edgar Thompson (0051-1006); U.S. Steel Irvin (0050-1008); and Braddock Recovery/Harsco Metals (0265-1001).

\* \* \* \* \*

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

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

\* \* \* \* \*

(e) EPA approves the 2010 1-hour SO<sub>2</sub> attainment plan for the City of Clairton, City of Duquesne, City of McKeesport, Borough of Braddock, Borough of Dravosburg, Borough of East McKeesport, Borough of East Pittsburgh, Borough of Elizabeth, Borough of Glassport, Borough of Jefferson Hills, Borough of Liberty, Borough of Lincoln, Borough of North Braddock, Borough of Pleasant Hills, Borough of Port Vue, Borough of Versailles, Borough of Wall, Borough of West Elizabeth, Borough of West Mifflin, Elizabeth Township, Forward Township, and North Versailles Township in Pennsylvania, submitted by the Department of Environmental Protection on October 3, 2017.

[FR Doc. 2020-08573 Filed: 4/22/2020 8:45 am; Publication Date: 4/23/2020]