

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 SO₂ Nonattainment Area (2010 Standards)

June 6, 2017

Written Comments by Clean Air Council

Clean Air Council (“the Council”) submits these written comments regarding the Proposed Revision to the Allegheny County Portion of the Pennsylvania State Implementation Plan for the Allegheny, PA SO₂ Nonattainment Area, dated May 1, 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 8,000 paying members and 30,000 activists.

These written comments will supplement the verbal testimony provided by the Council at the public hearing on June 1, 2017.

These comments include comments originally submitted in response to the Allegheny County Health Department’s (“Department”) first proposed revision, dated March 2, 2017.

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

Council’s First Comments:

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, http://www.achd.net/air/publiccomment2016/ANP2017_final_7_14.pdf. To date, the Department has not adequately addressed those concerns.

Department's Second Proposed Revision:

The Department has not indicated an intention to install a monitoring station near Springdale.

Council's Second Comments:

The Department has not adequately addressed the problems in the proposed revision. The Department's continuing failure to address the deficiency means that the Department's monitoring data may not be fully representative of air quality in the nonattainment area.

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

Council's First Comments:

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 sulfur dioxide 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.").

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 SO₂ 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.

Department's Second Proposed Revision:

The Department has not indicated an intention to reactivate the monitor at Glassport.

Council's Second Comments:

The Department has not adequately addressed the problems in the proposed revision. The Department's continuing failure to reactivate the Glassport monitor means that the Department's monitoring data may not be fully representative of air quality in the nonattainment area.

3. The Department Should Install an Additional Monitor Near the Grandview Golf Course, Which Would Improve the Reliability of Air Modeling Results.

Council's First Comments:

The maximum modeled SO₂ level was located on the Grandview golf course, in North Braddock. Proposed Revision, page 20. The level at this location was higher than the level at the nearest SO₂ monitoring station approximately 2000 feet away in North Braddock, to the southwest. In order to capture the maximum SO₂ concentration downwind from the industrial facilities, the Department should install an additional monitor near the Grandview golf course property.

The Department conducted a performance evaluation of the dispersion model for only one site, the Liberty monitor. See Appendix G. The Department did this because the Liberty monitor was the only monitor showing nonattainment. A performance evaluation at an additional monitor near the Grandview golf course would provide improved data for evaluating attainment with the national ambient air quality standard. It would also provide better data for evaluating the effectiveness of future models.

The Department has acknowledged that the complex terrain of the Mon Valley makes air modeling more difficult. Being able to conduct performance testing at additional monitored locations would increase the confidence that a model is able to perform well under various conditions and in various areas. This is especially true where the maximum modeled SO₂ impact is located far away from the air monitor reflecting nonattainment, as in the present case.

The Department should install an additional monitor near the Grandview golf course, which would improve the reliability of air modeling results.

Department's Second Proposed Revision:

In the second proposed revision, the Department did not indicate that a monitor would be installed near the Grandview golf course.

Council's Second Comments:

The Department has not adequately addressed the problems in the proposed revision. The Department's monitoring data may not be fully representative of air quality in the nonattainment area.

4. The Department Should Correct its Exclusion of Various Emissions from the Irvin Facility from Air Modeling, Including Coke Oven Gas Flaring.

Council's First Comments:

In its screening analysis, the Department screened out intermittent sources under the rationale that the sources involve seasonal or emergency processes that would not occur frequently or at full capacity, resulting in an "unachievable level of emissions at full operation." See Appendix E, pages 21-22. Some of these sources may have been screened out improperly or incorrectly excluded from the emissions inventory altogether.

Coke Oven Gas flaring emissions at Irvin are not included in the detailed inventory of emissions that is required by regulation. This is not consistent with 40 C.F.R. §51.114 (a) (requiring a "detailed inventory of emissions from point and area sources"). Emissions reductions are asserted in Appendix E, but left unquantified. This is not consistent with 40 C.F.R. §51.114 (b) (requiring a "summary of emission levels projected to result from application of the new control strategy"). These emissions were linked to impacts of 23.8 ppb in 2014 and an average impact of 11.9 ppb from 2012-2013. See Appendix E, pages 21-22. They should be quantified in the emissions inventory and emissions reductions should also be quantified.

The Department excluded the Edgar Thomson Blast Furnace Miscellaneous emissions due to highly variable emission rates, and weather impacting rail thawing. See Appendix E, pages 21-22. These emissions were linked to impacts of 28.8 ppb to 48.7 ppb, from 2012-2014. See *id.*, page 21. The Department asserts that the "[h]ighest impacts from these sources are also at the fence line of the Edgar Thomson property, with little transport beyond the fence line." See *id.* But these impacts were not modeled, so transport cannot be determined. The Department should model the impacts to evaluate whether transport beyond the fence line will occur.

The Department should correct its exclusion of various emissions from the Irvin facility from air modeling, including coke oven gas flaring.

Department's Second Proposed Revision:

The Department did not revise this section. See Proposed Revision, Appendix E, pages 21-22.

Council's Second Comments:

The Department has not adequately addressed the problems in the proposed revision. It has not established that these emissions are included in the modeling, or that these emissions are zero when the rest of the facility is operating at full capacity.

The Department does not assert that these units cannot run when the facility is operating at full capacity. It only asserts that they "cannot physically operate at full capacity while other processes are at full capacity," or that they "operate only during seasonal, emergency, or excess conditions." Proposed Revision, Appendix C, page 21. The Department has not eliminated the possibility that these sources could run when the facility is operating at full capacity, even if at a lower capacity. See *id.*, pages 21-22. By excluding these sources from the modeling altogether, the Department may be underrepresenting emissions within the nonattainment area. See *id.*

5. 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.

Council's First Comments:

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 PM_{2.5} (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.

Department’s Second Proposed Revision:

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 set forth in the “weight of evidence” section. See Proposed Revision, pages 39-41.

Council’s Second Comments:

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

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

Council's First Comments:

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.

Department's Second Proposed Revision:

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

Council's Second Comments:

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 sulfur dioxide emissions.

7. The Department Should Impose Immediate Deadlines for Implementing Proposed Control Strategies, and Not Wait Until the Attainment Date.

Council's First Comments:

The attainment date is October 4, 2018 – less than 18 months from now. 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 does 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 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.

EPA, Guidance for 1-Hour SO₂ 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.

Department's Second Proposed Revision:

In the second proposed revision, the Department has now required compliance with some control measures by October 2017, instead of by the attainment date of October 4, 2018. However, it has not done this for all control measures, including the Vacuum Carbonate Unit (VCU) project at the Clairton facility.

Council's Second Comments:

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

While some of the implementation dates have now been changed to October 2017, the Vacuum Carbonate Unit project at the Clairton facility continues to have an implementation date of October 4, 2018. This postponement of compliance with control strategies until the exact attainment date violates 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.

8. 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.

Council's First Comments:

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 SO₂ 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.

Department's Second Proposed 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 Vacuum Carbonate Unit (VCU) project at the Clairton facility, and Coke Oven Gas lines. See Proposed Revision, page 8-9, Appendix D-4. The Department asserts that it is justified in allowing 24-hour and 30-day averaging because sulfur dioxide is a fairly easy gas 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 to justify its position that long-term averaging is appropriate for the VCU and Coke Oven Gas lines. See Proposed Revision, pages 9, 13.

Council's Second Comments

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 requires that a long-term emission limit 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.

9. **The Department Should Provide a More Specific Description of its Contingency Measures.**

Council's First Comments:

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 SO₂ 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 SO₂ 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 SO₂ 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.

Department's Second Proposed Revision:

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 ultimately involve. See Proposed Revision, pages 31-33.

Council's Second Comments:

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 stated 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 only 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.* Therefore, the Department can and should do more than is described in its proposed revision.

It is notable that in the past, the Department has included more specific contingency measures, than it is requiring 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 measures, including lowering the hydrogen sulfide grain loading for coke oven gas, specific plan limits for types or amounts of high sulfur fuel, and lower sulfur dioxide 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, when it included specific contingency measures in a sulfur dioxide maintenance plan thirteen years ago. The Department should identify specific measures 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).

10. 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.

Council’s First Comments:

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.

Department's Second Proposed Revision:

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 sulfur dioxide overall, even without completed point source controls.

Council's Second Comments:

The Department has not adequately addressed 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. Adding decreases in ambient concentrations to decreases in source emissions is like adding 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.*

11. The Department Should Eliminate its Discussion of “Weight of Evidence.”

Department’s Second Proposed Revision:

In its proposed revision, the Department provides information about additional control measures that were not quantified in this proposed revision, monitored data and emission trends, source shutdowns claimed to lead to reductions in emissions, declining population trends, and National Clean Fuel Vehicle Programs. The title of this section is “Weight of Evidence.” *See Proposed Revision at 38-44, Section 9.*

Council’s Second Comments:

The Department dedicates a significant part of its proposed revision to a discussion of “weight of evidence.” But it does not define this concept or describe how it applies in the context of this proposed revision. EPA’s Guidance document says nothing about “weight of evidence” in sulfur dioxide plan revisions. *See EPA Guidance, pages 1 - 69.* The fact that EPA has defined and applied the concept of “weight of evidence” in guidance documents for attainment demonstrations for other pollutants, but did not do this for sulfur dioxide, indicates that EPA does not intend to apply a “weight of evidence” analysis to a sulfur dioxide attainment demonstration. Therefore, the Department should delete the “weight of evidence” section from the proposed revision.

For certain pollutants (particulates, ozone, and regional haze), EPA in some cases allows for the exclusion of data showing nonattainment in favor of data showing attainment, based on the “weight of evidence”:

What Is Entailed In A Weight Of Evidence Determination?

As discussed in Section 2, augmenting a modeled attainment test with supplemental analyses may yield a conclusion differing from that indicated by the modeled attainment test results alone. Past modeling analyses have shown that future design value uncertainties of 2-4 ppb for ozone⁸⁹, can result from use of alternate, yet equally appropriate, emissions inputs, chemical mechanisms, and meteorological inputs (Jones, 2005; Sistla, 2004). Because of this uncertainty, ***EPA believes that weight of evidence determinations can be used in some cases to***

demonstrate attainment conclusions that differ from the conclusions of the model attainment test.

Few studies have been done to examine similar uncertainties for PM2.5. Based on recent modeling analyses, a similar range of +/- 2-4% of the NAAQS seems appropriate for PM2.5. That translates to roughly 0.3-0.6 ug/m³ for the annual PM2.5 standard. Consequently, the recommended weight of evidence range for PM2.5 is nominally +/- 0.5 ug/m³.

U.S. EPA, Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5, and Regional Haze, page 105 (April 2007) (emphasis added). The premise of this approach is that there are uncertainties in modeling for particulates and ozone. *See id.* EPA has also adopted this approach for regional haze, but only because progress goals for regional haze address trends in air quality, in contrast to progress goals for the national ambient air quality standards, which are tied to an absolute level of air quality. *Id.* at 107.

In its most recent guidance document relating to this subject, EPA reiterated that a “weight of evidence” analysis involves a conclusion of future attainment status despite results indicating nonattainment:

A written description as to why the full set of evidence leads to a ***conclusive determination regarding the future attainment status of the area that differs from the results of the modeled attainment test alone.***

U.S. EPA, Draft Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2s, and Regional Haze, page 191 (December 3, 2014) (emphasis added).

Nowhere in these guidance documents does EPA contemplate extending the “weight of evidence” approach to attainment demonstrations for sulfur dioxide. More importantly, EPA does not mention a “weight of evidence” concept in its guidance document for sulfur dioxide attainment demonstrations. *See EPA Guidance, pages 1-69.*

Clearly, EPA did not intend to extend this approach to sulfur dioxide. When it softened the requirements for state air permitting agencies with respect to reasonable further progress and contingency measures for sulfur dioxide, it assumed there is a “discernible relationship between emissions and air quality.” *See General Preamble for Future Proposed Rulemakings, 57 Fed. Reg. 13,498, 13,547 (April 16, 1992)* (recognizing a “single ‘step’” between pre-control nonattainment and post-control attainment, for reasonable further progress, and recognizing “a comprehensive program to identify sources of violations of the sulfur dioxide NAAQS and to undertake an aggressive follow-up for compliance and enforcement,” for contingency measures). The Department cannot have it both ways. It cannot avail itself of softened

requirements for “reasonable further progress” and “contingency measures” (which the Department has not met, in any case), and then apply a “weight of evidence” approach under the rationale that its attainment demonstration is uncertain.

In the proposed revision, the Department does not even propose to apply the “weight of evidence” approach for the reasons contemplated in those other guidance documents -- to disregard data indicating nonattainment. In its section titled “Additional Controls in the NAA,” the Department simply states that “the following controls or scenarios have not been quantified for this SIP.” See Proposed Revision, page 38. Therefore, this section serves no meaningful purpose.

The Department should remove the “weight of evidence” section.

12. Conclusion.

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



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