CLEAN AIR COUNCIL

Allegheny County Health Department
Proposed Revision to the Allegheny County Portion of the
Pennsylvania State Implementation Plan

Attainment Demonstration for the Allegheny, PA
SO_2 Nonattainment Area (2010 Standards)

December 19, 2018

Written Comments by Clean Air Council

Clean Air Council ("the Council") submits these written comments regarding EPA's proposed approval of a revision to the Allegheny County Portion of the Pennsylvania State Implementation Plan for the Allegheny, PA SO_2 Nonattainment Area, dated September 14, 2017 and submitted on October 3, 2017.

The Council is a non-profit environmental organization headquartered at 135 South 19th Street, Suite 300, Philadelphia, Pennsylvania, 19103. The Council maintains an office in Pittsburgh. For 50 years, the Council has worked to improve air quality across Pennsylvania. The Council has members throughout the Commonwealth who support its mission to protect everyone's right to breathe clean air, including members in Allegheny County. The Council has approximately 35,000 activist members.

These comments include comments originally submitted to the Allegheny County Health Department ("Department") in response to proposed revisions dated March 2, 2017 and May 1, 2017. The Council submits that many of these comments were not adequately addressed by the Department in its response to comments.

1. The Department Should Install a Monitoring Station Near Springdale to Facilitate a More Reliable Designation of the Nonattainment Area.

Summary of Comments to the Department:

The Council believes that the scope of the nonattainment area may be drawn too narrowly, due to insufficient monitoring for sulfur dioxide throughout the County. Specifically, there is no monitoring station for sulfur dioxide near Springdale, where the Cheswick Generating Station is located. This power plant is the largest source of sulfur dioxide in the County.

The Council and other environmental groups have submitted several comments about this deficiency in connection with the Department's revisions to the annual monitoring network. *See* Air Monitoring Network Plan for 2017 (July 1, 2016), pages 67-69, 72, Appendix A, Sections 1, 2, and 5, https://www.epa.gov/sites/production/files/2017-12/documents/paplan2016_-_achd.pdf. To date, the Department has not adequately addressed those concerns.

The Department's continuing failure to address insufficient monitoring means that the Department's monitoring data is not fully representative of air quality in the nonattainment area.

Summary of the Department's Response to Comments:

In its Response to Comments document dated June 13, 2017, the Department avoids the question, deferring to the Data Requirements Rule initiative:

> The area including and surrounding the Cheswick plant is being addressed under Round 3 of the 2010 SO2 NAAQS (the Data Requirements Rule (DRR)), for which either modeling or monitoring can be used for air quality characterization. (There were no identified Round 2 areas for the state of Pennsylvania). This demonstration has yet to be finalized at the time of this SIP.

Comment #27, page 11-12. A review of EPA's website does not indicate any further action on this, with respect to areas in Pennsylvania. https://www.epa.gov/sulfur-dioxide-designations/intended-sulfur-dioxide-area-designations-august-2017, https://www.govinfo.gov/content/pkg/FR-2017-09-05/pdf/2017-18423.pdf, https://www.epa.gov/sites/production/files/2017-08/documents/designations_overview.pdf.

The lack of a sulfur dioxide monitor near the Springdale facility has presented a longstanding issue regarding whether the Department has sufficient data regarding levels of sulfur dioxide near a power plant that has been the largest source of sulfur dioxide in the county.

Accordingly, EPA require the Department to gather sufficient information regarding ambient levels of sulfur dioxide near Springdale, or otherwise provide sufficient evidence that there is no possibility of the area being in nonattainment with the national ambient air quality standard.

2. The Department Should Install and Operate a Sulfur Dioxide Monitor at the Glassport Location.

Summary of Comments to the Department:

The Department discontinued this monitor in 2006 because it was deteriorating and difficult to reach. But this monitor was operated for a number of years, demonstrating it is feasible to operate a monitor at this location.

More importantly, when it was operating the levels of sulfur dioxide were much higher than at the Liberty monitor. Should the Department suggest that air quality is improving based on data collected at the Liberty monitor, it is important for the public to remember that the Department discontinued the operation of the Glassport monitor, and that this monitor demonstrated higher levels of sulfur dioxide. At some point, the lack of a monitor at this location could become material to whether the area is determined to be in attainment.

While EPA prefers air modeling over air monitoring for purposes of SO_2 attainment demonstrations (forecasting of attainment in the future), this does not apply to attainment determinations (verification of attainment in the past). *See* Final Rule, Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 FR 35,520, 35,553 (June 22, 2010) ("***EPA is still considering*** how monitoring and modeling data would be used together in specific situations to define attainment and nonattainment boundaries and ***under what circumstances it may be appropriate to rely on monitoring data alone to make attainment determinations***.") (emphasis added).

In addition, the regulatory formula for calculating the design value (and therefore, determining whether an area is in attainment) necessarily involves actual data from an ambient air quality monitoring site. 40 C.F.R. part 50, Appendix T-Interpretation of the Primary National Ambient Air Quality Standards for Oxides of Sulfur (Sulfur Dioxide), Section 5(a) (Calculation Procedures for the 1-Hour Primary SO_2 NAAQS), 5(b) (actual formula). Accordingly, the failure to reactivate the Glassport monitor may become relevant to an accurate determination of air quality in this area.

The Department should install and operate a sulfur dioxide monitor at the Glassport location. The Department's continuing failure to reactivate the Glassport monitor means that the Department's monitoring data is not fully representative of air quality in the nonattainment area.

Summary of the Department's Response to Comments:

In its Response to Comments document dated June 13, 2017, the Department avoids the fact that omission of this monitoring station deprives the Department of an additional source of data that could help understand the nature and extent of the air pollution problem:

> Monitored data at the former Glassport monitor site were taken into consideration for this SIP, and this site was an important factor in the model evaluation for the NAA. Historical data from the Glassport site were used to determine appropriate modeled concentrations at this location. The types of industrial operations closest to this location have not changed much since the site was terminated, and current trends should be similar at the Glassport and Liberty locations for comparison to the modeled predictions.

Comment #29, page 12-13. Even if the historic data were taken into consideration, the fact remains that data from a monitor that demonstrated higher concentrations of sulfur dioxide in the past has not been available since the time of its discontinuation. Given the fact that the airshed is

very complex, this omission likely understates the degree of the air pollution problem of sulfur dioxide.

Accordingly, EPA should require the Department to restore the Glassport monitoring site.

3. <u>The Department Should Evaluate Impacts on Attainment with National Ambient Air Quality Standards in Other States, Resulting from the Transport of Sulfur Dioxide from the Mon Valley.</u>

<u>Summary of Comments to the Department</u>:

Sulfur dioxide is a precursor to the formation of fine particulates ($PM_{2.5}$). But the Department does not discuss the impact of sources in Allegheny County on levels of sulfur dioxide or fine particulates outside this nonattainment area.

In contrast, the Department discusses the impact of upwind sources (outside the County) on sulfur dioxide levels in the Allegheny County nonattainment area. For example, it mentions the long-range transport of sulfur dioxide to the Liberty monitor. Proposed Revision, page 4 ("Concentrations of SO2 were largest from the S through SW directions. These are directions from which local and long-range transport carries substantial amounts of SO2 to the Liberty monitoring site from large, stationary sources."). The Department notes that the valley itself affects transport within the nonattainment area. *Id.,* page 6 ("Air quality management in Allegheny County is complicated by valley influences on pollutant transport and dispersion…."). This is an important issue in the County that affects PM10 and SO2 and potentially PM2.5 (as an issue of the future) in several key valley segments in Allegheny County").

In addition, the Department also included modeling of upwind sources outside the nonattainment area. *Id.,* page 14 ("Emissions from sources outside of the NAA are not included in the above table. However, some sources outside of the NAA have been included in the modeling demonstration in order to properly account for transported emissions into the NAA."). The Department also consider the deactivation of large sources of sulfur dioxide outside the County, as part of its section on Weight of Evidence. *Id.,* page 31 ("Several additional EGUs in the surrounding area have deactivated since 2011 or plan to deactivate in the next few years. These deactivations will lead the continued decrease of background and transported SO2 emissions in the NAA.").

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 national ambient air quality standard. Section 110(a)(2)(D), 42 U.S.C. §7410(a)(2)(D).

Pennsylvania is an upwind state that contributes to downwind nonattainment for fine particulates. Final Rule, Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals, 78 Fed. Reg. 48,208, 48,239-48,244 (August 8, 2011). Having identified three large sources of sulfur dioxide in the County, the

Department should evaluate and address their contribution to downwind nonattainment in other states, with respect to the standards for sulfur dioxide and fine particulates.

The Department should evaluate impacts on attainment with national ambient air quality standards in other states, resulting from the transport of sulfur dioxide from the Mon Valley.

In the second proposed revision, the Department did not address the transport of sulfur dioxide from the Mon Valley. In contrast, it asserted that several sources outside of the nonattainment area may be having an effect on sulfur dioxide concentrations inside the Mon Valley. This was addressed in the "weight of evidence" section. *See* Proposed Revision, pages 39-41.

Summary of the Department's Response to Comments:

In its Response to Comments document dated June 13, 2017, the Department avoids the question by asserting that "SO2 as a precursor to PM2.5 is better addressed via PM2.5 modeling using photochemical modeling, and development of an attainment demonstration for the 2012 PM2.5 NAAQS for Allegheny County is underway." Comment #45, page 19-20.

The problem with this assertion is that as far the Council can tell, the development of an attainment demonstration for the fine particulate standard was not underway at the time the Department made this statement on June 13, 2017. In fact, as of today the Department is over two years behind in addressing the problem of nonattainment with the 2012 annual standard. It ignored a deadline set by Congress and it recently proposed a revision of its Nonattainment New Source Review regulations in November 2018 only after a federal lawsuit against EPA led to a finding by EPA that the Department has failed to make the required submissions, which has started the clock running for sanctions under the Clean Air Act. This is clear from EPA's website:

Pennsylvania: PM-2.5 (2012) / Allegheny County

SIP Requirement	Deadline	Submittal Date	Latest Action	Date of Latest Action	FR Citation Click to view FR notice
Emission Inventory (Moderate)	10/15/2016		Failure to submit	05/07/2018	83 FR 14759
RACM/RACT (Moderate)	10/15/2016		Failure to submit	05/07/2018	83 FR 14759
Attainment Demonstration (Moderate)	10/15/2016		Failure to submit	05/07/2018	83 FR 14759

RFP (Moderate)	10/15/2016		Failure to submit	05/07/2018	83 FR 14759
Quantitative Milestones (Moderate)	10/15/2016		Failure to submit	05/07/2018	83 FR 14759
Contingency Measures (Moderate)	10/15/2016		Failure to submit	05/07/2018	83 FR 14759
Nonattainment NSR (Moderate)	10/15/2016		Failure to submit	05/07/2018	83 FR 14759

Source: EPA, Status of SIP Required Elements for Pennsylvania Designated Areas, https://www3.epa.gov/airquality/urbanair/sipstatus/reports/pa_elembypoll.html (last visited on December 18, 2018). The Federal Register notice represents EPA's finding that the Department failed to make the timely submissions by that deadline. *See* 83 Fed. Reg. 14,759.

Especially where the Department is delinquent in making its required submissions of revisions of the state implementation plan for fine particulates, EPA should require more in this proposed revision of the state implementation plan for sulfur dioxide, to address the problem of interstate transport of fine particulates, attributable to large sources of sulfur dioxide in Allegheny County.

4. The Department Should Explore Additional Opportunities for Sulfur Dioxide Reductions at the U.S. Steel Facilities.

Summary of Comments to the Department:

In addition to the projects discussed in the Department's proposed plan revision, there may be other measures and control strategies to facilitate attainment with the national ambient air quality standard for sulfur dioxide. *See* Proposed Revision, pages 8-13, 22.

Many facilities in nonattainment areas are small enough that reductions in air emissions might not have a significant effect on attainment. But that is not the case with these three facilities, which contribute over 99% of the sulfur dioxide from stationary sources in this nonattainment area. The Clairton, Edgar Thomson, and Irvin facilities contribute 46%, 40%, and 13% of sulfur dioxide from all stationary sources in this nonattainment area. *See id.*, page 23.

The Department should explore additional opportunities for sulfur dioxide reductions at the U.S. Steel facilities. Such opportunities might include the use of lower-sulfur coal, a lower percentage of allowable leaking doors at the Clairton facility, and efficiency initiatives.

In the second proposed revision, the Department identified several control measures including a new stack and combined flue system at the Edgar Thomson plant. In addition, the Clairton facility is also utilizing a new Vacuum Carbonate Unit (VCU). *See* Proposed Revision, pages 8-11. The Department also asserts that the actual emissions will be reduced in the Edgar Thomson Mon Valley plant because Coke Oven Gas COGs will be used in conjunction with other fuels.

The Department has not adequately addressed the problems in the proposed revision, even though the facilities have agreed to implement additional control measures.

There are significant sources of fugitive emissions that can easily be reduced at the Mon Valley Works. For example, the Department can and should be doing something to require fewer leaking doors at the coke oven facility in Clairton. Further coke oven pressure controls, such as PROven (as implemented in Clairton Battery C) should be considered as a means of fugitive reduction in batteries that have not yet implemented the technology. Emission free coke pushing, discharging, and traveling systems, as seen in Japan's SCOPE 21 coke oven emission reduction system, can further reduce hot car and pushing emissions. *See* Installation Permit Application for the Proposed C Battery Project, Appendix D http://www.sagady.com/clairton/05212008disclosure/0052ip011app2008-02-28revised.pdf; Best Available Techniques (BAT) Reference Document for Iron and Steel Production, page 549 http://eippcb.jrc.ec.europa.eu/reference/BREF/IS_Adopted_03_2012.pdf. These controls have the added public health benefit of also reducing benzene and PM emissions, while also reducing SO_2 emissions.

Summary of the Department's Response to Comments:

In its Response to Comments document dated June 13, 2017, the Department does not offer any suggestion for requiring additional emissions reductions from these facilities. It merely asserts that "[t]he SIP includes the most feasible plan identified in order to demonstrate attainment by 2018. Future projects not implemented or quantified by this SIP will lead to continued decreases of emissions." Comment #16, page 8. The Department's response is not acceptable.

The EPA should take note that the design value for fine particulates has increased during the past two years. *See* 2017 Air Quality Annual Report, page 8 (three-year average of 13.0 micrograms per cubic meter for fine particulates for 2015-2017, which exceeds the national ambient air quality standard of 12.0 micrograms per cubic meter), http://www.county.allegheny.pa.us/uploadedFiles/Allegheny_Home/Health_Department/Resources/Data_and_Reporting/Air_Quality_Reports/2017-Air-Quality-Annual-Report.pdf, 2016 Air Quality Annual Report, page 8 (three-year average of 12.8 micrograms per cubic meter for fine particulates for 2014-2016, which exceeds the national ambient air quality standard of 12.0 micrograms per cubic meter), http://www.county.allegheny.pa.us/uploadedFiles/Allegheny_Home/Health_Department/Resources/Data_and_Reporting/Air_Quality_Reports/2016_final_AQ.pdf, 2015 Air Quality Annual Report, page 8 (three-year average of 12.6 micrograms per cubic meter for fine particulates for 2013-2015, which exceeds the national ambient air quality standard of 12.0 micrograms per

cubic meter), http://www.county.allegheny.pa.us/uploadedFiles/Allegheny_Home/Health_Department/Resources/Data_and_Reporting/Air_Quality_Reports/2016_final_AQ.pdf. While fine particulates are a different criteria pollutant than sulfur dioxide, sulfur dioxide is a precursor to fine particulates, and they are co-generated pollutants. Therefore, the worsening problem with fine particulates may be indicative of a worsening problem with sulfur dioxide.

EPA should require the Department to develop additional requirements for emissions reductions from these facilities, including the suggestions the Council made in its comments.

5. The Department Should Have Imposed Immediate Deadlines for Implementing Proposed Control Strategies, and Not Wait Until the Attainment Date.

Summary of Comments to the Department:

The attainment date was October 4, 2018. Final Rule, Findings of Failure To Submit State Implementation Plans Required for Attainment of the 2010 1-Hour Primary Sulfur Dioxide National Ambient Air Quality Standard (NAAQS), 81 Fed. Reg. 14,736 ("The statutory attainment date of October 4, 2018, applies to all areas designated nonattainment effective as of October 4, 2013, and not otherwise redesignated to attainment, regardless of the status of the plan or FIP that applies to that area.").

At least six times in the proposed plan revision, the Department did not require compliance with a number of control strategies until the attainment date, October 4, 2018. This is reflected in three statements relating to all the Mon Valley facilities:

1. "Completion of the VCU project and full operation of both the 100 and 600 upgraded units must be on or before October 4, 2018." (Proposed Revision, page 8);

2. "To further reduce SO2 emissions from COG operations, a tail gas recycling project is also planned for completion on or before October 4, 2018." (*Id.*, page 9); and

3. "Maximum short-term limits equal to or lower than the modeled critical emission values (CEVs) as listed in Table 3-1 on the following pages will be adopted on or before October 4, 2018.") (*Id.*, page 10).

In addition, this is reflected in three statements relating to the U.S. Steel's Edgar Thomson facility:

1. "Construction of a new stack and a combined flue system is planned for the Riley Boilers 1, 2, and 3. Boilers 1, 2, and 3 will exhaust emissions to the new stack, constructed to a minimum release height of 70 meters, located geographically between or near the boiler house and blast furnace 3 stoves. Boiler allowable emissions will also be reduced on an aggregate basis. Complete installation and operation of the new stack will be on or before October 4, 2018." (*Id.*, page 10);

2. "Alternatively, if equivalent or lower SO2 impacts can be demonstrated through a combination of emission limits and/or controls determined by dispersion modeling, USS may complete such installation, with ACHD approval, on or before October 4, 2018." (*Id.*, page 10); and

3. "A maximum short-term limit of 1.8 lb/hr for the rotary kiln dryer will be adopted on or before October 4, 2018." (*Id.*, page 10) (statement relates to Harsco, formerly Braddock Recovery, located on the property of the Edgar Thomson facility).

This postponement of compliance with control strategies until the exact attainment date contradicts EPA's policy relating to attainment plans. EPA requires the state permitting agency to generate at least one calendar year of compliance information, prior to the attainment date:

> ***Consistent with its approach for other pollutants***, the EPA expects attainment plans to require sources to comply with the requirements of the attainment strategy at least 1 calendar year before the attainment date. Thus, for areas that were designated with an effective date of October 2013, with an attainment deadline that is as expeditiously as practicable, but no later than October 2018, ***the EPA would expect states to require sources to begin complying with the attainment strategy in the SIP no later than January I, 2017***. By this means, ***the plans would be able to provide at least l 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***.

EPA, Guidance for 1-Hour SO_2 Nonattainment Area SIP Submissions (April 2014), https://www.epa.gov/sites/production/files/2016-06/documents/20140423guidance_nonattainment_sip.pdf, pages 10-11 ("EPA Guidance"). While the Department failed to meet this deadline of January 1, 2017, it could mitigate this delay by imposing controls on the relevant facilities immediately after the effective date of the final revision.

Although EPA has discretion concerning the approval of plans with varying compliance dates, it cautions that it might not be able to make an attainment determination (that is, verify actual past attainment), if the monitors do not yield a design value that meets the standard on the attainment date. *Id.*, page 11.

While plan revisions could potentially be accomplished in a very streamlined manner for control strategies that have recently taken effect, this would still have to be premised on the notion that "the control strategy will result in attainment once 3 years of data that reflect those controls are available." *Id.* Given the high complexity of the airshed in the Mon Valley and the various factors affecting the ambient level of sulfur dioxide, it seems highly unlikely that this

standard could be met without extensive data collected over a long period of time. EPA expects at least one calendar year of data, and the Department should provide it.

The Department should impose immediate deadlines for implementing proposed control strategies, and not wait until the attainment date.

In the second proposed revision, the Department has set some of the new control implementation dates in advance of the attainment date of October 4, 2018.

The Department has not adequately addressed the problems in the proposed revision. While some of the implementation dates have been changed to October 6, 2017, the Vacuum Carbonate Units at the Clairton Plant continue to have an implementation date of October 4, 2018. This postponement of compliance with control strategies until the exact attainment date contradicts EPA's policy relating to attainment plans. EPA requires the state permitting agency to generate at least one calendar year of compliance information, prior to the attainment date. *See* EPA Guidance, pages 10-11. The Department should impose immediate deadlines for implementing proposed control strategies, and not wait until the attainment date. EPA should not approve this revision given the lack of adequate compliance information.

Summary of the Department's Response to Comments:

In its Response to Comments document dated June 13, 2017, the Department summarily stated 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. Comment #14, page 7. 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.

The Department also stated that "[i]t is also anticipated that concentrations will be low enough in order to show one year of monitored attainment for year 2018, if not a design value for 2016-2018 below the NAAQS, for all monitor sites in the nonattainment area (NAA)." *Id.* Again, it cited no evidence in support of this assertion. (Presumably, it was relying on its modeling).

But a rough preliminary evaluation of ambient air quality monitoring data for the three-year period 2016-2018 suggests that Allegheny County will be in nonattainment, due to data at the Liberty monitor (0064). It appears that the design value will be 101 ppb, based on the average of the following fourth-highest maximum hourly values for 2016, 2017, and 2018:

11/27/2016: 64 ppb
08/15/2017: 116 ppb
05/12/2018: 122 ppb (assuming more than 300 days of valid data)

(These figures are based on data through the third quarter of 2018, downloaded from EPA's website, https://www.epa.gov/outdoor-air-quality-data/download-daily-data).

Accordingly, EPA should provide an evaluation whether the design value for 2016-2018 will in fact be below the NAAQS, as anticipated by the Department. 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 Department should revise the state implementation plan to require additional emissions reductions sufficient to meet the standard. (See Comment above regarding additional emissions reductions). .

6. <u>The Department Should Reject an Extended Averaging Time for Hydrogen Sulfide Emissions from the Vacuum Carbonate Unit (Clairton Facility), Which Would Require Another Plan Revision.</u>

<u>Summary of Comments to the Department</u>:

In the proposed revision, the Department notes the initiation of a 100 and 600 Vacuum Carbonate Unit (VCU) to reduce the content of hydrogen sulfide in the downriver coke oven gas (COG) utilized at all the Mon Valley Works plants. Proposed Revision, page 8. The 100 VCU upgrade was completed on April 20, 2016, leading to significant decreases in sulfur content in COG. *Id.* This is demonstrated by a graph demonstrating the hydrogen sulfide content of the downriver COG, for all of calendar year 2016. *Id.* at 9, Figure 3-1 (Hydrogen sulfide is used as a proxy for SO_2 emissions).

Without mentioning whether an emissions limitation has been set for this unit, the Department states the facility may have the option of either a 24-hour or a 30-day extended averaging time limit.

> ***In accordance with EPA's SIP guidance, USS may apply to ACHD for either a 24-hour or 30-day extended averaging time for grains of H2S per 100 dscf of COG***. Approval of an extended averaging time will depend on review by ACHD, along with incorporation of the extended time into a Title V operating permit.

Id. (emphasis added). A 30-day extended averaging time limit could result in allowing high levels of emissions of sulfur dioxide, which could contribute to continuing nonattainment.

EPA's general policy is that "averaging times in SIP emissions limits should not exceed the averaging time of the applicable NAAQS that the limit is intended to help attain." EPA Guidance, page 22. After reviewing public comment on its proposed guidance on plans for sulfur dioxide, EPA retained this traditional approach, while recognizing that "it may be possible in specific cases for states to develop control strategies that account for variability in 1-hour emissions rates through emission limits with averaging times that are longer than 1 hour, using averaging times as long as 30-days, but still provide for attainment of the 2010 SO2 NAAQS." *Id.*, page 24.

Still, a state must meet numerous technical requirements before extending an averaging time for sulfur dioxide. *See id.,* pages 24-40, Appendix C. Any such emissions limit would require a downward adjustment to compensate for the loss of stringency. *Id.*, page 25.

Most importantly, this would have to be done through a plan submittal, and the Department could not simply do it through an installation permit:

> ***The SIP submittal would provide the justification that the adjusted longer term average limit in the SIP provides comparable stringency as would be obtained with a 1-hour average limit at the modeled critical emission value***, along with ***any additional information***, particularly regarding prospective emissions variability, that addresses the adequacy of the longer term limit for providing for attainment of the NAAQS.

See id., page C-1, Appendix C - Example Determination of Longer Term Average Emission Limit (emphasis added); *Id.*, page 26 (the state "would submit modeling demonstrating that a hypothetical 1-hour average limit at the critical emission value would provide for attainment, supplemented by a case-specific demonstration that the actually adopted longer term limit reflects a comparable degree of stringency as the hypothetical 1-hour limit at the critical emission value"); *Id.*, page 27 ("In conjunction with a [sic] states' normal obligation to demonstrate that their attainment plans suitably provide for attainment, the EPA believes that air agencies that use longer term average limits should provide additional justification for the application of such limits.").

As a matter of policy, the Council believes there should be no averaging period at all, given the complexity of the airshed.

The Department should reject an extended averaging time for hydrogen sulfide emissions from the Vacuum Carbonate Unit (Clairton facility), which would require another plan revision.

In the second proposed revision, the Department develops a long-term averaging approach over a 24-hour and 30-day period for the 100 and 600 VCU at the Clairton facility, as well as the COG lines. *See* Proposed Revision, page 8-9. The Department asserts that it is justified in allowing 24-hour and 30-day averaging because sulfur dioxide is a fairly easy compound to model. However, the Department also indicates that modeling itself is difficult in the Mon Valley because of the complex terrain and meteorological conditions. *See* Proposed Revision, page 1.

In addition, the Department added a discussion of the critical emission value (CEV) in Appendix D. The Department uses this CEV in order to justify its position that long term averaging is appropriate for the VCUs and COG lines. *See* Proposed Revision, pages 9, 13.

A. Long-Term Averaging Based on Calculated Critical Emissions Value

The Department has not adequately addressed the problems in the proposed revision.

The Department has not provided calculations regarding a "critical emissions value" for sulfur dioxide. This is important because EPA refers to a long term emission limit to be comparably stringent to a 1-hour limit at the critical emission value:

> In conjunction with a states' [sic] normal obligation to demonstrate that their attainment plans suitably provide for attainment, the EPA believes that air agencies that use longer term average limits should provide additional justification for the application of such limits. The EPA expects to consider the following factors in evaluating the adequacy of plans with limits based on longer averaging times: (1) ***whether the numerical value of the mass emissions limit averaged over a longer time is comparably stringent to a 1-hour limit at the critical emission value***; and (2) whether the longer term average limit, potentially in combination with other limits, can be expected to constrain emissions sufficiently so that any occasions of emissions above the critical emission value will be limited in frequency and magnitude and, if they occur, would not be expected to result in NAAQS violations.

See EPA Guidance Document, pages 27-28 (emphasis added).

The first step is to determine a source's critical emission value. *See* EPA Guidance, Appendix C. The Department apparently developed a CEV of 33.88 lbs/hr for the Clairton Battery 20 Underfiring. In order to justify long-term averaging, the Department must show that the source would meet the 1-hour critical emission value. If it meets this value, it might be allowed to use long-term averaging. However, the Department does not show how it calculated this figure.

The Department should explicitly state these values in order for the EPA and public to accurately assess whether long term averaging is appropriate in this case.

B. Long-Term Averaging in General

The Department asserts that it has established a 30-day average emissions limit that is of "comparable stringency" to a 1-hour value, based on its calculated CEV of 33.88 lbs/hr.

However, the Guidance Document sets forth several steps in order to establish "comparable stringency." *See* EPA Guidance Appendix C. Such steps include determining a specific source's CEV through dispersion modeling, compiling data to show the distribution of emissions expected once the attainment plan is implemented, determining the 99th percentile for both the 1-hour and 30-day averages, computing the ratio between those two 99th percentile values, and multiplying the ratio by the "comparable stringency" value to determine if the 30-day average is of "comparable stringency" to the 1-hour value. *See* EPA Guidance Appendix C.

The Department does not show each of these steps in its proposed plan revision, or in any of its appendices. The Department should explicitly state these values in order for the EPA and public to accurately assess whether there is "comparable stringency."

In addition, the Department does not have enough data for its B Line VCU upgrade to determine "comparable stringency" values. *See* Proposed SIP Revision, Appendix D, Figure D-4-3. The Department only has eight (8) months of data for this particular control. *See id.*, *page* 4. This is an inadequate amount of data to model. The Department indicates that it projected these eight months of data out to 3-5 years, which is the appropriate amount of data to use for long-term "comparable stringency" modeling. *See id.* Due to the inadequacy of this data set, combined with the unpredictable and complicated meteorological conditions of the Mon Valley, the Department should either use actual VCU data from a comparable site with 3-5 years of operating data, or forego long-term modeling altogether.

Summary of the Department's Response to Comments:

In its Response to Comments document dated June 13, 2017, the Department does not explain how it calculated the data, and simply points to the results of the calculations:

> The modeled CEVs as listed in Tables 3-1 and 3-3 were used as the bases for the longer-term averaging and adjustment ratios. The values provided in Appendix D are the results of calculations done via spreadsheet using several thousand records of data. The results given in Appendix D are an appropriate summary of the steps required for determination of variability and the use of longer-term averaging.

Comment #11, page 6. Moreover, it appears that EPA does not have the emissions data to evaluate the frequency and magnitude of future exceedances of the CEVs:

> EPA does not have the emissions data to make quantitative estimates of the expected frequency or magnitude of emissions exceeding the CEVs, but EPA believes, particularly with the application of the 24-hour supplemental limits, that these occasions are likely to be modest in frequency and magnitude

Proposed Rule, 83 Fed. Reg. 58,206, 58,215 (col. 1) (November 19, 2018), https://www.federalregister.gov/d/2018-25079/p-74). Nevertheless, "EPA proposes to find that the emission limits with these longer term averaging times were appropriately set in accordance with EPA's 2014 SO2 Nonattainment Guidance and are sufficient for the Allegheny Area to attain the 2010 SO2 NAAQS." *Id.* at 58,215 (col. 3).

Accordingly, EPA should require the Department to provide a meaningful and better explanation of the calculations and analysis. The unpredictable and complicated meteorological conditions of the Mon Valley could cause potential violations of the sulfur dioxide standard.

7. <u>The Department Should Provide Detailed Contingency Measures</u>.

<u>Summary of Comments to the Department</u>:

In the section of the Proposed Revision relating to Contingency Measures, the Department states that "the ACHD will work to ensure that "affected sources implement appropriate control measures as expeditiously as practicable" so that the SO_2 NAAQS can be met by the attainment date." Proposed Revision, page 28. This is not an adequate contingency measure under the statute or under EPA's guidance document.

The Clean Air Act requires a revision of a State Implementation Plan to include contingency measures that will take effect without further action of the state permitting agency or EPA, if the state fails to attain the national ambient air quality standard by the attainment date:

> (9) Contingency measures
>
> ***Such plan shall provide for the implementation of specific measures to be undertaken if the area fails*** to make reasonable further progress, or ***to attain the national primary ambient air quality standard by the attainment date*** applicable under this part. Such measures ***shall be included in the plan revision as contingency measures to take effect in any such case without further action by the State or the Administrator***.
>
> Section 172(c)(9), 42 U.S.C. §7502(c)(9) (emphasis added).

In its guidance document, EPA states that "it would be unlikely for an area to implement the necessary emission controls yet fail to attain the NAAQS," because the control measures for SO_2 are less prone to uncertainty, as compared with the control measures for other criteria pollutants. EPA Guidance, page 41. Accordingly, EPA identifies the following contingency measures for sulfur dioxide plans:

> Therefore, for SO2 programs, the EPA has explained that "contingency measures" can mean that the air agency has a ***comprehensive program to identify sources of violations of the SO2 NAAQS*** and ***to undertake an "aggressive" follow-up for compliance and enforcement***, including ***expedited procedures for establishing enforcement consent agreements pending the adoption of the revised SIP***.

Id., pages 41-42.

To comply with this guidance document, the Department should describe (1) its comprehensive program to identify sources of violations of the SO_2 standard, (2) its comprehensive program to undertake an "aggressive" follow-up for compliance and

enforcement, and (3) its expedited procedures for establishing enforcement consent agreements pending the adoption of a revised plans.

The Department should provide a more specific description of its contingency measures.

In the second proposed revision, the Department added language indicating that it would identify source violations, require an audit report from those sources, complete an evaluation and consultation period, and if necessary, implement additional control measures to abate a violation. However, the Department does not assert what these specific control measures would be. *See* Proposed Revision, pages 31-33.

The Department has not adequately addressed the problems in the proposed revision. The statute requires that the measures be specific enough to take effect without further action by the Administrator. *See* 42 U.S.C. §7410(c)(9). The Department has not met this requirement.

The proposed revision has not provided detail regarding *how* possible future violations will be addressed. *See* EPA's Comments, dated April 6, 2017, page. 4, comment 9. EPA indicated that the Department should describe *how* such contingency measures would operate. This indicates that the Department should be more *specific* about its contingency measures, as required by the statute. *See* 42 U.S.C. §7410(c)(9). The Department asserts that future violations will be identified and monitored, after which additional controls may be implemented, if necessary. *See* Proposed Revision page 31. Without a comprehensive description of specific control measures, the Department's plan falls short of the statutory requirement. *See* 42 U.S.C. §7410(c)(9).

The Department is only paying lip-service to the EPA Guidance Document, which states that contingency measures should include "a comprehensive program to identify sources of violations of the SO2 NAAQS and to undertake an "aggressive" follow-up for compliance and enforcement." *See* EPA Guidance, page 42. However, EPA also states that "this approach to contingency measures for SO2 would not preclude an air agency from requiring additional contingency measures that are enforceable and appropriate for a particular source category." *Id.* (emphasis added). Therefore, the Department can and should do more than is described in its contingency measures.

It is notable that in the past, the Department has included more specific contingency measures, than it is doing now. In the context of a contingency plan under section 175A for a redesignation of a sulfur dioxide nonattainment area, the Department included several specific control mechanisms, including lowering the hydrogen sulfide grain loading for Coke oven gas, specific plan limits for types or amounts of high sulfur fuel, and lower SO2 emission limits. *See* 69 Fed. Reg. 17,374, 17,379 (April 2, 2004) (Proposed Rule); *See also* 69 Fed. Reg. 43,522, 43,523 (July 21, 2004)(Final Rule). In the proposed revision, it is unreasonable for the Department to not include specific measures and controls in this proposed revision, when it considered it necessary to include such measures in a nonattainment plan just thirteen years ago. The Department should identify specific measures in order to comply with the actual language of the Clean Air Act, which requires that "**specific measures** to be undertaken if the area fails to make reasonable further progress…" 42 U.S.C. 7410(c)(9).

Summary of the Department's Response to Comments:

In its Response to Comments document dated June 13, 2017, the Department makes the conclusory assertion that "[c]ontingency Measures for this SIP define a detailed process for identifying the source(s) of violation of the SO2 NAAQS and aggressively following up with implementing corrective actions," and it does not provide more specific contingency measures. Comment #65, page 27-28.

Even assuming that the Department has what the guidance document characterizes as "an 'aggressive' follow-up for compliance and enforcement," it is unclear what this would involve in the present case. If it merely means that the Department will seek to impose monetary penalties on an owner of a facility in the future, this is not necessarily a meaningful contingency measure, if it is a contingency measure at all. While the Department is currently litigating an enforcement action against U.S. Steel for a penalty of over $1 million (an evidentiary hearing was held this month), it remains to be seen whether it will result in any meaningful controls of benefit to the public. *See* Enforcement Order dated June 28, 2018, https://www.alleghenycounty.us/uploadedFiles/Allegheny_Home/Health_Department/Programs/Air_Quality/ACHD-USSteel-Enforcement-Order-062818.pdf,

Accordingly, EPA should require more of the Department than a *pro forma* commitment to follow up with an enforcement action in the event of nonattainment with the standard for sulfur dioxide.

8. The Department Should Clarify its Misinterpretation That It Need Not Show Reasonable Further Progress Toward Attainment, Simply Because It is Not Seeking an Extension of an Attainment Date.

Summary of Comments to the Department:

The Department does not provide a section dedicated to Reasonable Further Progress. In the section regarding Contingency Measures, it makes the assertion that "RFP documentation is not required for this plan since an extension of attainment date is not necessitated." Proposed Revision, page 28. This is a misinterpretation that the Department should correct.

> The statute defines Reasonable Further Progress as follows:
>
> **(1) Reasonable further progress.**
>
> The ***term "reasonable further progress" means such annual incremental reductions in emissions*** of the relevant air pollutant as are required by this part ***or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date***.

Section 171(1), 42 U.S.C. §7501(1) (emphasis added). This definition is not limited to instances in which a state permitting agency is seeking an extension of an attainment date.

The Department's misinterpretation is not supported by the language of the statutory requirement to implement Contingency Measures:

> (9) Contingency measures
>
> ***Such plan shall provide for the implementation of specific measures to be undertaken if the area fails to make reasonable further progress***, or to attain the national primary ambient air quality standard by the attainment date applicable under this part. Such measures shall be included in the plan revision as contingency measures to take effect in any such case without further action by the State or the Administrator.

Section 172(c)(9), 42 U.S.C. §7502(c)(9) (emphasis added). EPA's guidance document does not support the misinterpretation, either. *See id.*, pages 53-55.

This matters because the requirement to demonstrate Reasonable Further Progress under the statute and the guidance documents underscores the need to require the immediate implementation of control strategies, rather than wait until the attainment date. (*See* discussion regarding deadlines for control strategies above).

The Department should clarify its misinterpretation that it need not show Reasonable Further Progress toward attainment, simply because it is not seeking an extension of an attainment date.

In the second proposed revision, the Department states that point sources controls were not quantified for the plan because such controls take time to implement, and many controls are still under construction. *See* Proposed Revision, pages 31-32. The Department asserts that overall ambient quality data shows that there is a decrease in SO2 overall, even without completed point source controls.

The Department did not adequately address the problems in the proposed revision. The Department correctly states that "reasonable further progress" contemplates "annual incremental reductions in emissions." *See* Proposed Revision, page 31. However, the data provided in this section only demonstrates overall ambient reduction in sulfur dioxide at the Liberty monitor. *Id.* at 32. The data would have to show *annual incremental reductions in sulfur dioxide 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 sulfur dioxide at a monitoring site. *See* Proposed Revision, page 32. 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.*

Summary of the Department's Response to Comments:

With respect to reasonable further progress, in its Response to Comments document dated June 13, 2017 the Department makes the assertion that:

> "the definition is generally less pertinent to pollutants like SO2 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 SO2, 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.

Comment #67, page 28-29 (emphasis added). The Department'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.

The argument is flawed on another account. The assertion that emissions reductions cannot be double-counted by applying them to both the control strategy and reasonable further progress is not a defense to not doing single-counting of additional emissions reductions from means other than VCU upgrades, such as limiting leaking doors. (See Comment on additional emissions reductions, above). 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.

Accordingly, EPA should require more of the Department by way of reasonable further progress, and require additional emissions reductions above and beyond those achievable through recent projects.

Thank you for your consideration of the comments of the Council.

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