

(g) Notification to the manufacturer by examiner. Within a 7-day period following the receipt by the examiner of the allegations and other pertinent material, the examiner will transmit a registered letter of notification to the manufacturer informing him or her of the—

(1) Specific allegations.

(2) Directive of the Director requiring the holding of a public hearing on the allegations.

(3) Examiner's decision to hold the public hearing at a specific time, date, and place that will be not earlier than 30 days from the date of the letter of notification.

(4) Ultimate authority of the Director to suspend or revoke the certificate of authority if the record developed at the hearing so warrants.

(5) Right to—

(i) A full and fair public hearing.

(ii) Be represented by counsel at the hearing.

(iii) Request a change in the date, time, or place of the hearing, for purposes of having reasonable time in which to prepare the case.

(iv) Submit evidence and present witnesses in his or her own behalf.

(v) Obtain at no cost a verbatim transcript of the proceedings, upon written request filed before the commencement of the hearing.

(h) Public hearing by examiner.

(1) At the time, date, and place designated in accordance with g(3) of this section, the examiner will conduct the public hearing.

(i) A verbatim record of the proceedings will be maintained.

(ii) All previous material received by the examiner will be introduced into evidence and made part of the record.

(iii) The Government may be represented by counsel at the hearing.

(2) Subsequent to the conclusion of the hearing, the examiner will make specific findings on the record before him or her concerning each allegation.

(3) The complete record of the case will be forwarded to the Director.

(i) Action by the Director.

(1) The Director will review the record of the hearing and either approve or disapprove the findings.

(2) Upon arrival of a finding of breach of quality control policies, the manufacturer will be so advised.

(3) After review of the findings, the certificate of authority may be revoked or suspended. If the certificate of authority is revoked or suspended, the Director will—

(i) Notify the manufacturer of the revocation or suspension.

(ii) Remove the manufacturer from the list of certified manufacturers.

(iii) Inform the AAFES and the Defense Logistics Agency-Troop Support of the action.

(j) Reinstatement of certificate of authority. Upon receipt of adequate assurance that the manufacturer will comply with quality control policies, the Director may reinstate a certificate of authority that has been suspended or revoked.

#### **Subpart D—License and Manufacture of the Service Flag and Service Lapel Button**

##### **§ 507.17 Authority to manufacture.**

(a) The Secretary of Defense has designated the Secretary of the Army to grant certificates of authority for the manufacture and commercial sale of Service flags and Service lapel buttons.

(b) Any person, firm, or corporation that wishes to manufacture the Service flag or lapel button must apply for a certificate of authority to manufacture from TIOH.

##### **§ 507.18 Application for licensing.**

(a) Applicants who want to manufacture and sell Service flags or Service lapel buttons should contact the Director, The Institute of Heraldry, 9325 Gunston Road, Suite 113, Fort Belvoir, VA 22060–5576 to obtain an agreement to manufacture, drawings, and instructions for manufacturing the Service flag and Service lapel button.

(b) Certificates of authority to manufacture Service flags and Service lapel buttons will be valid for 5 years from the date of issuance, at which time applicants must reapply for a new certificate of authority.

**Brenda S. Bowen,**

*Army Federal Register Liaison Officer.*

[FR Doc. 2020–12176 Filed 6–11–20; 8:45 am]

**BILLING CODE 5061–AP–P**

## **ENVIRONMENTAL PROTECTION AGENCY**

### **40 CFR Part 52**

**[EPA–R03–OAR–2020–0157; FRL–10010–42–Region 3]**

#### **Air Plan Approval; Pennsylvania; Allegheny County Area Attainment Plan for the 2012 Fine Particulate Matter National Ambient Air Quality Standard**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to approve elements of a state implementation plan

(SIP) revision submitted by the Pennsylvania Department of Environmental Protection (PADEP) on behalf of the Allegheny County Health Department (ACHD) to address Clean Air Act (CAA or “the Act”) requirements for the 2012 annual fine particulate matter (PM<sub>2.5</sub>) national ambient air quality standards (NAAQS or “standards”) in the Allegheny County Moderate PM<sub>2.5</sub> nonattainment area (“Allegheny County area”). The SIP revision contains the “Attainment Demonstration for the Allegheny County, PA PM<sub>2.5</sub> Nonattainment Area, 2012 NAAQS,” submitted on September 30, 2019 (also referred to as “the Allegheny County PM<sub>2.5</sub> Plan” or simply “the plan”). EPA is proposing to fully approve the following elements of the Allegheny County PM<sub>2.5</sub> Plan: The base year emissions inventory, the particulate matter precursor contribution demonstration, the reasonably available control measures/ reasonably available control technology (RACM/RACT) demonstration, the attainment demonstration, the air quality modeling demonstration supporting attainment by the attainment deadline, the reasonable further progress (RFP) demonstration, and the a demonstration of interim quantitative milestones to ensure timely attainment. EPA is proposing to conditionally approve the following elements of this Allegheny County PM<sub>2.5</sub> Plan SIP revision: The contingency measures and the motor vehicle emission budget (MVEB) elements of the plan. PADEP commits, on behalf of ACHD, to submit a supplemental SIP revision to remedy those portions of the plan for which EPA is proposing conditional approval within twelve months of EPA's final conditional approval action. This action is being taken under the CAA.

**DATES:** Written comments must be received on or before July 13, 2020.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA–R03–OAR–2020–0157 at <https://www.regulations.gov>, or via email to [spielberger.susan@epa.gov](mailto:spielberger.susan@epa.gov). For comments submitted at [Regulations.gov](https://www.regulations.gov), follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from [Regulations.gov](https://www.regulations.gov). For either manner of submission, EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be confidential business information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment.

The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.* on the web, cloud, or other file sharing system). For additional submission methods, please contact the person identified in the **FOR FURTHER INFORMATION CONTACT** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** Brian Rehn, Planning & Implementation Branch (3AD30), Air & Radiation Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. The telephone number is (215) 814-2176. Mr. Rehn can also be reached via electronic mail at [rehn.brian@epa.gov](mailto:rehn.brian@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document, “we,” “us,” and “our” refer to EPA.

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## I. Background

Under section 109 of the CAA, EPA has established NAAQS for certain pervasive air pollutants (referred to as “criteria pollutants”) and conducts periodic reviews of the NAAQS to determine whether they should be revised or whether new NAAQS should be established. EPA sets the NAAQS for criteria pollutants at levels required to protect public health and welfare. “Primary” NAAQS are those determined by EPA as requisite to protect human health, while “secondary” NAAQS are those determined by EPA as requisite to protect the public welfare from any known or anticipated adverse effects of the NAAQS pollutant.<sup>1</sup> Particulate matter is one of the criteria pollutants for which EPA has established health-based standards. The CAA requires states to submit regulations that control particulate matter emissions.

Particulate matter includes particles with diameters that are generally 2.5 microns or smaller (referred to as PM<sub>2.5</sub>) and particles with diameters that are generally 10 microns or smaller (or PM<sub>10</sub>). Particulate matter has deleterious

effects on the environment, both to human health and to plants and wildlife. The effects on human health include premature mortality, aggravation of respiratory and cardiovascular disease, and decreased lung function. Some individuals, such as older adults and people with lung or heart disease, are particularly sensitive to PM<sub>2.5</sub> exposure. Impacts on the environment include impairment of visibility, as well as damage to vegetation and ecosystems.<sup>2</sup> Sources can directly emit PM<sub>2.5</sub> into the atmosphere, in the form of a solid or a liquid particle (*i.e.*, “direct PM<sub>2.5</sub>” or “primary PM<sub>2.5</sub>”). PM<sub>2.5</sub> can also form as a result of chemical reactions in the atmosphere of precursor pollutants emitted from sources (*i.e.* “secondary PM<sub>2.5</sub>”). Such secondary PM<sub>2.5</sub> precursor pollutants include nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), volatile organic compounds (VOC), and ammonia.<sup>3</sup>

On July 18, 1997, EPA revised the particulate matter NAAQS to establish new primary and secondary annual and 24-hour standards for PM<sub>2.5</sub>.<sup>4</sup> The annual standard was set at 15.0 micrograms per cubic meter (µg/m<sup>3</sup>), based on a 3-year average of annual mean PM<sub>2.5</sub> concentrations. The 24-hour (daily) standard was set at 65 µg/m<sup>3</sup> based on the 3-year average of the annual 98th percentile values of 24-hour PM<sub>2.5</sub> concentrations at each population-oriented monitor within an area.<sup>5</sup>

On October 17, 2006,<sup>6</sup> EPA revisited the particulate matter NAAQS, retaining the annual average PM<sub>2.5</sub> NAAQS at 15 µg/m<sup>3</sup>, but revising the 24-hour PM<sub>2.5</sub> NAAQS to 35 µg/m<sup>3</sup> (based on a 3-year average of the annual 98th percentile values of 24-hour concentrations).<sup>7</sup> On January 15, 2013, EPA finalized the 2012 PM<sub>2.5</sub> NAAQS, which revised the annual standard to 12.0 µg/m<sup>3</sup> based on a 3-year average of annual mean PM<sub>2.5</sub> concentrations, but retained the current 24-hour standard of 35 µg/m<sup>3</sup> based on a 3-year average of the 98th percentile of 24-hour concentrations.<sup>8</sup>

<sup>2</sup> See 78 FR 3086, 3088 (January 15, 2013).

<sup>3</sup> See EPA, Air Quality Criteria for Particulate Matter, No. EPA/600/P-99/002aF and EPA/600/P-99/002bF, October 2004.

<sup>4</sup> 62 FR 38652 (July 18, 1997).

<sup>5</sup> In this action, EPA set primary and secondary standards at the same level for both the 24-hour and the annual PM<sub>2.5</sub> standards.

<sup>6</sup> See 71 FR 61144.

<sup>7</sup> Under 40 CFR part 50, the primary and secondary 2006 24-hour PM<sub>2.5</sub> NAAQS are attained when the annual arithmetic mean concentration (as determined in accordance with 40 CFR part 50, appendix N) is less than or equal to 35 µg/m<sup>3</sup> at all relevant monitoring sites in the subject area, averaged over a 3-year period.

<sup>8</sup> See 78 FR 3086.

<sup>1</sup> See CAA section 109(b).

Following promulgation of a new or revised NAAQS, EPA is required by CAA section 107(d) to designate areas throughout the nation as attaining or not attaining the NAAQS. EPA designated and classified the Allegheny County area as “Moderate” nonattainment for the 2012 annual PM<sub>2.5</sub> standards based on ambient monitoring data that showed the area was above 12.0 µg/m<sup>3</sup> for the 2011–2013 monitoring period.<sup>9</sup> Based on monitoring data for the 2011–2013 period, the PM<sub>2.5</sub> annual design values for the Liberty monitor [AIRS ID 42–00300064] were 13.4 µg/m<sup>3</sup>.

The Allegheny County 2012 PM<sub>2.5</sub> nonattainment area lies in southwestern Pennsylvania and in 2018 had a population of 1,218,452 persons. Pittsburgh is the largest city in Allegheny County, which also contains the Cities of Clairton, Duquesne, and McKeesport. In total, the County has 130 self-governing municipalities. Allegheny County has complex, mountainous terrain cut by numerous river valleys, which can work to trap locally generated air pollutants. Within the County, some river valleys lie at less than 720 feet in elevation above mean sea level (MSL), while adjacent hilltops can be greater than 1250 feet—with frequently large temperature differences between the hilltop and valley floor (e.g. 2 to 7 °F) during clear, light-wind, nighttime conditions. The combination of higher elevation mountainous terrain and river valleys, in conjunction with cool weather, traps locally generated pollution and makes the area prone to atmospheric inversions that impair PM<sub>2.5</sub> dispersion, sometimes for multiple days, particularly during winter. The Liberty monitor sits above the east bank of the Monongahela River at an elevation of 1,100 feet, immediately downwind of the highest emitting PM<sub>2.5</sub> stationary source in the area, the U.S. Steel Clairton Coke Works, which lies in the river valley at an elevation 300 feet below the monitor. As a result, the monitored PM<sub>2.5</sub> values at the Liberty monitor are sometimes far higher than those of other monitors in the surrounding region.

ACHD has the primary responsibility for developing a plan to attain the 2012 annual PM<sub>2.5</sub> NAAQS in this area, working in conjunction with the PADEP in preparing the Allegheny County PM<sub>2.5</sub> Plan. Under Pennsylvania law, authority for regulating sources in the area is split between the County and Pennsylvania, with ACHD having primary responsibility for regulating stationary sources in the area.

## II. Clean Air Act Plan Requirements for Areas Designated Moderate Nonattainment for the PM<sub>2.5</sub> NAAQS

A January 4, 2013, U.S. Court of Appeals for the District of Columbia Circuit decision<sup>10</sup> stated that EPA must implement PM<sub>2.5</sub> NAAQS pursuant to title I, part D, subpart 4 of the CAA, which contains provisions specifically concerning PM<sub>10</sub> nonattainment areas. With respect to the statutory requirements for attainment plans for the 2012 annual PM<sub>2.5</sub> NAAQS, general CAA nonattainment area planning requirements are found in part D, subpart 1, and planning requirements specific to areas designated Moderate for particulate matter are found in subpart 4 of part D.

EPA has a longstanding general guidance document interpreting the 1990 amendments to the CAA, referred to as the General Preamble for the Implementation of title I of the Clean Air Act of 1990 (or the “General Preamble”).<sup>11</sup> The General Preamble addresses the relationship between the requirements of CAA part D, subpart 1 and subpart 4, and provides recommendations to states for meeting certain statutory requirements for particulate matter attainment plans. As explained in the General Preamble, requirements specific to Moderate area attainment plan SIP submissions for particulate matter NAAQS are set forth in subpart 4 of part D, title I of the CAA. However, such SIP submissions must also meet the general attainment planning provisions in subpart 1 of part D, title I of the CAA, to the extent these provisions “are not otherwise subsumed by, or integrally related to,” the more specific subpart 4 requirements.<sup>12</sup>

To implement the PM<sub>2.5</sub> NAAQS, EPA also promulgated the “Fine Particulate Matter National Ambient Air Quality Standard: State Implementation Plan Requirements; Final Rule” (or the “PM<sub>2.5</sub> SIP Requirements Rule”).<sup>13</sup> The PM<sub>2.5</sub> SIP Requirements Rule provides additional regulatory requirements and guidance applicable to attainment plan submissions for the PM<sub>2.5</sub> NAAQS, including the 2012 annual PM<sub>2.5</sub> NAAQS that is the subject of this action. The PM<sub>2.5</sub> SIP Requirements Rule also clarifies how states should meet the statutory SIP requirements that apply to areas designated nonattainment for any

PM<sub>2.5</sub> NAAQS under both subparts 1 and 4.

The CAA subpart 1 statutory requirements for attainment plans include: (i) The section 172(c)(1) requirements for RACM/RACT and attainment demonstrations; (ii) the section 172(c)(2) requirement to demonstrate RFP; (iii) the section 172(c)(3) requirement for preparation of emissions inventories; (iv) the section 172(c)(5) requirements for adoption of a nonattainment new source review (NNSR) permitting program; and (v) the section 172(c)(9) requirement to adopt contingency measures.

Requirements specific to Moderate PM<sub>2.5</sub> nonattainment areas under CAA subpart 4 include: (i) The section 189(a)(1)(A) and 189(e) NNSR permit program requirements; (ii) the section 189(a)(1)(B) requirements for attainment demonstrations; (iii) the section 189(a)(1)(C) requirements for RACM; and (iv) the section 189(c) requirements for RFP and QMs. Under CAA subpart 4, states with Moderate PM<sub>2.5</sub> nonattainment areas must provide for attainment in the area as expeditiously as practicable (but no later than December 31, 2021) for the 2012 PM<sub>2.5</sub> annual NAAQS. In addition, under CAA subpart 4, direct PM<sub>2.5</sub> (and all precursors to the formation of PM<sub>2.5</sub>) are subject to control unless EPA approves a demonstration from the state establishing that a given precursor does not contribute significantly to PM<sub>2.5</sub> levels that exceed the PM<sub>2.5</sub> NAAQS in the area.<sup>14</sup>

## III. Review of the Allegheny County PM<sub>2.5</sub> Plan

### A. Emissions Inventories for the Base Year and Attainment Year

#### 1. Requirements for Emissions Inventories

CAA section 172(c)(3) requires that each SIP include a “comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in [the] area . . .” By requiring an accounting of actual emissions from all sources of the relevant pollutants in the area, this section provides for the base year inventory to include all emissions that contribute to the formation of a particular NAAQS pollutant. For the 2012 PM<sub>2.5</sub> NAAQS, this includes emissions of direct PM<sub>2.5</sub> as well as the main chemical precursors to the formation of secondary PM<sub>2.5</sub>, including NO<sub>x</sub>, SO<sub>2</sub>, VOCs, and ammonia (NH<sub>3</sub>). Primary PM<sub>2.5</sub> is comprised of both

<sup>10</sup> *Natural Resources Defense Council v. EPA*, 706 F. 3d 428 (D.C. Cir. 2013).

<sup>11</sup> See General Preamble, 57 FR 13498 (April 16, 1992).

<sup>12</sup> See 57 FR 13538, April 16, 1992.

<sup>13</sup> See 81 FR 58010, August 24, 2016.

<sup>14</sup> See 40 CFR 51.1006 and 51.1009.

<sup>9</sup> See 80 FR 2206 (January 15, 2015).

condensable and filterable particulate matter components.

EPA PM<sub>2.5</sub> requirements rule establishes that “the base year inventory for the nonattainment area: (a) Be required to represent one of the 3 years used for designations or another technically appropriate year; (b) include actual emissions of all sources within the nonattainment area; (c) be annual total or average-season-day emissions in accordance with the NAAQS violation; (d) include direct PM<sub>2.5</sub> (filterable and condensable) as well as all scientific PM<sub>2.5</sub> precursors . . .”<sup>15</sup>

A state must include in its SIP submission documentation explaining how the emissions data were calculated. In estimating mobile source emissions, a state should use the latest emissions models and planning assumptions available at the time it develops the SIP submission.<sup>16</sup> States are also required to use EPA’s “Compilation of Air Pollutant Emission Factors” (AP-42)<sup>17</sup> road dust method for calculating re-entrained road dust emissions from paved roads.<sup>18</sup> MOVES is EPA’s state-of-the-art tool for estimating emissions from on-road mobile sources. At the time ACHD prepared the SIP, MOVES2014a was the latest available version of the MOVES model, which included new data, emission standards, and functional improvements and features over prior versions of the model.<sup>19</sup> EPA subsequently released an updated MOVES model (MOVES2014b) in August 2018, which better estimates non-road mobile emissions compared to MOVES2014a. However, MOVES2014b was not available at the time ACHD began working on emission inventories in support of this plan, and EPA does not consider MOVES2014b a new model

for SIP and transportation conformity purposes.<sup>20</sup>

In addition to the base year inventory submitted to meet the requirements of CAA section 172(c)(3), the State must also submit future “baseline inventories” for the projected attainment year and each RFP milestone year, and any other year of significance for meeting applicable CAA requirements.<sup>21</sup> By “baseline inventories” (also referred to as “projected baseline inventories”), we mean projected emissions inventories for future years that account for, among other things, the ongoing effects of economic growth and adopted emissions control requirements. The SIP submission should include documentation to explain how the state calculated the emissions projections.

## 2. Emissions Inventories in the Allegheny County PM<sub>2.5</sub> Plan

The Allegheny County PM<sub>2.5</sub> nonattainment area emissions inventory has both small and medium city typical emission sources and is home to several large industrial sources of PM<sub>2.5</sub> pollution. The Monongahela River Valley contains the U.S. Steel Corporation’s Mon Valley Works, which includes the largest coke manufacturing plant in the United States (the U.S. Steel Clairton Coke Works) as well as the Irvin and Edgar Thomson steel works. The area is also home (or nearby to) to several steel manufacturing facilities, coal fired electric generating facilities, and other manufacturing and industrial facilities.

As specified by EPA’s PM<sub>2.5</sub> Implementation Rule, pollutants inventoried for the Allegheny County PM<sub>2.5</sub> area include primary (direct) PM<sub>2.5</sub> along with precursors SO<sub>2</sub>, NO<sub>x</sub>, VOC, and NH<sub>3</sub>. Particulate emissions are also transported into the Allegheny

County area from surrounding counties in southwestern Pennsylvania, as well as surrounding, upwind states. EPA’s Emissions Inventory Guidance for PM<sub>2.5</sub> specifies that PM<sub>10</sub> should also be included because PM<sub>10</sub> emissions are often used as the basis for calculating PM<sub>2.5</sub>.<sup>22</sup>

The 2021 inventory is a projection of the 2011 base year inventory, which accounts for expected growth trends for each source category, as well as emission reductions from adopted and implemented control measures. This projection inventory also factors in stationary source shutdowns occurring since the base year. Local projections were focused on PM<sub>2.5</sub> and precursor reductions from stationary point source emissions, while regional projections were based on reductions from all sectors as incorporated into the Mid-Atlantic Regional Air Management Association (MARAMA) inventories. ACHD staff worked with PADEP to develop the base year and projection emissions inventories for the Allegheny County PM<sub>2.5</sub> nonattainment area.

The base 2011 and future projection 2021 emissions inventories for the Allegheny County PM<sub>2.5</sub> area used in this demonstration are found in Section 4 (Emissions Inventories) of the Commonwealth’s September 30, 2019 SIP revision, with detailed emissions inventories found in Appendix D (Emissions Inventories) of the SIP revision. Documentation of the regional inventory development is included in Appendix E (Emissions Inventory Documentation) of the SIP revision, and emissions inputs used for the modeling are described in Section 5 (Modeling Demonstration) and Appendix F (Modeling Protocols). Table 1 provides a summary of the 2011 base year emission inventory for the Allegheny County area in tons per year (tpy) of direct PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors and also a summary of the 2021 projected emissions inventory.

<sup>22</sup> See U.S. EPA, “Emissions Inventory Guidance for Implementation of Ozone [and Particulate Matter] National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” available at: [https://www.epa.gov/sites/production/files/2017-07/documents/ei\\_guidance\\_may\\_2017\\_final\\_rev.pdf](https://www.epa.gov/sites/production/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf)

<sup>15</sup> 81 FR 58027–58033, August 24, 2016.

<sup>16</sup> See EPA’s “Policy Guidance on the Use of MOVES2014 for State Implementation Plan Development, Transportation Conformity, and Other Purposes,” (EPA-420-B-14-008; July 2014), p. 6.

<sup>17</sup> EPA released an update to AP-42 in January 2011 that revised the equation for estimating paved road dust emissions based on an updated data regression that included new emission tests results.

<sup>18</sup> See 76 FR 6328 (February 4, 2011).

<sup>19</sup> See EPA guidance document “Policy Guidance on the Use of MOVES2014 for State Implementation Plan Development, Transportation Conformity, and Other Purposes” (EPA-420-B-14-008; July 2014).

<sup>20</sup> See EPA guidance document “EPA Releases MOVES2014b Mobile Source Emissions Model: Questions and Answers,” (EPA-420-F-18-014; August 2018), available at: <https://nepis.epa.gov/Exec/zyPDF.cgi?Dockey=P100V7H1.pdf>.

<sup>21</sup> See 40 CFR 51.1007(a), 51.1008(b), and 51.1009(f). See also U.S. EPA, “Emissions Inventory Guidance for Implementation of Ozone [and Particulate Matter] National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations,” available at: [https://www.epa.gov/sites/production/files/2017-07/documents/ei\\_guidance\\_may\\_2017\\_final\\_rev.pdf](https://www.epa.gov/sites/production/files/2017-07/documents/ei_guidance_may_2017_final_rev.pdf).

TABLE 1—BASE YEAR AND PROJECTED ATTAINMENT YEAR EMISSION INVENTORIES FOR ALLEGHENY COUNTY  
[Tons per year]

Allegheny County	PM <sub>2.5</sub> (total)	PM <sub>2.5</sub> (filterable)	PM <sub>2.5</sub> (condensable)	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	NH <sub>3</sub>
<b>2011 Base Year Emission Inventory for Allegheny County, by Sector (Tons per Year)</b>								
Point Sources .....	2,503	1,338	1,164	2,987	13,460	11,128	1,169	207
Area Sources .....	2,491	2,011	480	4,683	1,528	6,979	11,200	621
Non-road Mobile Sources ....	361	361	0	378	11	3,921	3,780	5
Highway Mobile Sources .....	450	450	0	984	78	13,259	7,383	304
Fires .....	24	24	0	29	2	5	64	4
Biogenic Sources .....	0	0	0	0	0	166	5,876	0
<b>Total .....</b>	<b>5,829</b>	<b>4,185</b>	<b>1,644</b>	<b>9,061</b>	<b>15,080</b>	<b>35,460</b>	<b>29,972</b>	<b>1,141</b>
Point Sources .....	2,256	1,256	999	2,722	5,921	7,928	1,534	202
Area Sources .....	2,708	2,226	472	5,486	1,079	6,664	10,221	615
Non-road Mobile Sources ....	234	234	0	248	5	2,212	2,752	6
Highway Mobile Sources .....	266	266	0	722	31	5,708	3,479	209
Fires .....	24	24	0	29	2	5	64	4
Biogenic Sources .....	0	0	0	0	0	168	5,876	0
<b>Total .....</b>	<b>5,488</b>	<b>4,007</b>	<b>1,471</b>	<b>9,207</b>	<b>7,039</b>	<b>22,684</b>	<b>23,926</b>	<b>1,037</b>

3. EPA’s Evaluation and Proposed Action on the Emission Inventories

The emission inventories in the Allegheny County area PM<sub>2.5</sub> plan are based on the most current and accurate information available to PADEP and ACHD at the time the attainment plan was developed and used the most recently available tools and planning assumptions. The emission inventories in the attainment plan comprehensively address all source categories in the Allegheny County PM<sub>2.5</sub> nonattainment area and were developed consistent with EPA’s emission inventory preparation guidance. The selection of 2011 for use as a base year emissions inventory is one of the three years (2011–2013) used for purposes of designation of the area and the 2021 projection emissions inventory corresponds to the moderate area attainment deadline, in accordance with EPA’s SIP requirements rule. The inventories model direct PM<sub>2.5</sub> (including the filterable and condensable components), as well as PM<sub>2.5</sub> precursor emissions. For these reasons, we are proposing to approve the 2011 base year emissions inventory in the Allegheny County PM<sub>2.5</sub> Plan as meeting the requirements of CAA section 172(c)(3). We are also proposing to find that the 2021 projected inventory in the plan is an adequate basis for the determination of RACM, RFP, and for demonstrating attainment in the Allegheny County PM<sub>2.5</sub> Plan. For further information on our review of the emission inventories supporting this plan, refer to EPA’s Technical Support Document (TSD) for Emission

Inventories prepared in support of this action, which is available in the docket.

*B. Particulate Matter Precursor Demonstration*

1. PM<sub>2.5</sub> Precursor Requirements

The provisions of subpart 4 of part D, title I of the CAA do not define the term “precursor” for purposes of PM<sub>2.5</sub>, nor does subpart 4 explicitly require the control of any specifically identified PM precursor. However, the definition of “air pollutant” in CAA section 302(g) “includes any precursors to the formation of any air pollutant, to the extent the Administrator has identified such precursor or precursors for the particular purpose for which the term ‘air pollutant’ is used.”

In the PM<sub>2.5</sub> SIP Requirements Rule, EPA recognized that treatment of PM<sub>2.5</sub> precursors is an important issue in developing a PM<sub>2.5</sub> attainment plan.<sup>23</sup> Therein, EPA identified SO<sub>2</sub>, NO<sub>x</sub>, VOC, and NH<sub>3</sub> as precursors to formation of PM<sub>2.5</sub>. Accordingly, the attainment plan requirements of subpart 4 apply to emissions of all four precursor pollutants and direct PM<sub>2.5</sub> from all types of stationary, area, and mobile sources, except as otherwise provided in the Act (e.g., in CAA section 189(e)).

Section 189(e) of the CAA requires that the control requirements for major stationary sources of direct PM<sub>10</sub> (which includes PM<sub>2.5</sub>) also apply to major stationary sources of PM<sub>10</sub> precursors, except where the Administrator determines that such sources do not contribute significantly to PM<sub>10</sub> levels

that exceed the standard in the area. Section 189(e) contains the only expressed exception to the control requirements under subpart 4 for sources of PM<sub>2.5</sub> precursor emissions. Although section 189(e) explicitly addresses only major stationary sources, EPA interprets the Act as authorizing it to also determine, under appropriate circumstances, that regulation of specific PM<sub>2.5</sub> precursors from other sources in a given nonattainment area is not necessary.

Under the PM<sub>2.5</sub> SIP Requirements Rule, a state may elect to submit to EPA a “comprehensive precursor demonstration” for a specific nonattainment area to show that emissions of a particular precursor from all existing sources located in the nonattainment area do not contribute significantly to PM<sub>2.5</sub> levels that exceed the standard in the area.<sup>24</sup> Such a comprehensive precursor demonstration must include a concentration-based contribution analysis (i.e., evaluation of the contribution of a particular precursor to PM<sub>2.5</sub> levels in the area) and may also include a sensitivity-based contribution analysis (i.e., evaluation of the sensitivity of PM<sub>2.5</sub> levels in the area to a decrease in emissions of the precursor). If EPA determines that the contribution of the precursor to PM<sub>2.5</sub> levels in the area is not significant and approves the demonstration, the state is not required to control emissions of the relevant precursor from existing sources in the current attainment plan.<sup>25</sup>

EPA issued PM<sub>2.5</sub> Precursor Demonstration Guidance (“Precursor

<sup>23</sup> See section III of EPA’s PM<sub>2.5</sub> SIP Requirements Rule (81 FR 58017, August 24, 2016).

<sup>24</sup> See 40 CFR 51.1006(a)(1).

<sup>25</sup> Id.

Guidance”) to provide recommendations to states for conducting an optional, comprehensive precursor demonstration as part of an attainment plan SIP submission.<sup>26</sup> Section 1.1.1 of the Precursor Guidance describes the steps for performing a precursor demonstration. First, a concentration-based analysis should be performed to determine whether all emissions of the relevant precursor contribute significantly to total PM<sub>2.5</sub> concentrations. If the concentration-based analysis does not support a finding of insignificant contribution, then a sensitivity analysis may be conducted to evaluate, through air quality modeling, the effect of reducing emissions of the precursor (by a certain percentage) from either all existing emission sources of the precursor or only existing major stationary sources of the precursor, on PM<sub>2.5</sub> levels in the area.

Section 2.2 of the Precursor Guidance recommends the use of 0.2 µg/m<sup>3</sup> for the annual PM<sub>2.5</sub> NAAQS and 1.5 µg/m<sup>3</sup> for the 24-hour PM<sub>2.5</sub> NAAQS as thresholds below which ambient air quality impacts could be considered “insignificant” (*i.e.*, impacts that do not “contribute” to PM<sub>2.5</sub> concentrations that exceed the NAAQS). When considering whether a precursor contributes significantly to PM<sub>2.5</sub> levels

which exceed the NAAQS in the area, a state may also consider additional factors based on the specific circumstances of the area. As to air quality impacts that exceed the 0.2 µg/m<sup>3</sup> annual or 1.5 µg/m<sup>3</sup> 24-hour contribution thresholds, states may provide additional support for a conclusion that a particular precursor does not contribute significantly to ambient PM<sub>2.5</sub> levels that exceed the NAAQS. States may consider other information, such as the amount by which the impacts exceed the recommended contribution threshold; the severity of nonattainment at relevant monitors and/or grid cell locations in the area; anticipated growth or loss of sources; analyses of speciation data and precursor emission inventories; and air quality trends.<sup>27</sup>

2. Precursor Demonstration in the Allegheny County PM<sub>2.5</sub> Plan

The Allegheny County PM<sub>2.5</sub> Plan includes a comprehensive precursor demonstration, which evaluates the impact of the precursors VOC and NH<sub>3</sub> to nonattainment of the PM<sub>2.5</sub> NAAQS in Allegheny County. The concentration-based analysis indicates that all precursors show ambient monitored levels above the thresholds for significant contribution.<sup>28</sup> Therefore, a sensitivity analysis was performed using Comprehensive Air Quality Model

with extensions (CAMx).<sup>29</sup> CAMx is a Eulerian photochemical grid model that simulates a wide variety of inert and chemically active pollutants, including ozone, particulate matter, inorganic and organic PM<sub>2.5</sub>/PM<sub>10</sub>, and mercury and other toxics. For the sensitivity analysis, a total of three CAMx runs were used to evaluate PM<sub>2.5</sub> sensitivity to reductions of NH<sub>3</sub> and VOC emissions in Allegheny County: A base case and two sensitivity-case runs. For one sensitivity-case run, anthropogenic emissions of VOC in Allegheny County were reduced by 50%. For the other sensitivity-case run, anthropogenic emissions of NH<sub>3</sub> were reduced by 50%. For both runs, the 50% reductions were applied to both point and area source anthropogenic emissions with all other emissions held constant. EPA’s Modeled Attainment Test Software (MATS) was then used to model design values at monitoring sites in Allegheny County with and without the 50% reduction in VOC and NH<sub>3</sub>. Table 2 shows the projected annual and 24-hour reductions in PM<sub>2.5</sub> design values (DVs) at the monitoring sites in the nonattainment area based on the reductions for VOC and NH<sub>3</sub>. Additional information regarding the sensitivity analysis can be found in Appendix I.4 (Precursor Insignificance Demonstration) of the Allegheny County PM<sub>2.5</sub> Plan.

TABLE 2—SENSITIVITY TEST REDUCTIONS IN DESIGN VALUES (DVs) AT ALLEGHENY COUNTY AREA MONITORS

Monitoring Site	AQS ID	Annual basis		24-hour basis	
		Reduction in DV with 50% less VOC (µg/m <sup>3</sup> )	Reduction in DV with 50% less NH <sub>3</sub> (µg/m <sup>3</sup> )	Reduction in DV with 50% less VOC (µg/m <sup>3</sup> )	Reduction in DV with 50% less NH <sub>3</sub> (µg/m <sup>3</sup> )
Avalon .....	42-003-0002	0.01	0.20	0.0	0.1
Lawrenceville .....	42-003-0008	0.00	0.23	0.0	0.0
Liberty .....	42-003-0064	0.00	0.15	0.0	0.8
South Fayette .....	42-003-0067	0.00	0.10	0.0	0.1
North Park .....	42-003-0093	0.00	0.17	0.1	0.9
Harrison .....	42-003-1008	0.00	0.13	0.0	0.0
North Braddock .....	42-003-1301	0.00	0.21	0.0	0.4
Clairton .....	42-003-3007	0.00	0.13	0.0	0.0

As can be seen in Table 2, the modeled decreases in design values due to a 50% reduction in VOC and NH<sub>3</sub> at the Liberty monitor are both below the significance thresholds of 0.2 µg/m<sup>3</sup> for the annual PM<sub>2.5</sub> NAAQS and 1.5 µg/m<sup>3</sup> for the 24-hour PM<sub>2.5</sub> NAAQS. Therefore, ACHD determined that VOC and NH<sub>3</sub> are both insignificant

contributors to nonattainment in Allegheny County and excluded both precursors from additional analysis in the Allegheny County PM<sub>2.5</sub> Plan.

3. EPA’s Evaluation and Proposed Action on the Precursor Demonstration

EPA has reviewed the comprehensive precursor demonstration included in the

Allegheny County PM<sub>2.5</sub> Plan and is proposing to find that it meets the requirements of the PM<sub>2.5</sub> SIP Requirements Rule and EPA’s Precursor Guidance. The comprehensive precursor demonstration includes a sensitivity analysis that indicates that the estimated impacts of a 50% reduction in point and area source anthropogenic

<sup>26</sup> See EPA Office of Air Quality Planning and Standards, “Fine Particulate Matter (PM<sub>2.5</sub>) Precursor Demonstration Guidance,” [EPA-454/R-19-004, May 30, 2019] <https://www.epa.gov/pm-pollution/pm25-precursor-demonstration-guidance>.

<sup>27</sup> *Id.* at p. 17.

<sup>28</sup> For additional information on the concentration-based analysis, see Appendix C of the Allegheny County PM<sub>2.5</sub> Plan.

<sup>29</sup> CAMx is a photochemical grid model that simulates a wide variety of inert and chemically active pollutants, including ozone, particulate matter, inorganic and organic PM<sub>2.5</sub>/PM<sub>10</sub>, and mercury and other toxics.

emissions of VOC and NH<sub>3</sub> are below the significance thresholds of 0.2 µg/m<sup>3</sup> for the annual PM<sub>2.5</sub> NAAQS and 1.5 µg/m<sup>3</sup> for the 24-hour PM<sub>2.5</sub> NAAQS at the Liberty monitor, which has consistently been the highest reading PM<sub>2.5</sub> monitor in Allegheny County and the only monitor in the County not meeting the 2012 annual PM<sub>2.5</sub> NAAQS. Since the estimated impacts at the Liberty monitor are below the significance threshold, it can be concluded, for purposes of the precursor demonstration, that the precursors VOC and NH<sub>3</sub> do not significantly contribute to nonattainment of the PM<sub>2.5</sub> NAAQS in Allegheny County. Therefore, pursuant to 40 CFR 51.1006, EPA is proposing to find that Allegheny County is not required to control emissions of VOC or NH<sub>3</sub> from existing sources in the Allegheny County PM<sub>2.5</sub> Plan.

*C. Reasonably Available Control Measures (RACM)/Reasonably Available Control Technology (RACT)*

1. Requirements for RACM/RACT

CAA section 172(c)(1) requires that each attainment plan “provide for the implementation of all reasonably available control measures as expeditiously as practicable (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology) and shall provide for attainment of the national ambient air quality standards.” Section 189(a)(1)(C) of the CAA requires that states with areas classified as moderate nonattainment for PM<sub>2.5</sub> have attainment plan provisions to assure that RACM and RACT are implemented no later than four years after designation

of the area. EPA reads CAA sections 172(c)(1) and 189(a)(1)(C) together to require that attainment plans for moderate nonattainment areas must provide for the implementation of RACM and RACT for existing sources of PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors in the nonattainment area as expeditiously as practicable but no later than four years after designation.<sup>30</sup>

The preamble to the PM<sub>2.5</sub> SIP Requirements Rule defines RACM as “any technologically and economically feasible measure that can be implemented in whole or in part within four years after the effective date of designation of a PM<sub>2.5</sub> nonattainment area,” including RACT.<sup>31</sup> The preamble also recommends steps for evaluating control measures as part of a RACM/RACT analysis.<sup>32</sup> In short, a RACM/RACT analysis is a process for states to identify emission sources, evaluate potential emission controls, and impose those control measures and technologies that are reasonable and necessary to bring the area into attainment as expeditiously as practicable, but no later than the statutory attainment date for the area.

Pursuant to the preamble of the PM<sub>2.5</sub> SIP Requirements Rule, in the case of a moderate area that can demonstrate it can attain by the statutory attainment date without implementing all reasonably available control measures (*i.e.* RACM/RACT and additional reasonable measures), the state would not be required to adopt certain otherwise reasonable measures if the state demonstrates that collectively such measures would not enable the area to attain the standard at least one year earlier (*i.e.* “advance the attainment date” by one year).<sup>33</sup> The attainment date for the Allegheny County

nonattainment area is December 31, 2021.

2. RACM Analysis in the Allegheny County PM<sub>2.5</sub> Plan

A summary of ACHD’s RACM analysis is provided in Section 6 of the Allegheny County PM<sub>2.5</sub> Plan and a detailed analysis is provided in Appendix J. Based on the insignificance findings for VOC and NH<sub>3</sub>, ACHD did not evaluate options for the control of VOC and NH<sub>3</sub> in their RACM analysis. ACHD’s RACM analysis examines options for the control of primary PM<sub>2.5</sub> and precursors SO<sub>2</sub> and NO<sub>x</sub> in the Allegheny County nonattainment area for the following source categories: Area sources, non-road mobile sources, on-road mobile sources, and some small point sources.

For each source category, ACHD evaluated RACM alternatives through the following process: (1) Examine source category emissions in the nonattainment area; (2) determine technologically feasible control technologies or measures for each source category; and, (3) for each technologically feasible control technology or measure, examine the control efficiency by pollutant, the estimated emission reductions by pollutant, the estimated cost per ton of pollutant reduced, and the date by which the technology or measure could be reasonably implemented.

a. RACM Measures Evaluation

Table 3 lists the RACM measures in the Allegheny County PM<sub>2.5</sub> Plan. These measures are discussed in more detail in Appendix J of the Allegheny County PM<sub>2.5</sub> Plan, which is located in the docket for this rulemaking.

TABLE 3—SUMMARY OF RACM ALTERNATIVES EVALUATED FOR ALLEGHENY COUNTY

Source category group	Existing controls/programs	RACM alternative(s)	Notes
Agriculture .....	None .....	None identified .....	Small source of emissions; mostly NH <sub>3</sub> emissions, NH <sub>3</sub> is an insignificant precursor in the non-attainment area.
Commercial Cooking .....	None .....	1. Charbroiler catalytic oxidizers for chain-driven broilers. 2. HEPA filters for under-fired boilers.	1. Small emission reductions county-wide. 2. Full implementation could take five years from promulgation.
Cremation .....	None .....	None identified .....	Small source of emissions county-wide; permit restrictions are BACT.
Fuel Combustion (Industrial and Commercial).	Federal standards for boilers and engines.	Low-NO <sub>x</sub> burners .....	Full implementation could take five years from promulgation.
Fuel Combustion (Residential) .....	Sulfur limit for home heating oil ...	None identified .....	Small source of emissions compared to commercial and industrial fuel combustion.

<sup>30</sup> See 81 FR 58010 and 58034, August 24, 2016.

<sup>31</sup> See 81 FR 58010–58035 and 58043, August 24, 2016, as well as 40 CFR 51.1009(a)(4)(i)(A).

<sup>32</sup> See 81 FR 58010–58035 and 58046, August 24, 2016.

<sup>33</sup> See 81 FR 58018, August 24, 2016.

TABLE 3—SUMMARY OF RACM ALTERNATIVES EVALUATED FOR ALLEGHENY COUNTY—Continued

Source category group	Existing controls/programs	RACM alternative(s)	Notes
Fuel Combustion (Residential Wood).	1. Fireplace insert program. 2. Prohibition of non-phase 2 outdoor wood-fired boilers (OWBs). 3. No outdoor burning when Air Quality Action Days are predicted. 4. Wood stove change-out program.	1. Additional wood stove change-out program. 2. Education and outreach on clean burning. 3. Replacement of old stoves when homes are sold. 4. OWB compliance for pre-2011 units.	1. Insignificant emission reductions. 2. Reductions difficult to quantify. 3. Reductions and costs difficult to quantify; Significant PM <sub>2.5</sub> emission reductions unlikely within short to medium timeframe. 4. Insignificant emission reductions.
Fugitive Dust .....	Use of dust suppressants .....	Paving of all unpaved roads countywide.	Small emission reductions countywide.
Oil and Gas Exploration and Production.	None .....	No feasible, cost effective options were identified.	None.
Petroleum Storage .....	None .....	None identified .....	VOC emissions only, VOC is an insignificant precursor in the nonattainment area.
Solvent Utilization .....	ACHD regulations .....	None identified .....	VOC emissions only, VOC is an insignificant precursor in the nonattainment area.
Surface Coatings .....	ACHD regulations .....	None identified .....	VOC emissions only, VOC is an insignificant precursor in the nonattainment area.
Marine .....	Federal standards; towboat repowering project.	1. Vessel repowering from Tier 0 to newer engines. 2. Retrofit tugboats with diesel particulate filters. 3. Control idling. 4. Pleasure craft controls.	1. High costs. 2. Small emission reductions. 3. Emission reductions not quantified, potential insignificant emission reductions. 4. Emission reductions not quantified, potential insignificant emission reductions that are not cost effective.
Railroad .....	Federal standards .....	Replacement of older engines to newer engines.	High costs relative to emission reductions.
Off-Highway Equipment (Gasoline)	Rebate program for gasoline-fueled equipment exchange.	Additional gas-for electric exchange programs.	Emission reductions not quantified, potential insignificant emission reductions.
Off-Highway Equipment (Diesel) ...	Federal Standards; idling restrictions.	Retrofit construction equipment with a diesel particulate filter (DPF).	Small emission reductions countywide.
Off-Highway Equipment (Other) ....	None .....	None identified .....	None.
Gasoline Refueling .....	Stage II vapor recovery systems ..	None identified .....	VOC emissions only, VOC is an insignificant precursor in the nonattainment area.
Gasoline Vehicles (Light-Duty) .....	Federal emission standards; Inspection/Maintenance (I/M) program.	Ridesharing program .....	Reductions not quantified; light duty gasoline vehicles show large reductions through 2021 with current controls.
Gasoline Vehicles (Heavy-Duty) ....	Federal emission standards; idling restrictions.	None .....	Small portion of the on-road mobile source inventory.
Diesel Refueling .....	None .....	None identified .....	VOC emissions only, VOC is an insignificant precursor in the nonattainment area.
Diesel Vehicles (Light-Duty) .....	Federal emission standards; idling restrictions.	None identified .....	Small portion of the on-road mobile source inventory.
Diesel Vehicles (Heavy Duty) .....	Federal emission standards; idling restrictions.	(1) Additional diesel engine retrofits. (2) Replacement of public or private fleets ahead of normal schedule. (3) Additional diesel idling requirements.	(1) Small emission reductions countywide. (2) Small emission reductions countywide. (3) Reductions not quantified.
Compressed Natural Gas (CNG) Vehicles (Heavy Duty).	None .....	None identified .....	Small portion of the on-road mobile source inventory.
Ethanol E-85 Vehicles (Light-duty gasoline, capable of burning 85% ethanol 15% gasoline blend).	None .....	None identified .....	Small portion of the on-road mobile source inventory.
Aggregate Processing .....	Rules in effect for stone, sand, and gravel operations.	Require water sprays, dust suppressants, telescopic chutes, and baghouse/cyclone dust collectors.	None.



3. RACT Analysis in the Allegheny County PM<sub>2.5</sub> Plan

Section 6 of the Allegheny County PM<sub>2.5</sub> Plan also includes a summary of ACHD's RACT analysis. ACHD's detailed analysis is provided in Appendix J of the Allegheny County PM<sub>2.5</sub> Plan.

ACHD used the following methodology for their RACT analysis:

(1) Identify all current major stationary point sources of PM<sub>2.5</sub>, SO<sub>2</sub>, or NO<sub>x</sub> in the Allegheny County nonattainment area; (2) identify the different processes, or process groups, for the applicable major source facilities and the current controls for the processes; (3) identify potential RACT alternatives for the process groups; and (4) evaluate the

technological and economic feasibility of any potential RACT alternatives.<sup>34</sup>

a. RACT Measures Evaluation

Table 4 summarizes the identified facilities and corresponding findings from ACHD's RACT analysis for the Allegheny County PM<sub>2.5</sub> Plan. ACHD's complete RACT analysis is provided in Appendix J of the Allegheny County PM<sub>2.5</sub> Plan.

TABLE 4—SUMMARY OF RACT ANALYSIS IN ALLEGHENY COUNTY PM<sub>2.5</sub> PLAN

Facility	Major pollutants	Summary of facility	Controls	RACT Findings
Allegheny Energy Springdale (now Springdale Energy) .....	PM, NO <sub>x</sub> .....	Combined-cycle turbine EGU, natural gas (NG) or fuel oil.	Low NO <sub>x</sub> burners (LNB), selective catalytic reduction (SCR).	Meets RACT requirements.
ATI Allegheny Ludlum .....	PM, SO <sub>2</sub> , NO <sub>x</sub>	Specialty steel facility .....	Baghouses, ultra-low NO <sub>x</sub> burners (ULNB), mist eliminators.	Meets RACT requirements.
Bay Valley (now Riverbend) ..	NO <sub>x</sub> .....	Food manufacturing facility ....	LNB, flue gas recirculation (FGR); switched from coal to natural gas as fuel for all units.	Meets RACT requirements.
Bellefield Boiler .....	NO <sub>x</sub> .....	Steam generation facility .....	LNB, FGR .....	Meets RACT requirements.
Energy Center Pittsburgh (North Shore).	NO <sub>x</sub> .....	District heating and cooling plant.	LNB, drift eliminators .....	Meets RACT requirements.
GenOn Brunot Island .....	PM, SO <sub>2</sub> , NO <sub>x</sub>	Combined-cycle turbine EGU, NG or fuel oil.	Water injection with SCR, mist eliminators.	Meets RACT requirements.
GenOn Cheswick .....	PM, SO <sub>2</sub> , NO <sub>x</sub>	Coal-fired EGU .....	FGD, LNB with overfire air (OFA), SCR, ESP.	Meets RACT requirements.
Pittsburgh Allegheny County Thermal (PACT).	NO <sub>x</sub> .....	Steam generation facility .....	NO <sub>x</sub> limits .....	Meets RACT requirements.
Universal Stainless .....	NO <sub>x</sub> .....	Specialty steel facility .....	LNB, baghouses .....	Meets RACT requirements.
University of Pittsburgh—Main Campus.	NO <sub>x</sub> .....	Public university .....	ULNB, FGR, low sulfur fuel oil	Meets RACT requirements.
U.S. Steel Clairton .....	PM, SO <sub>2</sub> , NO <sub>x</sub>	Metallurgical coke and by-products facility.	Baghouses, baffles (quench towers), coke oven gas (COG) grain limits, afterburners, visible emission (VE) restrictions.	Meets RACT requirements.
USS Edgar Thomson .....	PM, SO <sub>2</sub> , NO <sub>x</sub>	Iron and steel making facility	Baghouses, COG grain limits, scrubbers, drift eliminators.	Meets RACT requirements.
USS Irvin .....	PM, SO <sub>2</sub> , NO <sub>x</sub>	Secondary steel processing facility.	COG grain limits, scrubbers, mist eliminators.	Meets RACT requirements.

4. EPA's Evaluation and Proposed Action on RACM and RACT

ACHD has found that no economically or technologically feasible controls (or combination thereof) in Allegheny County are needed to show attainment by the attainment date of December 31, 2021 and that no feasible controls (or combination thereof) will advance the attainment date by one year or more (i.e. to December 31, 2020). The Allegheny County PM<sub>2.5</sub> Plan includes a modeling demonstration showing that Allegheny County can attain the 2012 PM<sub>2.5</sub> NAAQS by the December 31, 2021 attainment date through the control strategy described in the plan.

EPA is proposing to approve ACHD's evaluation of RACM/RACT control

measures in the Allegheny County PM<sub>2.5</sub> Plan. ACHD has demonstrated in the plan that Allegheny County can attain the PM<sub>2.5</sub> NAAQS by the attainment date without implementing RACM/RACT. Also, according to the Allegheny County PM<sub>2.5</sub> Plan, the implementation of additional control measures will not advance the attainment date in Allegheny County by one year or more. Therefore, EPA is proposing to find that the Allegheny County PM<sub>2.5</sub> Plan satisfies the RACM/RACT requirements of title I, part D, subpart 1 and subpart 4 of the CAA.

D. Air Quality Modeling

1. Requirements for Air Quality Modeling

Section 189(a)(1)(B) of the CAA requires that a plan for a Moderate PM<sub>2.5</sub> nonattainment area include a demonstration (including air quality modeling) that the plan will provide for attainment by the applicable attainment date, or a demonstration that attainment by such date is impracticable. An attainment demonstration must show that the control measures in the plan are sufficient to attain the NAAQS by the attainment date. The attainment demonstration predicts future ambient concentrations for comparison to the NAAQS, making use of available

<sup>34</sup> An explanation of sources that were excluded from ACHD's RACT analysis as well as the control

technologies that were analyzed are provided in Appendix J of the Allegheny County PM<sub>2.5</sub> Plan.

information on ambient concentrations, meteorology, and current and projected emissions inventories, including the effect of control measures in the plan. This information is typically used in conjunction with a computer model of the atmosphere.

EPA has provided additional modeling requirements and guidance for modeling analyses in the “Guideline on Air Quality Models” (“Guideline”).<sup>35</sup> Per the PM<sub>2.5</sub> SIP Requirements Rule, the attainment demonstration modeling guidance provides recommendations that include: Developing a conceptual description of the problem to be addressed; developing a modeling/analysis protocol; selecting an appropriate model to support the demonstration; selecting appropriate meteorological episodes or time periods to model; choosing an appropriate area to model with appropriate horizontal/vertical resolution; generating meteorological and air quality inputs to the air quality model; generating emissions inputs to the air quality model; and, evaluating performance of the air quality model. After these steps are completed, the state can apply a model to simulate effects of future year emissions and candidate control strategies.

## 2. Air Quality Modeling in the Allegheny County PM<sub>2.5</sub> Plan

ACHD’s September 30, 2019 PM<sub>2.5</sub> SIP revision includes a modeling demonstration showing that monitors in Allegheny County will comply with both the 24-hour and the annual 2012 PM<sub>2.5</sub> standards by December 31, 2021. The demonstration is based, in part, on results from the CAMx analysis. The modeling analysis also includes a local area analysis using the US EPA’s AERMOD Gaussian dispersion model to analyze the direct PM<sub>2.5</sub> component for the Liberty monitor, which has consistently been the highest reading PM<sub>2.5</sub> monitor in Allegheny County.

The highest PM monitor readings in Allegheny County are generally attributed to a combination of high localized industrial source emissions with strong temperature inversions, which trap those locally generated

emissions within the major river valleys. Elevation differences between the valley floors and surrounding terrain can be on the order of 500 feet. Under ideal meteorological conditions (*i.e.* light winds and clear night-time skies), Allegheny County has observed temperature differences between hilltop and valley floor in the range of 2 to 7 degrees Fahrenheit along with strong channeled flow within the Monongahela River valley (“Mon Valley”). Strong temperature inversions inhibit vertical mixing, trapping emissions emitted at near ground-level within the valleys, contributing to episodes of poor air quality.

Given the topography of the area, which is marked by low mountains and river valleys, and the resulting influence of that topography on localized meteorological conditions and a propensity for atmospheric inversions, ACHD developed their modeling analysis to consider these localized conditions. Further, the modeling analysis needed to properly account for both regional emission sources, and more importantly the specific, localized impacts of several large industrial source emissions that strongly contribute to episodes of poor air quality. Further details related to development of the baseline and projected year inventories can be found in appendices D and E of the Commonwealth’s September 30, 2019 SIP revision, which are available in the docket for this rulemaking. The modeling protocols used for the Commonwealth’s analysis are found in Appendix F of the September 2019 SIP revision.

Modeling for the Allegheny County area assesses regional impacts from PM<sub>2.5</sub> precursors and localized impacts from primary PM<sub>2.5</sub> sources. CAMx was utilized at fine grid resolution to model both long-range transport and near-field impacts of most sources. EPA’s AERMOD Gaussian dispersion model was used for simulating localized primary PM<sub>2.5</sub> impacts at the Liberty monitor, which has consistently recorded the highest monitor concentrations since PM<sub>2.5</sub> monitoring began in the area in the late 1990s.

ACHD provided an extensive review of meteorological conditions in Allegheny County over a five-year

period from 2009 through 2013.<sup>36</sup> The ACHD analysis involved a general review of inversions, winds, temperature, and precipitation in general and its appropriateness for the modeling demonstration. The modeling demonstration is indicative of these meteorological conditions and the use of 2011 base year emissions data is suitable to represent typical conditions over the five-year (2009–2013) period examined—with the exception of one month (October 2011) that recorded severe inversions.

CAMx-ready emissions were prepared for the 2011 modeling base year and projected 2021 attainment year and pre-processed for input to CAMx using the Sparse Matrix Operator Kernel Emissions (SMOKE) model.<sup>37</sup> CAMx was evaluated using ambient observational data from three monitoring networks: EPA’s Air Quality System (AQS) database; Federal Reference Method (FRM) total PM<sub>2.5</sub> mass; and the Chemical Speciation Network (CSN) speciated PM<sub>2.5</sub>. The Atmospheric Model Evaluation Tool (or AMET) was the primary software tool used to compare observations and modeled values from the 1.333 kilometer (km) domain in Allegheny County.<sup>38</sup> ACHD found good agreement between modeled and observed PM<sub>2.5</sub> concentrations across Allegheny County. The results of the model performance evaluations can be referenced in Appendix G of the Commonwealth’s September 30, 2019 SIP.

ACHD used MATS with the CAMx 2011 and 2021 modeling results to obtain 2021 projected attainment year design value concentrations at all of the FRM monitoring sites within the modeling domain. This included some monitoring sites outside the Allegheny County PM<sub>2.5</sub> nonattainment area. Allegheny County’s projected 2021 PM<sub>2.5</sub> concentrations are summarized in Table 5 and include a breakdown of each modeled PM<sub>2.5</sub> component (2021 projected value is the sum of all the PM<sub>2.5</sub> components).

<sup>36</sup> See Appendix B of the September 30, 2019 SIP submittal “*Meteorological Analysis*.”

<sup>37</sup> See SMOKE model, at <https://www.cmascenter.org/smoke/>.

<sup>38</sup> See AMET software at: <https://www.cmascenter.org/amet/>.

<sup>35</sup> 40 CFR part 51 appendix W, “Guideline on Air Quality Models,” 82 FR 5182, January 17, 2017; available at <https://www.epa.gov/scram/clean-air-act-permit-modeling-guidance>.

TABLE 5—PROJECTED 2021 CAMx MODELED VALUES FOR THE 2012 PM<sub>2.5</sub> NAAQS FOR ALLEGHENY COUNTY AREA MONITORS  
[Based on a 1.33 km grid]

Monitoring Site	CAMx projected design value and PM <sub>2.5</sub> modeled components (1.333 km grid)								
	Actual 2016–18 DV	Projected 2021 DV	OPP	ED	NH <sub>4</sub>	OCmb	SO <sub>4</sub>	NO <sub>3</sub>	NaCl
<b>Allegheny County Area 24-Hour Design Values**</b>									
Avalon .....	20.2	21.4	0.606	0.965	2.191	9.064	3.258	3.564	0.150
Clairton .....	18.7	21.4	0.869	3.542	1.882	7.753	4.464	0.828	0.038
Harrison .....	20.0	20.7	0.870	1.348	1.809	8.807	4.917	0.862	0.055
Lawrenceville .....	18.4	20.4	1.000	0.996	1.855	8.723	4.334	1.480	0.087
Liberty .....	34.9	38.6	1.248	3.910	2.520	21.634	4.978	2.253	0.060
North Braddock .....	24.5	23.4	1.178	2.564	2.353	8.304	4.577	2.403	0.096
North Park .....	15.6	17.3	1.280	0.948	1.537	6.783	4.272	0.585	0.047
South Fayette .....	18.3	18.4	1.188	1.480	1.613	6.952	4.552	0.700	0.039
<b>Allegheny County Area Annual Design Values</b>									
Avalon .....	9.7	10.0	0.398	0.508	0.772	4.727	1.926	0.566	0.028
Clairton .....	9.3	9.2	0.508	1.266	0.843	2.703	2.205	0.734	0.014
Harrison .....	9.6	9.4	0.495	0.633	0.856	3.470	2.219	0.689	0.026
Lawrenceville .....	9.1	9.0	0.483	0.530	0.810	3.395	1.999	0.614	0.032
Liberty .....	12.6	12.5	0.618	1.509	1.058	4.637	2.795	0.937	0.017
North Braddock .....	10.7	10.0	0.608	0.989	0.951	3.192	2.463	0.797	0.023
North Park .....	7.8	7.6	0.593	0.478	0.743	2.219	1.908	0.560	0.026
South Fayette .....	8.3	8.5	0.579	0.636	0.774	2.844	2.071	0.592	0.020

\*\* 24-Hour Design values are rounded to nearest whole number so Avalon’s projected 2021 24-hour design value is 21 µg/m<sup>3</sup>  
Blank = Salt and passive component held constant from base to future case, OPP = other primary PM<sub>2.5</sub>, EC = elemental carbon, NH<sub>4</sub> = ammonium, OCmb = organic carbon mass (by) mass balance, SO<sub>4</sub> = sulfate, NO<sub>3</sub> = Nitrate, NaCl = “salt”.

Modeled 2021 PM<sub>2.5</sub> design values for all monitors except the Liberty monitor meet the revised 2012 PM<sub>2.5</sub> NAAQS. All monitors in Allegheny County meet the 24-hour PM<sub>2.5</sub> NAAQS using 2018 design values. Only the Liberty monitor is projected to exceed the revised 2012 annual PM<sub>2.5</sub> NAAQS in 2021, based on the CAMx developed design values. Therefore, in accordance with EPA’s modeling guidance, ACHD undertook a more refined local area analysis to better gauge emission control impacts for sources nearby the Liberty monitor in southern Allegheny County and the effect of controlling those sources on projected PM<sub>2.5</sub> concentrations in the Liberty monitor area. The Liberty monitor’s location on elevated terrain several miles downwind of the U.S. Steel Clairton Coke Works complicates this analysis.

As stated in EPA’s “Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM<sub>2.5</sub> and Regional Haze” (“Modeling Guidance”), “. . . there are numerous cases where local source contributions may not be dominant but are a sizable contributor to total annual average PM<sub>2.5</sub> at this monitor. In these cases, a more refined analysis of the contribution of local primary PM<sub>2.5</sub> sources to PM<sub>2.5</sub> at the monitor(s) will help explain the causes of nonattainment at and near the monitor and may lead to more efficient ways to attain the NAAQS by controlling emissions from local sources which may be important contributors to

the violating area.”<sup>39</sup> ACHD has done analysis of regional monitor concentrations and demonstrated unique industrial source influences using source apportionment modeling<sup>40</sup> and concluded that the Liberty monitor, “shows a large contribution from carbon-rich industrial sources, not present at the other sites, that contribute carbons as well as primary sulfate and several trace elements.”

EPA’s Modeling Guidance allows the use of several tools to evaluate contributions of local PM<sub>2.5</sub> sources, such as Gaussian dispersion modeling. While dispersion models may not be an appropriate tool for determining secondary PM<sub>2.5</sub> or ozone concentrations, they work well for use in determining local primary PM<sub>2.5</sub> impacts.<sup>41</sup> ACHD utilized EPA’s AERMOD model to conduct a local area analysis of the Liberty monitor area. The refined Liberty local analysis modeling used AERMOD to further resolve the impact of local area sources and meteorology beyond the CAMx analysis,

to generate the final modeled design values at the Liberty monitor. This local area analysis shows that the Liberty monitor will attain by attainment deadline.

Finally, ACHD included additional information in its September 30, 2019 SIP revision constituting a “weight of evidence” demonstration to support its modeling analysis, per EPA’s Modeling guidance.<sup>42</sup> ACHD’s weight of evidence demonstration includes analysis of downward PM<sub>2.5</sub> monitoring trends at Allegheny County monitors, a listing of permanent stationary source shutdowns (not reflected in the modeling analysis), PM<sub>2.5</sub> precursor reductions of SO<sub>2</sub> resulting from reductions in neighboring areas, emission reductions due to population decrease projections, and emission reductions due to voluntary programs (not included in the SIP). Also, additional EGU deactivations in Pennsylvania and surrounding states were announced after EGU forecasting was performed (based on 2015 data). These deactivations, which were not included in the air quality modeling for this plan, will lead to further reductions of PM<sub>2.5</sub> precursor emissions that

<sup>39</sup> EPA policy memo, *Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM<sub>2.5</sub> and Regional Haze*, from Richard Wayland, dated November 29, 2018. See p. 134. Available at: [https://epa.gov/ttn/scram/guidance/guide/O3-PM-RH-Modeling\\_Guidance-2018.pdf](https://epa.gov/ttn/scram/guidance/guide/O3-PM-RH-Modeling_Guidance-2018.pdf).

<sup>40</sup> See Appendix C of the September 30, 2019 SIP Revision, “Speciation and Source Apportionment Analysis.”

<sup>41</sup> *Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM<sub>2.5</sub> and Regional Haze*, from Richard Wayland, dated November 29, 2018, at p. 134.

<sup>42</sup> See pp. 169–171 of EPA’s *Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM<sub>2.5</sub> and Regional Haze*, which outlines several other analyses that could be included in any attainment demonstration to help bolster results from the primary modeling analysis. These could include additional modeling analyses, analyses of trends in ambient air quality and emissions, and additional emissions controls/reductions.

potentially contribute PM<sub>2.5</sub> emissions to Allegheny County. Further information on recent planned EGU deactivations can be found in Section 11.4 of the Allegheny County PM<sub>2.5</sub> Plan.

### 3. EPA's Evaluation and Proposed Action on Modeling

EPA has reviewed the modeling demonstration prepared by ACHD for the Allegheny County PM<sub>2.5</sub> nonattainment area. EPA also reviewed the supporting local area AERMOD dispersion model analysis prepared by ACHD to assess the impact of sources closest to the Liberty monitor. ACHD modeling protocols covering the Weather Research and Forecasting (WRF) prognostic meteorological model, the CAMx modeling domains and the AERMOD local area analysis all comport with EPA's Modeling Guidance.<sup>43</sup>

With the exception of the Liberty monitor, the CAMx model projected 2021 PM<sub>2.5</sub> design values for all monitors in Allegheny County are projected to be below the NAAQS by the attainment deadline. ACHD elected to conduct a refined local area assessment to further assess the impact of several large nearby sources beyond the scope of the CAMx modeling. The Allegheny County Plan contains ACHD's arguments supporting its contention that the CAMx 1.333 km modeling analysis could be overestimating projected 2021 PM<sub>2.5</sub> concentrations at the Liberty monitor.<sup>44</sup> These CAMx modeling limitations cited include: Limitations in CAMx's ability to properly characterize concentration gradients across the 1.333 km grid cells, failure to use the most up to date available stack test emissions data and stack test emission calculations for several key sources in the area, improper CAMx source characterizations, and improper source apportionment by CAMx.

EPA proposes to agree with ACHD's assessment that these are reasonable arguments to support use of a supplemental local area analysis using AERMOD dispersion modeling to refine projected 2021 model concentrations at the Liberty monitor. Final projected 2021 values at the Liberty monitor using the local area analysis were 35 µg/m<sup>3</sup> (24-hour) and 12.0 µg/m<sup>3</sup> (annual), which demonstrate attainment with the 2012 PM<sub>2.5</sub> NAAQS.

Given that the projected 2021 PM<sub>2.5</sub> concentrations at the Liberty monitor

just meet the 2012 PM<sub>2.5</sub> NAAQS, ACHD's use of additional supporting information via a weight of evidence demonstration is warranted. The Allegheny County Plan contains a monitor value trends analysis showing statistically significant downward trends at all of its PM<sub>2.5</sub> monitoring sites, including the Liberty monitor. EPA agrees with ACHD's contention that the Pennsylvania Jersey Maryland Power Pool (PJM Interconnection, or simply PJM) forecasts of electric generation for the last few years have overestimated the actual amount of electric generation needed, and as a result the projected regional PM<sub>2.5</sub> precursor emissions from the electric generation sector are likely overestimated.<sup>45</sup> Electricity generation and demand reports from PJM indicate a decline in coal-fired power plant operations and an increase in power generation share from a rise in number and capacity of lower emission producing, more efficient combined-cycle natural gas plants. This trend is leading to significant reductions in regional emissions of SO<sub>2</sub>, a precursor to PM<sub>2.5</sub>.<sup>46</sup> It also appears that the CAMx model overestimates projections for some monitor locations in Allegheny County, as shown by the fact that actual measured 2018 PM<sub>2.5</sub> design values are already below forecast 2021 model projections. Allegheny County also documented additional local emission reductions and source shutdowns which were not accounted for in the projected emission inventories, along with other voluntary programs that could lead to additional emission reductions. The combination of these weight of evidence impacts should lead to continued reductions in PM<sub>2.5</sub> monitor concentrations in Allegheny County.

EPA believes ACHD's modeling demonstration shows that its projected 2021 PM<sub>2.5</sub> design values will likely comply with the 2012 PM<sub>2.5</sub> NAAQS—particularly since the actual 2018 PM<sub>2.5</sub> design values at all monitoring sites in Allegheny County (except the Liberty monitor) meet the 2012 PM<sub>2.5</sub> NAAQS. Allegheny County's unmonitored area analysis attempts to more accurately ensure attainment over the entire county and not just those portions covered by the monitoring network. Given the results of ACHD's CAMx modeling for the area, the refined AERMOD local area assessment, and the additional emission reductions and other supporting

arguments from ACHD's weight of evidence demonstration, EPA supports ACHD's finding that PM<sub>2.5</sub> design values at the Liberty monitor will meet the 2012 PM<sub>2.5</sub> NAAQS by the December 31, 2021 attainment date.

### E. Attainment Demonstration

#### 1. Requirements for an Attainment Demonstration

CAA section 189(a)(1)(B) requires that each state in which a Moderate PM<sub>2.5</sub> nonattainment area is located submit an attainment plan that includes, among other things, either a demonstration (including air quality modeling) that the plan will provide for attainment by the applicable attainment date, or a demonstration that attainment by such date is impracticable. In addition, CAA section 172(c)(1) generally requires, for each nonattainment area, a plan that provides for the implementation of all RACM and RACT as expeditiously as practicable and provides for attainment of the NAAQS. EPA interprets these two provisions together to require that an attainment demonstration for a Moderate PM<sub>2.5</sub> nonattainment area meet the following criteria: (1) The attainment demonstration must show the projected attainment date for the area that is as expeditious as practicable; (2) the attainment demonstration must meet the requirements of 40 CFR part 51, appendix W and must include inventory data, modeling results, and emission reduction analyses on which the state has based its projected attainment date; (3) the base year for the emissions inventory required for the attainment demonstration must be one of the three years used for designations or another technically appropriate inventory year; and (4) the control strategies modeled as part of the attainment demonstration must be consistent with the control strategy requirements under 40 CFR 51.1009(a), including the requirements for RACM/RACT and additional reasonable measures.<sup>47</sup>

In addition, the attainment demonstration must provide for the implementation of all control measures needed for attainment as expeditiously as practicable, but no later than the beginning of the year containing the applicable attainment date.<sup>48</sup>

#### 2. Attainment Demonstration in the Allegheny County PM<sub>2.5</sub> Plan

As explained in section III.D of this document, ACHD's PM<sub>2.5</sub> SIP includes a modeling demonstration, based on

<sup>45</sup> See Appendix K of the September 30, 2019 SIP revision.

<sup>46</sup> See Section 3, page 104, [http://www.monitoringanalytics.com/reports/PJM\\_State\\_of\\_the\\_Market/2018.shtml](http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2018.shtml).

<sup>47</sup> See EPA's PM<sub>2.5</sub> Implementation Rule, at 40 CFR 51.1011(a).

<sup>48</sup> Id.

<sup>43</sup> Ibid.

<sup>44</sup> See Appendix F.3 of the September 30, 2019 SIP revision.

modeling using currently implemented emission control measures, that shows that monitors in Allegheny County, Pennsylvania will comply with both the 24-hour and the annual PM<sub>2.5</sub> standards by December 31, 2021. The modeling for the Allegheny County PM<sub>2.5</sub> nonattainment area focuses on regional impacts from PM<sub>2.5</sub> precursors and localized impacts from primary PM<sub>2.5</sub> sources. ACHD also conducted an unmonitored area analysis to better refine those areas of Allegheny County further from the air monitor sites, as was discussed earlier in section III.D of this document pertaining to the modeling.

The attainment plan includes a weight of evidence analysis to further bolster the attainment demonstration. The plan shows reductions in PM<sub>2.5</sub> emissions and PM<sub>2.5</sub> precursor emission inventories between 2011 and 2021 as a result of implementation of RACT/RACM, stationary source shutdowns (not reflected in the 2011 inventory), and from implemented state, local, and Federal emission controls.

ACHD contends that the results from their modeling analysis, as well as its weight of evidence supplemental analysis, demonstrate that all monitors in Allegheny County will attain the revised 2012 24-hour and annual PM<sub>2.5</sub> NAAQS by the statutory date (December 31, 2021).

### 3. EPA's Evaluation of ACHD's PM<sub>2.5</sub> Attainment Demonstration

EPA evaluated whether ACHD has adequately demonstrated that the Allegheny County Area meets EPA requirements for demonstration of attainment, as described here:

a. The attainment demonstration must show the projected attainment date for the area that is as expeditious as practicable.

As discussed in section III.D of this preamble, EPA proposes to find that the modeling demonstration and additional analysis in the attainment plan show that the area will achieve the 2012 PM<sub>2.5</sub> NAAQS by the attainment date. In its review of RACM measures, ACHD found no additional measures that, if enacted, would advance the attainment deadline earlier than the December 31, 2021 attainment deadline. Currently, 2018 PM<sub>2.5</sub> design values at all monitoring sites in Allegheny County except Liberty meet the 2012 PM<sub>2.5</sub> NAAQS. Allegheny County's unmonitored area analysis predicts attainment over the entire County. Given the results of the refined local area analysis, ACHD's analysis of potential model overestimations, and additional emission reductions identified as part of the weight of evidence demonstration

(that are not included in the modeling demonstration), EPA concludes that attainment demonstration modeling reasonably projects that all the monitors in the area will meet the 2012 PM<sub>2.5</sub> NAAQS by the 2021 projected attainment date and that attainment prior to that date is not practicable.

b. The attainment demonstration must meet the requirements of 40 CFR part 51, appendix W and must include inventory data, modeling results, and emission reduction analyses on which the state has based its projected attainment date;

Based on our analysis of the attainment modeling demonstration in section III.D of this document, EPA also proposes to conclude that the attainment demonstration modeling includes appropriate modeling analysis information complying with the requirements of 40 CFR part 51, appendix W. Based on EPA's review of the supporting PM<sub>2.5</sub> and PM<sub>2.5</sub> precursor emission inventories (as described in the emission inventory section of this action), EPA also proposes to conclude that the plan includes appropriate emission inventory data to meet the related EPA emission inventory requirements.

c. The base year for the emissions inventory required for the attainment demonstration must be one of the three years used for designations or another technically appropriate inventory year; and

ACHD selected 2011 as its base year for the emissions inventory used for the attainment demonstration. Since 2011 is one of the three years (*i.e.*, 2011–2013) used for designation purposes, EPA finds that this choice of base year for the attainment demonstration meets EPA requirements.

d. The control strategies modeled as part of the attainment demonstration must be consistent with the control strategy requirements under 40 CFR 51.1009(a), including the requirements for RACM/RACT and additional reasonable measures.

Based on our review of ACHD's attainment demonstration modeling, EPA proposes to find that the air quality modeling meets the requirements of 40 CFR 51.1011(a) and accounts for all technically and economically feasible control measures for direct PM<sub>2.5</sub> (as well as PM<sub>2.5</sub> precursor) emissions sources upon which PADEP and ACHD have based their projected attainment date for the area. 40 CFR 51.1009(a) and 40 CFR 51.1011.

As part of the RACT/RACM determination (in conjunction with the accompanying weight of evidence demonstration emission reductions),

EPA proposes to conclude that the control strategies modeled as part of the attainment demonstration are consistent with the control strategy requirements under 40 CFR 51.1009(a), including the requirements for RACM/RACT and additional reasonable measures. Based on the RACT/RACM analysis and the additional weight of evidence demonstration for PM<sub>2.5</sub> and PM<sub>2.5</sub> precursor emission reductions, EPA believes the attainment modeling analysis shows that the projected December 31, 2021 attainment date for the area is as expeditious as practicable.

e. The attainment demonstration must provide for the implementation of all control measures needed for attainment as expeditiously as practicable, but no later than the beginning of the year containing the applicable attainment date.

In Section 3 (Control Strategy) of the Allegheny County PM<sub>2.5</sub> Plan, ACHD sets out its attainment control strategy. ACHD incorporated the controls described in Section 3 in the future case 2021 emissions and modeling inventories for the attainment demonstration. These controls include local source modifications, local source shutdowns, and regional controls. ACHD states that the local source modifications are Federally enforceable through ACHD installation permits and operating permits. These local source modifications are fully implemented, and the shutdowns all occurred after the 2011 base year, but prior to the submittal of the plan. The regional controls include various Federal control measures as well as two Pennsylvania statewide measures related to sulfur limits for commercial fuel oil and VOC limits for adhesives and sealants. These regional measures are also fully implemented.

EPA has evaluated ACHD's control strategy for attainment and found that all control measures needed for attainment have been implemented as expeditiously as practicable. The attainment date is December 31, 2021. These controls were all implemented prior to PADEP submitting the September 30, 2019 SIP revision. Therefore, EPA concludes that the control measures were implemented well before the beginning of the year containing the applicable attainment date, 2021.

### 4. EPA's Proposed Action on the PM<sub>2.5</sub> Attainment Demonstration

EPA proposes to conclude that the attainment demonstration for the Allegheny County PM<sub>2.5</sub> Plan meets the requirements for a moderate area plan under CAA section 189(a)(1)(B), and

that this plan contains an approvable demonstration (including air quality modeling) showing that the plan provides for attainment by the applicable attainment date. EPA also proposes to conclude that this plan meets CAA section 172(c)(1) requirements to provide for the implementation of RACM and RACT as expeditiously as practicable and provides for attainment of the NAAQS. By meeting these requirements, EPA proposes to conclude that ACHD's plan for the Allegheny County PM<sub>2.5</sub> area meets applicable requirements for an approvable attainment demonstration for a Moderate PM<sub>2.5</sub> nonattainment area.

#### F. Reasonable Further Progress (RFP)

##### 1. Requirements for Ensuring Reasonable Further Progress

CAA section 172(c)(2) states that all nonattainment area plans shall demonstrate reasonable progress towards attainment. In addition, CAA section 189(c) requires that all PM<sub>2.5</sub> nonattainment area SIPs include a QM demonstration, to be achieved every three years until the area is redesignated to attainment and which demonstrate RFP, as defined in CAA section 171(l). Section 171(l) defines RFP as "such annual incremental reductions in emissions of the relevant air pollutant as are required by part D or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable [NAAQS] by the applicable date." Neither subpart 1 nor subpart 4 of part D, title I of the Act requires that a set percentage of emissions reductions be achieved in any given year for purposes of satisfying the RFP requirement. EPA's SIP requirements rule does not require a specific RFP related inventory, but the attainment projected inventory for the nonattainment area also may serve a purpose for evaluation of RFP.<sup>49</sup>

For purposes of the PM<sub>2.5</sub> NAAQS, EPA has interpreted the RFP requirement to require that nonattainment area plans show annual incremental emission reductions sufficient to maintain generally linear progress toward attainment by the applicable deadline.<sup>50</sup> As discussed in EPA guidance in the Addendum to the General Preamble (or "the Addendum"),<sup>51</sup> requiring linear progress in reductions of direct PM<sub>2.5</sub> and any individual precursor in a PM<sub>2.5</sub>

plan may be appropriate in situations where: The pollutant is emitted by a large number and range of sources; the relationship between any individual source or source category and overall air quality is not well known; a chemical transformation is involved (*e.g.*, secondary particulate significantly contributes to PM<sub>2.5</sub> levels over the standard); and/or the emission reductions necessary to attain the PM<sub>2.5</sub> standard are inventory-wide.<sup>52</sup>

The Addendum indicates that requiring linear progress may be less appropriate in other situations, such as: Where there are a limited number of sources of direct PM<sub>2.5</sub> or a precursor; where the relationships between individual sources and air quality are relatively well defined; and/or where the emission control systems utilized will result in swift and dramatic emission reductions.

In nonattainment areas characterized by any of these latter conditions, RFP may be better represented as stepwise progress as controls are implemented and achieve significant reductions soon thereafter. For example, if an area's nonattainment problem can be attributed to a few major sources, EPA guidance indicates that "RFP should be met by adherence to an ambitious compliance schedule, which is likely to periodically yield significant emission reductions of direct PM<sub>2.5</sub> or a PM<sub>2.5</sub> precursor."<sup>53</sup> This latter case is applicable to the Allegheny County Area, as the violating monitor is impacted heavily by nearby major emission sources, which are implementing controls in a stepwise fashion between the base year and attainment deadline.

Where attainment is driven by regulatory compliance, the PM<sub>2.5</sub> attainment plan should include a detailed schedule for compliance with regulations in the area and provide corresponding annual emission reductions to be realized from each milestone in the schedule.<sup>54</sup> In reviewing an attainment plan under CAA subpart 4, EPA considers whether the annual incremental emission reductions to be achieved are reasonable in light of the statutory objective of timely attainment. States should consider both cost-effectiveness and pollution reduction effectiveness when developing implementation schedules for its control measures and may implement measures that are more

effective at reducing PM<sub>2.5</sub> earlier to provide greater public health benefits.<sup>55</sup>

The PM<sub>2.5</sub> SIP Requirements Rule establishes specific regulatory requirements for purposes of satisfying the Act's RFP requirements and provides related guidance in the preamble to the rule. Specifically, under the PM<sub>2.5</sub> SIP Requirements Rule, each PM<sub>2.5</sub> attainment plan must contain an RFP analysis that includes, at minimum: (1) An implementation schedule for control measures; (2) RFP projected emissions for direct PM<sub>2.5</sub> and all PM<sub>2.5</sub> plan precursors for each applicable milestone year, based on the anticipated control measure implementation schedule; (3) a demonstration that the control strategy and implementation schedule will achieve reasonable progress toward attainment between the base year and the attainment year; and (4) a demonstration that by the end of the calendar year for each milestone date for the area, pollutant emissions will be at levels that reflect either generally linear progress or stepwise progress in reducing emissions on an annual basis between the base year and the attainment year.<sup>56</sup> States should estimate the RFP projected emissions for each milestone year by sector on a pollutant-by-pollutant basis.<sup>57</sup>

##### 2. RFP Demonstration in the Allegheny County PM<sub>2.5</sub> Plan

The RFP demonstration and QM demonstration methodology are detailed in Section 7 of the Allegheny County PM<sub>2.5</sub> Plan. ACHD elected to try to show that nonattainment area emissions of direct PM<sub>2.5</sub> pollutants (and significant PM<sub>2.5</sub> precursor pollutants) decline from the base year to the attainment year, in a generally linear manner.

The Allegheny County Plan estimates that emissions of direct PM<sub>2.5</sub> will decline steadily from 2011 through 2021 and that emissions of direct PM<sub>2.5</sub> will generally remain below the levels needed to show incremental, continuing progress toward attainment. ACHD compiled RFP emissions inventories for the milestone years of 2019 and 2022 using the base and projected inventories used in the attainment demonstration. Milestone years are based on a schedule of 4.5 and 7.5 years after designation (years 2019 and 2022, respectively), as outlined in the PM<sub>2.5</sub> Implementation Rule for a moderate PM<sub>2.5</sub> nonattainment area.<sup>58</sup> Year 2019

<sup>55</sup> Id.

<sup>56</sup> 40 CFR 51.1012(a).

<sup>57</sup> See 81 FR 58010, 58056 (August 24, 2016).

<sup>58</sup> RFP milestones occur every three years, starting from the due date of the SIP (*i.e.*, 18 months after designation), or 4.5 years and 7.5 after

<sup>49</sup> See EPA PM<sub>2.5</sub> Implementation Rule. 81 FR 58029, August 24, 2016.

<sup>50</sup> Addendum to the General Preamble at p. 42015. <sup>59</sup> FR 41998, August 16, 1994.

<sup>51</sup> Id.

<sup>52</sup> Id.

<sup>53</sup> Id at p. 42015.

<sup>54</sup> Id. at p. 42016.

emissions were calculated by linearly interpolating base year 2011 and projected case 2021 emissions. Year 2022 emissions were held constant from the projected 2021 case, as a conservative approach beyond the expected attainment timeframe. In

addition to direct PM<sub>2.5</sub> emissions, the RFP demonstration includes PM<sub>2.5</sub> precursor emissions of SO<sub>2</sub> and NO<sub>x</sub>. However, it does not include VOC and NH<sub>3</sub> emissions as PM<sub>2.5</sub> precursors because those emissions were shown to be insignificant for purposes of the

Allegheny County Plan. The direct PM<sub>2.5</sub> emissions for the baseline, milestone, and attainment years are shown in Table 6 (with PM<sub>2.5</sub> broken down into filterable and condensable components).<sup>59</sup> The precursor emissions are shown in Tables 7 and 8.

TABLE 6—DIRECT PM<sub>2.5</sub> RFP EMISSIONS INVENTORY FOR ALLEGHENY COUNTY, BY MILESTONE YEAR [Tons/year]

Year	Base year 2011			Milestone year 2019			Projected attainment 2021			Milestone year 2022		
	PM <sub>2.5</sub>	PM <sub>2.5</sub> (filter)	PM <sub>2.5</sub> (cond)	PM <sub>2.5</sub>	PM <sub>2.5</sub> (filter)	PM <sub>2.5</sub> (cond)	PM <sub>2.5</sub>	PM <sub>2.5</sub> (filter)	PM <sub>2.5</sub> (cond)	PM <sub>2.5</sub>	PM <sub>2.5</sub> (filter)	PM <sub>2.5</sub> (cond)
Point Sources .....	2,503	1,338	1,164	2,305	1,272	1,032	2,256	1,256	999	2,256	1,256	999
Area Sources .....	2,491	2,011	480	2,665	2,183	473	2,708	2,226	472	2,708	2,226	472
Non-road Mobile Sources .....	361	361	0	259	259	0	234	234	0	234	234	0
On-road Mobile Sources ..	450	450	0	303	303	0	266	266	0	266	266	0
Fires .....	24	24	0	24	24	0	24	24	0	24	24	0
Biogenic .....	0	0	0	0	0	0	0	0	0	0	0	0
Total .....	5,829	4,185	1,644	5,556	4,042	1,505	5,488	4,007	1,471	5,488	4,007	1,471

TABLE 7—ALLEGHENY COUNTY SO<sub>2</sub> PRECURSOR RFP EMISSIONS INVENTORY, BY MILESTONE YEAR [Tons/year]

	Baseline 2011	Milestone 2019	Projected attainment 2021	Milestone 2022
Stationary Point Sources .....	13,460	7,429	5,921	5,921
Area Sources .....	1,528	1,169	1,079	1,079
Non-road Mobile Sources .....	11	6	5	5
On-road Mobile Sources .....	78	41	31	31
Fires .....	2	2	2	2
Biogenic Sources .....	0	0	0	0
Total .....	15,080	8,647	7,039	7,039

TABLE 8—ALLEGHENY COUNTY NO<sub>x</sub> PRECURSOR RFP EMISSIONS INVENTORY [Tons/year]

	Baseline 2011	Milestone 2019	Projected 2021	Milestone 2022
Stationary Point Sources .....	11,128	8,568	7,928	7,928
Area Sources .....	6,979	6,727	6,664	6,664
Non-road Mobile Sources .....	3,921	2,554	2,212	2,212
On-road Mobile Sources .....	13,259	7,218	5,708	5,708
Fires .....	5	5	5	5
Biogenic Sources .....	166	166	166	166
Total .....	35,460	25,239	22,684	22,684

Allegheny County then compared these RFP inventory projections against the most currently available National Emissions Inventory (NEI) data (*i.e.*,

2017 for stationary point source and 2014 for mobile and area emissions) to track the progress of their actual

emissions against their 2019 milestone year shown in Table 9.<sup>60</sup>

designation in 2015. The second milestone of 7.5 years, although beyond the attainment date for a moderate area, is included in the event the area (at

a future date) is reclassified from moderate to serious nonattainment.

<sup>59</sup> See corresponding Tables 7.1, 7.2, and 7.3 of Pennsylvania's September 30, 2019 SIP revision.

<sup>60</sup> See Table 7.4 of the September 30, 2019 SIP revision.

TABLE 9—ALLEGHENY COUNTY COMPOSITE EMISSIONS INVENTORY, BASED ON MOST RECENT AVAILABLE NEI DATA [Tons/year]

	PM <sub>2.5</sub>	PM <sub>2.5</sub> (filter)	PM <sub>2.5</sub> (cond)	SO <sub>2</sub>	NO <sub>x</sub>
Point Sources (2017 NEI) .....	1,305	775	530	4,712	6,148
Area Sources (2014 NEI) .....	2,646	2,174	473	481	8,687
Non-road Mobile Sources (2014 NEI) .....	315	315	0	8	3,183
On-road Mobile Sources (2014 NEI) .....	389	389	0	76	11,754
Fires (2011 NEI) .....	24	24	0	2	5
Biogenic Sources (2011 NEI) .....	0	0	0	0	166
Total .....	4,679	3,677	1,003	5,279	29,943

While the NEI dates do not directly correspond to the 2019 RFP milestone year, the composite inventory shows that Allegheny County is already meeting their projected PM<sub>2.5</sub> and SO<sub>2</sub> emissions. While NO<sub>x</sub> was not yet meeting the 2019 milestone based on actual emissions data, additional NO<sub>x</sub> reductions from mobile sources that

occur after 2014 are expected to close the gap between 2014 (when the latest mobile NEI data was available) and the 2019 projected NO<sub>x</sub> milestone.

ACHD attempted to show that linear progress towards attainment is being made by examining its monitoring data and its point source emissions data for the period between the base and

attainment years, achieved by performing a linear regression on this data to show yearly progress. Monitored concentrations are presented in Tables 10 and 11, showing the annual and 24-hour PM<sub>2.5</sub> design values, respectively, for each Allegheny County site for years 2011 through 2018.<sup>61</sup>

TABLE 10—MONITORED ANNUAL PM<sub>2.5</sub> DESIGN VALUES (µg/m<sup>3</sup>) FOR ALLEGHENY COUNTY MONITOR SITES, WITH LINEAR PROGRESS RATES

Monitor site	Monitored annual design value (µg/m <sup>3</sup> )								Yearly rate of linear progress
	2011	2012	2013	2014	2015	2016	2017	2018	
Liberty .....	15.0	14.8	13.4	13.0	12.6	12.8	13.0	12.6	-0.33
Avalon .....	14.7	13.4	11.4	10.6	10.6	10.4	10.2	9.7	-0.64
North Braddock .....	12.7	12.5	11.7	11.4	11.2	11.0	10.8	10.7	-0.30
Harrison .....	12.4	11.7	10.6	10.0	9.8	9.8	9.8	9.6	-0.38
Lawrenceville .....	11.6	11.1	10.3	10.0	9.7	9.5	9.2	9.1	-0.35
Clairton .....	11.5	10.9	9.8	9.5	9.9	9.8	9.8	9.3	-0.24
South Fayette .....	11.0	10.5	9.6	9.0	8.8	8.5	8.4	8.3	-0.39
North Park .....	9.7	9.4	8.8	8.5	8.5	8.2	8.2	7.8	-0.25

TABLE 11—MONITORED 24-HOUR PM<sub>2.5</sub> DESIGN VALUES, WITH LINEAR PROGRESS RATES [µg/m<sup>3</sup>]

Allegheny county monitor site	Monitored 24-hour design value (µg/m <sup>3</sup> )								Linear progress yearly rate
	2011	2012	2013	2014	2015	2016	2017	2018	
Liberty .....	44	43	37	35	33	36	37	35	-1.2
Avalon .....	34	29	25	22	23	22	21	20	-1.7
North Braddock .....	34	33	29	26	25	25	24	24	-1.5
Harrison .....	30	28	25	22	22	21	21	20	-1.4
Clairton .....	28	26	22	23	25	26	22	19	-0.8
Lawrenceville .....	27	26	23	21	21	20	19	18	-1.3
South Fayette .....	27	26	24	20	21	19	19	18	-1.3
North Park .....	25	23	19	17	18	18	17	16	-1.1

ACHD's analysis of historical monitored PM<sub>2.5</sub> design values shows that all sites in Allegheny County are achieving roughly linear reductions from baseline case through the most recently available monitor data. All sites are already below the NAAQS on both

annual and 24-hour bases, with the exception of the Liberty monitor (for the annual PM<sub>2.5</sub> NAAQS). Based on the linear annual rate of 0.33 µg/m<sup>3</sup> improvement (for annual design values), ACHD expects the Liberty monitor to achieve the annual NAAQS by 2021.

Based on the linear yearly rate of 1.2 µg/m<sup>3</sup> for 24-hour design values, ACHD expects that the Liberty monitor will continue to achieve the 24-hour standard.

EPA's Implementation Rule requires attainment plans to provide an

<sup>61</sup> See Tables 7.5 and 7.6 in the September 30, 2019 SIP revision.



implementation schedule containing regulatory implementation timeframes showing progress towards attainment. However, ACHD did not present a schedule, contending that because all control measures identified for the Allegheny County Plan have already been implemented, and there are no identified RACM/RACT or “additional control measures” to be implemented, a schedule for implementation of controls is not applicable to this SIP.

### 3. EPA’s Evaluation of and Proposed Action on RFP

For direct PM<sub>2.5</sub>, EPA agrees that ACHD has shown steady progress towards measuring RFP for the 2012 PM<sub>2.5</sub> NAAQS in the Allegheny County area. ACHD has shown that the measures being implemented in the area show ongoing progress towards achieving the NAAQS.

ACHD has established milestones for comparison of emissions and monitored values corresponding to the milestone compliance demonstration timeframes discussed in the QM and has demonstrated that it has achieved its RFP related milestone requirements for the area. Monitored ambient values in the area are trending downward at a steady, if not linear rate, and ACHD has demonstrated that both emission reductions and monitor values (for both the annual and 24-hour PM<sub>2.5</sub> NAAQS) are expected to continue to decrease through the 2019 milestone deadline and the 2021 attainment deadline.

As discussed in the precursors section of this proposed document (section III.B), EPA is proposing to determine that SO<sub>2</sub> and NO<sub>x</sub> are significant precursors in the Allegheny County area, but that VOCs and NH<sub>3</sub> are insignificant PM<sub>2.5</sub> precursors that do not contribute significantly to ambient PM<sub>2.5</sub> levels in the area.

The Allegheny County PM<sub>2.5</sub> Plan documents ACHD’s assertion that they are implementing all reasonable RACM and RACT and additional reasonable measures for direct PM<sub>2.5</sub> as expeditiously as practicable. The plan projects levels of direct PM<sub>2.5</sub> emissions in 2019 and 2022 that reflect full implementation of the Commonwealth’s and ACHD’s attainment control strategy for direct PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors. ACHD’s comparison of the most recently available NEI emissions data with the projections for 2019 and 2022 in the plan show that emissions are falling at expected rates to achieve RFP, and (with the exception of NO<sub>x</sub>), most emissions are at or below 2021 projected levels (and are expected to continue to drop with continued implementation of control measures identified in the

plan).<sup>62</sup> Stationary source controls in the area include controls at the U.S. Steel Clairton Coke Works (the largest modeled emission source of PM<sub>2.5</sub> in the area), including installation of new low-emission quench towers in 2013, replacement of an older coking battery in 2012, and new baffle washing requirements implemented in 2012. Other stationary source controls in the area include addition of flue gas desulfurization at the GenOn Cheswick coal fired EGU, arc furnace improvements and replacements at several area steel manufacturing facilities, etc. Further, a number of facilities in the area have been permanently shut down and have surrendered their permits, including: The Shenango Coke facility, the Guardian and GE Bridgeville glass plants, Bakerstown Container, and Allegheny Aggregates, among others.<sup>63</sup> In addition, new mobile source NO<sub>x</sub> controls and the replacement of older, higher emitting mobile sources with new, lower-emitting mobile sources due to fleet turnover are expected to continue to reduce NO<sub>x</sub> emissions between the 2014 NEI and the 2019 and 2022 future milestone cases.

In the case of an RFP demonstration based solely on linear reductions in emissions through the attainment deadline, EPA expects that, so long as the attainment date is as expeditious as practicable, then generally linear progress toward attainment by that date would satisfy the RFP requirement.<sup>64</sup>

Thus, EPA proposes to find that the Allegheny County PM<sub>2.5</sub> Plan demonstrates that emissions of direct PM<sub>2.5</sub> will be reduced at rates representing generally linear progress towards attainment. EPA also proposes to find that the plan demonstrates that all reasonable measures that provide the bases for the direct PM<sub>2.5</sub> emissions projections in the RFP analysis are being implemented as expeditiously as practicable. Accordingly, we propose to determine that the plan requires the annual incremental reductions in emissions of direct PM<sub>2.5</sub> (and significant precursors of PM<sub>2.5</sub>) that are necessary to ensure RFP towards attainment of the 2012 annual PM<sub>2.5</sub> NAAQS by 2021, in accordance with the

<sup>62</sup> See section 3.0 of this document for a list of current control measures in the Allegheny County area, including new stationary source controls and source shutdowns in the area.

<sup>63</sup> See Section 3 of ACHD’s plan in the September 30, 2019 SIP revision for a complete listing of implemented PM<sub>2.5</sub> and PM<sub>2.5</sub> precursor control strategies.

<sup>64</sup> See EPA’s PM<sub>2.5</sub> Requirements Rule at 81 FR 58056, August 24, 2016.

requirements of CAA sections 171(1) and 172(c)(2).

### G. Quantitative Milestone (QM) Demonstration

#### 1. Requirements for a QM Demonstration

Section 189(c) requires that attainment plans include milestones to demonstrate that RFP is being achieved on a timely basis. The purpose of the QM demonstration is to allow for periodic evaluation of the area’s progress towards attainment of the NAAQS consistent with RFP requirements. Because RFP is an annual emission reduction requirement while the QMs are to be achieved every three years, when a state demonstrates compliance with the QM, it demonstrates that RFP has been achieved during each of the relevant three years. QMs provide an objective means to evaluate progress toward attainment, e.g., through imposition of emission controls in the attainment plan and the requirement to quantify those required emission reductions.

The CAA does not specify the starting point for counting the three-year periods for QMs under CAA section 189(c). In the General Preamble and Addendum, EPA interpreted the CAA to require that the starting point for the first three-year period be the due date for the Moderate area plan submission.<sup>65</sup> Consistent with this longstanding interpretation of the Act, the PM<sub>2.5</sub> SIP Requirements Rule requires that each plan for a Moderate PM<sub>2.5</sub> nonattainment area contain QMs to be achieved no later than milestone dates 4.5 years and 7.5 years from the date of designation of the area.<sup>66</sup> Because EPA designated the Allegheny County area nonattainment for the 2012 annual PM<sub>2.5</sub> NAAQS effective April 15, 2015, the applicable QM dates for purposes of the Allegheny County PM<sub>2.5</sub> Plan are October 15, 2019 and October 15, 2022.<sup>67</sup>

The CAA requires states to submit QM reports (due 90 days after each milestone). Under EPA’s PM<sub>2.5</sub> implementation rule,<sup>68</sup> a submitted QM report must include, at minimum: (1) A certification by the Governor (or Governor’s designee) that the SIP control strategy is being implemented consistent with the RFP plan, as described in the applicable attainment plan; (2) technical support, including

<sup>65</sup> General Preamble, 57 FR 13539 (April 16, 1992); and Addendum, 59 FR 42016 (August 16, 1994).

<sup>66</sup> 40 CFR 51.1013(a)(1).

<sup>67</sup> 80 FR 2206 (January 15, 2015).

<sup>68</sup> 81 FR 58010 (August 24, 2016) (codified at 40 CFR part 51, subpart Z).

calculations, sufficient to document completion statistics for appropriate milestones and to demonstrate that the QM has been satisfied and how the emissions reductions achieved to date compare to those required or scheduled to meet RFP; and (3) a discussion of whether the area will attain the applicable PM<sub>2.5</sub> NAAQS by the projected attainment date for the area.<sup>69</sup> These reports should include calculations and any assumptions made by the state concerning how RFP has been met, *e.g.*, through quantification of emission reductions to date.<sup>70</sup>

2. QM Demonstration in the Allegheny County PM<sub>2.5</sub> Plan and 2019 QM Report

a. Allegheny County Area QM Demonstration

The September 30, 2019 SIP revision describes ACHD’s approach to demonstrating compliance with the QM

requirements of CAA section 189, in which measured air quality concentrations, as well as future projected air quality concentrations, are used to satisfy the milestone reporting requirement. For the Allegheny County moderate PM<sub>2.5</sub> nonattainment area, these QMs must to be reported to EPA for the milestone years 2019 and (if applicable) 2022. The QM report for year 2019 was due January 14, 2020 (*i.e.*, 90 days after the first milestone date of October 15, 2019). The second report for the 2022 milestone would be required only if the area failed to attain the NAAQS by its 2021 attainment date and were to be reclassified to a serious area. In that case, a 2022 milestone report would be due by January 14, 2023.

Because the Liberty monitor was the only monitor in the Allegheny County area not meeting the 2012 annual PM<sub>2.5</sub> NAAQS when EPA designated the area

nonattainment and is currently not meeting the NAAQS, ACHD based its QMs on the design values for the Liberty monitor. For the 2019 QM demonstration in the September 20, 2019 SIP, ACHD calculated the expected design values at the Liberty monitor based on a linear regression over a 10-year timeframe (from 2011 to the 2021 attainment year). The air quality modeling in the Allegheny County Plan predicts that the area will attain the 2012 annual PM<sub>2.5</sub> NAAQS by its December 31, 2021 attainment deadline. ACHD assumed that the 2019–2021 design value at the Liberty monitor would be equal to the level of the 2012 annual PM<sub>2.5</sub> NAAQS, or 12 µg/m<sup>3</sup>. Assuming linear progress, ACHD calculated 2019 design values for the Liberty monitor for both the annual and 24-hour<sup>71</sup> PM<sub>2.5</sub> NAAQS in Table 12.

TABLE 12—LIBERTY MONITOR AIR QUALITY CONCENTRATION MILESTONES [µg/m<sup>3</sup>]

Liberty design value	Base year (2011)	Projected year (2021)	Linear yearly rate	Milestone year (2019)	Milestone year (2022)
Annual .....	15.0	12.0	–0.3	12.6	12.0
24-Hour .....	44	35	–0.9	37	35

b. Allegheny County PM<sub>2.5</sub> Area 2019 QM Report

PADEP submitted the Allegheny County 2019 QM Report to EPA on January 14, 2020 and a supplement to

that report dated April 8, 2020, (collectively, the 2019 QM Report). The 2019 QM Report includes air quality monitoring data reports from AQS showing that the 2016–2018 design values for the Liberty monitor met the

milestone levels set forth in Table 12. In addition, the preliminary<sup>72</sup> 2017–2019 design values at the Liberty monitor are lower than the 2016–2018 design values. The data is presented in Table 13.

TABLE 13—LIBERTY MONITOR DESIGN VALUES FOR THE 2012 ANNUAL AND 24 HOUR PM<sub>2.5</sub> NAAQS [ln µg/m<sup>3</sup>]

NAAQS	2019 Milestone	2016–2018 Final	2017–2019 Preliminary
Annual .....	12.6	12.6	12.4
24-Hour .....	37	37	35

AQS reports submitted in the 2019 QM Report continue to show that all other monitors in the Allegheny County area have design values lower than those of the Liberty monitor. To demonstrate RFP is being met, as part of the 2019 QM Report ACHD verified that all controls listed as part of the plan’s control strategy remain in place. Further, ACHD states that, “RFP is being achieved for Allegheny County and

progress should continue toward attainment, to be achieved by the attainment date of December 31, 2021.” Furthermore, PADEP concurred with ACHD’s certification that the control strategy is being implemented in Allegheny County consistent with the RFP plan and that milestones are being achieved as included in the SIP.

In the attainment plan, ACHD developed the 2019 RFP milestone

emissions inventory by linearly interpolating 2011 base year and projected 2021 attainment year emissions inventories used in its modeled attainment demonstration. In the 2019 QM report, ACHD presented updated actual emissions data for the stationary point source sector of the emissions inventory for 2017 and 2018, along with prior data for the 2011–2016 period, as listed in Table 14.

<sup>69</sup> 40 CFR 51.1013(b).

<sup>70</sup> *Id.* at pp. 42016–42017.

<sup>71</sup> The 24-hour PM<sub>2.5</sub> NAAQS is set at 35 µg/m<sup>3</sup>.

<sup>72</sup> The 2019 data is fully validated and quality-assured, but not yet certified. The 2019 data must

be certified by May 1, 2020, in accordance with 40 CFR 58.15.

TABLE 14—ANNUAL ALLEGHENY COUNTY POINT SOURCE EMISSIONS FOR THE PERIOD 2011–2018, WITH YEARLY LINEAR PROGRESS RATES  
[In tons/year]

Pollutant	Point source emissions (tons/year)								Linear progress yearly rate
	2011	2012	2013	2014	2015	2016	2017	2018	
PM <sub>2.5</sub> .....	2,503	1,725	1,822	2,127	1,511	1,373	1,282	1,360	– 145
SO <sub>2</sub> .....	13,460	6,542	6,032	8,593	5,279	4,864	4,758	7,122	– 716
NO <sub>x</sub> .....	11,128	11,881	13,073	13,715	10,278	8,560	6,337	6,925	– 882

Pursuant to 40 CFR 51.1013(b)(3), the QM report must include a discussion of whether the PM<sub>2.5</sub> NAAQS will be attained by the projected attainment date for the area. ACHD’s 2019 QM report contains an evaluation of ambient air quality trends, meteorology, and emission control strategies. In the 2019 QM Report, ACHD concludes that it

expects the area to attain the 2012 annual PM<sub>2.5</sub> NAAQS by the December 31, 2021 attainment date. The 2019 report also contains a trend analysis of the Liberty monitor showing a decline in monitored PM<sub>2.5</sub> concentrations through 2019. An accompanying analysis of quarterly means for the Liberty monitor from 1999 to 2019

shows that the lowest quarterly means have occurred in the last four years, with three of the record-low quarters occurring in the last two years. The annual weighted PM<sub>2.5</sub> means for the Liberty monitor are shown in Table 15 for the 2009–2019 period.

TABLE 15—LIBERTY MONITOR ANNUAL WEIGHTED MEAN CONCENTRATIONS, 2009–2019

Metric	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Liberty weighted mean (µg/m <sup>3</sup> ) .....	15.0	16.0	14.0	14.3	12.0	12.7	12.9	12.8	13.4	11.5	12.2

**Note:** ACHD observes that concentrations are declining based on emission controls, but differences in the yearly concentrations at the Liberty monitor show dependence on the frequency and severity of inversions. Inversions were less frequent in 2013 and more prevalent in 2012 and 2017.

ACHD concludes that, based on monitored data, meteorology, and controls, ACHD expects that the Allegheny County Area will attain the 2012 annual PM<sub>2.5</sub> NAAQS by or before its December 31, 2021 attainment deadline.

3. EPA’s Evaluation and Proposed Action on the QM Demonstration

EPA has reviewed the QM demonstration contained in the September 30, 2019 moderate area attainment plan for the Allegheny County Area, as well as the 2019 QM Report submitted to EPA on January 14, 2020 (as supplemented on April 8, 2020). This demonstration confirms that the monitored ambient air quality levels in the area satisfy EPA requirements for milestone levels.

The 2019 QM report shows that 2016–2018 design values for the Liberty monitor (the only monitor that did not meet the NAAQS since the area was designated nonattainment) met the milestone test established by ACHD in the attainment plan. Preliminary 2017–2019 design values at the Liberty monitor presented in the 2019 QM report are lower than the 2016–2018 design values. Finally, air quality data reports from EPA’s AQS show that the 2016–2018 design values for the Liberty monitor met the QM levels set out in the attainment plan.

EPA has reviewed the RFP data presented in the 2019 QM Report and finds that the Allegheny County area has made demonstrable progress in reducing emissions of PM<sub>2.5</sub> and PM<sub>2.5</sub> significant precursors since EPA designated the area nonattainment for the PM<sub>2.5</sub> NAAQS in 2015. Comparing stationary source emissions in the 2019 QM Report to those predicted in the attainment plan for 2019, EPA finds that the most recent emissions inventory is well below the RFP milestone. Therefore, EPA finds that emissions reductions are meeting RFP through the 2019 period.

EPA determined in an April 22, 2020 letter to PADEP that (based on its review of information contained in the plan and additional information provided in the 2019 QM report) ACHD has adequately demonstrated that the 2019 QMs for a moderate area plan have been met. The 2019 QM Report contains each of the required components to meet the QM requirements of CAA section 189(c)(2) and 40 CFR 51.1013(b).

For further information on EPA’s review of the QM methodology and the 2019 QM Report, please refer to our TSD on the 2019 QM Report prepared in support of this action, which is available in the docket.<sup>73</sup>

<sup>73</sup> By letter dated April 22, 2020, from EPA Regional Administrator Servidio to PADEP

H. Contingency Measures

1. Requirements for Contingency Measures

In accordance with section 172(c)(9) of the CAA, the PM<sub>2.5</sub> SIP Requirements Rule requires that attainment demonstrations for moderate PM<sub>2.5</sub> nonattainment areas include contingency measures.<sup>74</sup> Contingency measures are additional control measures to be implemented in the event that EPA determines that an area failed to meet RFP requirements (including associated QMs) or failed to attain the PM<sub>2.5</sub> primary standard by the applicable attainment date.

In order for contingency measures to be approvable as part of a state’s PM<sub>2.5</sub> moderate area attainment plan, the measures must meet the following requirements set forth in the PM<sub>2.5</sub> SIP Requirements Rule and 40 CFR 51.1014: (1) The contingency measures must be fully adopted rules or control measures that are ready to be implemented quickly upon a determination by the Administrator of the nonattainment area’s failure to meet RFP, failure to meet any QM, failure to submit a QM

Secretary McDonnell, EPA determined that ACHD adequately demonstrated that the 2019 QMs provided in the attainment plan have been met.

<sup>74</sup> See 40 CFR 51.1014 and 81 FR 58010 at p. 58066, August 24, 2016.

report or failure to attain the standard by the applicable attainment date; (2) the plan must contain trigger mechanisms for the contingency measures, specify a schedule for implementation, and indicate that the measures will be implemented with minimal further action by the state or by EPA;<sup>75</sup> (3) the contingency measures shall consist of control measures that are not otherwise included in the control strategy or that achieve emissions reductions not otherwise relied upon in the control strategy for the area; and (4) the contingency measures should provide for emissions reductions approximately equivalent to one year's worth of reductions needed for RFP.

## 2. Contingency Measures in the Allegheny County PM<sub>2.5</sub> Plan

Section 8 (Contingency Measures) of the Allegheny County PM<sub>2.5</sub> Plan identifies as contingency measures two actions for the mitigation of primary PM<sub>2.5</sub> from the U.S. Steel Clairton Plant that are to be implemented as the result of a July 27, 2019 settlement agreement and order (#19060) between ACHD and U.S. Steel. These actions, which include the installation of a cover and/or air curtain and the installation of a new combustion (under-firing) stack at the U.S. Steel Clairton Works, are to be implemented by May 1, 2020 and November 1, 2021, respectively. ACHD predicts that, based on additional modeling, these two actions will lead to a reduction in absolute annual modeled impacts of 0.10 µg/m<sup>3</sup> at the Liberty monitor (AQS Site ID 42-003-0064) and that the resulting 2022 PM<sub>2.5</sub> annual design value will be lowered by 0.07 µg/m<sup>3</sup>. ACHD did not include these expected reductions in PM<sub>2.5</sub> emissions at the U.S. Steel Clairton facility in the emissions inventory portion of the Allegheny County PM<sub>2.5</sub> Plan.

## 3. EPA's Evaluation and Proposed Action on Contingency Measures

EPA does not consider the two actions contained in the July 27, 2019 settlement agreement and order to be suitable contingency measures. According to the PM<sub>2.5</sub> SIP Requirements Rule, "Contingency measures must be fully adopted rules or control measures that are ready to be

implemented quickly upon a determination by the Administrator of the nonattainment area's failure to meet RFP, failure to meet any QM, failure to submit a QM report or failure to attain the standard by the applicable attainment date." 81 FR 58010 at 58066, August 24, 2016.

Contingency measures are to be implemented only if they are "triggered" in the event of the Administrator's determination that the Area failed to meet RFP requirements (including associated QMs) or failed to attain the PM<sub>2.5</sub> NAAQS by the applicable attainment date. The installation of the air curtain and stack at the U.S. Steel Clairton Coke Works will be implemented regardless of whether the Allegheny County Area fails to meet the RFP requirements or attain the PM<sub>2.5</sub> NAAQS by the attainment date. Measures that will be implemented regardless of being triggered are not considered appropriate to use as contingency measures. Therefore, EPA cannot fully approve Section 8 (Contingency Measures) of the Allegheny County PM<sub>2.5</sub> Plan because the two measures in the settlement agreement and order do not meet the contingency measures requirements of the PM<sub>2.5</sub> SIP Requirements Rule and 40 CFR 51.1014.

EPA informed ACHD of this concern prior to the publication of ACHD's proposed plan. In response, PADEP submitted a letter to EPA dated April 20, 2020, concurring with ACHD's commitment to adopt specific contingency measures and an attainment year MVEB in accordance with EPA's proposed conditional approval of those elements of the September 30, 2019 SIP revision. In its April 7, 2020 letter to PADEP, ACHD commits to adopt measures from the following list that will provide for a reduction of 34 tons per year of direct PM<sub>2.5</sub> emissions countywide (or an equivalent reduction in combination of PM<sub>2.5</sub> precursors), or 9.4 tons per year of PM<sub>2.5</sub> in the immediate vicinity of the Liberty monitor. Measures include implementation of the following at the U.S. Steel Clairton Coke Works: (1) Increased residence times for the Pushing Emission Control (PEC) hoods during the pushing process (as described in ACHD Article XXI § 2105.21.e.6) for batteries 1-3, 13-15, and 19-20; (2) increased baffle washing for the Quench Towers; (3) road and parking lot paving; and (4) improvements to the PEC baghouses. Additional potential measures include road paving on a portion of unpaved public county roads; adoption of an ordinance to restrict sale and use of

heavy fuel oil and/or waste derived liquid fuel (WDLF) in Allegheny County; expansion of an existing wood stove change out program; repowering or replacement of tugboats and/or locomotives utilized by the U.S. Steel Mon Valley Works facilities; and replacement of locomotives at the McKeesport switchyard with new, cleaner equipment that meets the most recent standards.

After adopting measures, PADEP will submit a SIP revision, on behalf of ACHD, containing the adopted measures and meeting the requirements of the PM<sub>2.5</sub> SIP Requirements Rule and 40 CFR 51.1014. In addition, the contingency measures section will include a description of the trigger mechanisms and schedules for implementation of the contingency measures, as required by section 51.1014. ACHD and PADEP have committed to submit the contingency measures SIP revision to EPA as expeditiously as possible, but no later than one year after the effective date of EPA's final notice of conditional approval of the September 30, 2019 SIP revision.

However, as stated previously, the expected emission reductions from the installation of the air curtain and stack at the U.S. Steel Clairton Coke Works were not included in the emissions inventory included in the Allegheny County PM<sub>2.5</sub> Plan. Therefore, it is expected that these actions will provide for additional emission reductions beyond those projected in the Allegheny County PM<sub>2.5</sub> Plan. Thus, the installation of the air curtain and stack at Clairton provide additional assurance that the 2012 PM<sub>2.5</sub> NAAQS will be attained in the Allegheny County nonattainment area by the attainment date.

Therefore, EPA concludes that the installation of the air curtain and stack at the U.S. Steel Clairton Coke Works are better suited as additional control measures for attainment of the PM<sub>2.5</sub> NAAQS in the Allegheny County Area. EPA is proposing to approve the installation of the air curtain and stack at the Clairton Coke Works contained in the settlement agreement and order (#19060) referenced in the Allegheny County PM<sub>2.5</sub> Plan as additional control measures for the attainment of the PM<sub>2.5</sub> NAAQS in the Allegheny County nonattainment area.

EPA is also proposing to conditionally approve the contingency measures portion of the Allegheny County PM<sub>2.5</sub> Plan. As discussed previously, ACHD commits to adopt contingency measures and submit, through PADEP, a supplemental SIP revision consisting of

<sup>75</sup> According to the PM<sub>2.5</sub> SIP Requirements Rule, states must show that the contingency measures can be implemented with minimal further action and no additional rulemaking actions, such as public hearings or legislative review. EPA generally expects all actions needed to effect full implementation of the contingency measures to occur within 60 days after EPA notifies the state of the area's failure to meet an RFP requirement or attain the NAAQS.

a revised contingency measures section of the Allegheny County PM<sub>2.5</sub> Plan that includes adopted contingency measures from the April 20, 2020 letter and meets the requirements of the PM<sub>2.5</sub> SIP Requirements Rule and 40 CFR 51.1014. EPA's approval of the contingency measures portion of the Allegheny County PM<sub>2.5</sub> Plan is contingent on ACHD's adoption of approvable contingency measures and submittal of a SIP revision that meets the contingency measures requirements of the PM<sub>2.5</sub> SIP Requirements Rule and 40 CFR 51.1014.

### *I. Transportation Conformity and MVEBs*

#### 1. Requirements for Motor Vehicle Emission Budgets

Section 176(c) of the CAA requires Federal actions in nonattainment and maintenance areas to conform to the SIP's goals of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of the standards. Conformity to the SIP's goals means that such actions will not: (1) Cause or contribute to violations of a NAAQS, (2) worsen the severity of an existing violation, or (3) delay timely attainment of any NAAQS or any interim milestone. Section 176(c)(4) of the CAA requires that transportation plans, programs, and projects which are funded or approved under title 23 of the United States Code must be determined to conform with state or Federal air implementation plans. A MVEB is that portion of the total allowable emissions allocated to highway and transit vehicle use that are defined in the implementation plan for a control strategy SIP revision.<sup>76</sup>

Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to EPA's transportation conformity rule, codified at 40 CFR part 93, subpart A. Under this rule, the area metropolitan planning organization (MPO) coordinates with state and local air quality and transportation agencies, EPA, FHWA, and FTA to demonstrate that an area's regional transportation plans and transportation improvement programs conform to the applicable SIP.<sup>77</sup> This

<sup>76</sup> EPA's Transportation Conformity Rule at 40 CFR 93.101 defines a "control strategy SIP revision" as a "plan which contains specific strategies for controlling the emissions and reducing ambient levels of pollutants in order to satisfy CAA requirements of RFP and attainment."

<sup>77</sup> The Southwestern Pennsylvania Commission (SPC) is the official Metropolitan Planning Organization (MPO) for the 10-county Southwestern Pennsylvania Region, which includes the City of Pittsburgh and surrounding counties—including

conformity demonstration is typically done by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the MVEB contained in all control strategy SIPs.<sup>78</sup> An attainment, maintenance, or RFP plan SIP should include budgets for the attainment year, each required RFP milestone year, and the last year of the maintenance plan, as appropriate. Budgets are generally established for specific years and specific pollutants or precursors and must reflect all of the motor vehicle control measures contained in the applicable plan.<sup>79</sup> For MVEBs to be approvable, they must meet, at a minimum, EPA's conformity adequacy criteria at 40 CFR 93.118(e)(4).

All PM<sub>2.5</sub> control strategy SIP MVEBs must include direct PM<sub>2.5</sub> motor vehicle emissions (including emissions from tailpipes, brake wear, and tire wear).<sup>80</sup> Precursors of PM<sub>2.5</sub> must also be included in the MVEB, in certain circumstances. NO<sub>x</sub> is included in PM<sub>2.5</sub> nonattainment area MVEBs, unless both EPA Regional Administrator and the director of the state air agency made a finding that transportation-related emissions of NO<sub>x</sub> are insignificant to PM<sub>2.5</sub> nonattainment in the area.<sup>81</sup> Other potential PM<sub>2.5</sub> precursor emissions, such as VOC, SO<sub>2</sub> and NH<sub>3</sub>, are only included in PM<sub>2.5</sub> area MVEBs if EPA has determined them to be significant in the area.<sup>82</sup>

In order for a pollutant or precursor to be considered an insignificant contributor, the control strategy SIP must demonstrate that it is unreasonable to expect that such an area would experience enough motor vehicle emissions growth in that pollutant/precursor for a NAAQS violation to occur. Insignificance determinations are based on factors such as air quality, SIP motor vehicle control measures, trends and projections of motor vehicle emissions, and the percentage of the total SIP inventory that is comprised of motor vehicle emissions.<sup>83</sup> ACHD did

Allegheny County. SPC is responsible for planning and prioritizing the use of all state and Federal transportation funds allocated to the region.

<sup>78</sup> See 40 CFR 93.118(a).

<sup>79</sup> See 40 CFR 93.118(e)(4)(v).

<sup>80</sup> Per 40 CFR 93.102(b)(3), direct PM<sub>2.5</sub> emissions from re-entrained road dust need only be included in the MVEB if EPA Regional Administrator or the director of the state air agency has made a finding that re-entrained road dust emissions within the area are a significant contributor to the PM<sub>2.5</sub> nonattainment problem or if the applicable SIP includes re-entrained road dust in the budget as part of the RFP, attainment, or maintenance strategy.

<sup>81</sup> See 40 CFR 93.102(b)(2)(iv).

<sup>82</sup> See 40 CFR 93.102(b)(2)(v).

<sup>83</sup> See 40 CFR 93.109(f) for criteria for insignificance determinations. EPA's rationale for

not submit and is not seeking an insignificance determination for NO<sub>x</sub>.

#### 2. Motor Vehicle Emission Budgets in the Allegheny County PM<sub>2.5</sub> Attainment Plan

The Commonwealth's September 30, 2019 SIP revision lacks a MVEB specific to the 2012 PM<sub>2.5</sub> attainment plan for the attainment year of 2021. Instead, the SIP revision refers to existing MVEBs for the 1997 and 2006 PM<sub>2.5</sub> NAAQS established by EPA's approval of the maintenance plan for the Pittsburgh-Beaver Valley area for the 1997 and 2006 PM<sub>2.5</sub> NAAQS.<sup>84</sup> This maintenance plan included MVEBs for 2017 and 2025, for the larger Pittsburgh-Beaver Valley area (comprised of part of Allegheny County (excluding the Liberty-Clairton area), Beaver, Butler, Washington, and Westmoreland Counties, as well as portions of Armstrong County, Greene, and Lawrence Counties).

Neither EPA nor the Commonwealth's air director have made transportation-related insignificance findings for NO<sub>x</sub>, and EPA has not determined that transportation-related emissions of SO<sub>2</sub>, VOC, or NH<sub>3</sub> are significant in Allegheny County. Therefore, there is no established MVEB for SO<sub>2</sub>, VOC, and NH<sub>3</sub> in any approved control strategy SIP for the Allegheny County PM<sub>2.5</sub> area. ACHD has determined VOC and NH<sub>3</sub> to be insignificant as precursors to PM<sub>2.5</sub> nonattainment as part of the attainment plan.<sup>85</sup> Therefore, transportation conformity requirements are applicable only to PM<sub>2.5</sub> and NO<sub>x</sub> for the Allegheny County Area.

#### 3. EPA's Evaluation and Proposed Action on the Intended MVEB

EPA is proposing to find that ACHD's plan failed to establish a MVEB for the 2012 PM<sub>2.5</sub> attainment plan control strategy SIP for the 2021 attainment year, as required for emission budgets by 40 CFR 93.118. A budget is required for each NAAQS for each control strategy SIP, so that conformity can be demonstrated via a "budget" test for that particular area and control strategy milestone.<sup>86</sup>

Because the Allegheny County PM<sub>2.5</sub> Plan fails to establish an attainment year 2021 MVEB for PM<sub>2.5</sub> and NO<sub>x</sub>, EPA cannot approve this element of the plan at this time. However, PADEP subsequently submitted a letter to EPA

allowing insignificance determinations is described in the July 1, 2004 revision to the Transportation Conformity Rule at 69 FR 40004.

<sup>84</sup> See 80 FR 59624, October 2, 2015.

<sup>85</sup> See Section 5 (Modeling Demonstration) of the September 30, 2019 SIP revision.

<sup>86</sup> See 40 CFR 93.118(a), (b), and (e).

dated April 20, 2020, committing to remedy this deficiency by establishing a MVEB in accordance with EPA’s Transportation Conformity Rule requirements by September 30, 2020. Because ACHD and the MPO have identified the actual MVEB to be

established as part of their April 20, 2020 commitment, EPA is including the MVEB in this action for informational purposes only. The MVEB must still be adopted by Allegheny County through its normal SIP development process, which includes EPA’s related

requirements to undergo public comment. The April 20, 2020 commitment letter clearly identifies the MVEB that ACHD and the MPO intend to propose for the 2021 attainment year, as shown in Table 16.

TABLE 16—ALLEGHENY COUNTY, PA 2012 PM<sub>2.5</sub> NAAQS ATTAINMENT YEAR INTENDED MVEB FOR DIRECT PM<sub>2.5</sub> AND NITROGEN OXIDES (NO<sub>x</sub>)

Motor vehicle emissions budget year	Direct PM <sub>2.5</sub> on-road emissions (tons per year)	NO <sub>x</sub> on-road emissions (tons per year)
2021 .....	266	5,708

Remedy of this MVEB-related deficiency of the September 30, 2019 SIP revision entails: Identifying the attainment year MVEB in a supplemental SIP revision; conducting a public comment process on the identified MVEB (per the requirements of EPA conformity rule at 40 CFR 93.118(e)); and formally submitting the established MVEB to EPA as a supplemental revision to the attainment plan SIP revision. EPA is proposing to conditionally approve the MVEB element of the SIP submittal until ACHD remedies the deficiency with the 2021 MVEB.

**IV. Summary of Proposed Action and Request for Public Comment**

Under CAA section 110(k)(3), EPA is proposing to approve Pennsylvania’s September 30, 2019 SIP revision to address the CAA’s Moderate area planning requirements for the 2012 PM<sub>2.5</sub> NAAQS in the Allegheny County nonattainment area—with the exception of the contingency measures and MVEB elements of the plan, which EPA proposes to conditionally approve.

Specifically, EPA is proposing to approve the following elements of the Allegheny County PM<sub>2.5</sub> Plan:

- (1) The 2011 base year emissions inventory as meeting the requirements of CAA section 172(c)(3);
- (2) The RACM/RACT demonstration as meeting the requirements of CAA sections 172(c)(1) and 189(a)(1)(C);
- (3) The attainment demonstration as meeting the requirements of CAA sections 172(c)(1) and 189(a)(1)(B);
- (4) The RFP demonstration as meeting the requirements of CAA section 172(c)(2); and
- (5) The QM demonstration as meeting the requirements of CAA section 189(c).

EPA also proposes to conditionally approve the MVEB and contingency measures elements of the Allegheny County PM<sub>2.5</sub> Plan. Under section 110(k)(4) of the CAA, EPA may

conditionally approve a plan based on a commitment from the Commonwealth to adopt specific enforceable measures within a date certain no more than one year from the date of final conditional approval. If Pennsylvania fails to meet its commitments by the commitment date, the approval is treated as a disapproval.

Specifically, EPA is proposing to conditionally approve the following elements of the Allegheny County PM<sub>2.5</sub> Plan:

(1) The attainment year 2021 MVEB, as the plan failed to identify the MVEB, as required by CAA section 176(c) and 40 CFR part 93, subpart A. However, Pennsylvania submitted a commitment letter to EPA on April 20, 2020 transmitting ACHD’s April 7, 2020 letter that identifies their proposed MVEB for 2021 and commits to finalize a 2021 budget (following public notice and comment) and to submit it to EPA by September 30, 2020 as a revision to this SIP submission and;

(2) The contingency measures in Section 8 (Contingency Measures) of the Allegheny County PM<sub>2.5</sub> Plan, as the submitted contingency measures do not satisfy the requirements of the CAA section 172(c)(9) or the PM<sub>2.5</sub> SIP Requirements Rule at 40 CFR 51.1014. Upon receipt of that subsequent SIP submission, EPA will take separate action to determine whether those adopted contingency measures satisfy relevant EPA requirements for contingency measures.

EPA is soliciting public comments on the issues discussed in this document. The deadline and instructions for submission of comments are provided in the **DATES** and **ADDRESSES** sections of this action. EPA will consider any received comments prior to finalizing this proposed action.

**V. Statutory and Executive Order Reviews**

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA’s role is to approve state choices, provided that they meet the criteria of the CAA.

Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

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

- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

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

In addition, this proposed rule proposing to approve the Allegheny County PM<sub>2.5</sub> Plan (with the exception of the contingency measures and MVEB elements, which EPA is proposing to conditionally approve) does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the Commonwealth, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

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

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: June 4, 2020

**Cosmo Servidio,**

*Regional Administrator, Region III.*

[FR Doc. 2020-12499 Filed 6-11-20; 8:45 am]

BILLING CODE 6560-50-P

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 82

[EPA-HQ-OAR-2019-0698; FRL-10009-66-OAR]

RIN 2060-AU81

#### Protection of Stratospheric Ozone: Listing of Substitutes Under the Significant New Alternatives Policy Program

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** Pursuant to the U.S. Environmental Protection Agency's (EPA) Significant New Alternatives Policy program, this action proposes to list certain substances in the refrigeration and air conditioning sector

and the foam blowing sector. For the retail food refrigeration—medium-temperature stand-alone units (new) end-use, EPA is proposing to list substitutes as acceptable subject to narrowed use limits. For the residential and light commercial air conditioning and heat pumps (new) end-use, EPA is proposing to list substitutes as acceptable subject to use conditions. For the foam blowing sector, extruded polystyrene: Boardstock and billet end-use, EPA is proposing to list substitutes as acceptable. This action also proposes to remove an acceptable subject to use conditions listing for the fire suppression sector because EPA more recently listed the substitute as acceptable with no use restrictions.

**DATES:** Comments must be received on or before July 27, 2020. Any party requesting a public hearing must notify the contact listed below under **FOR FURTHER INFORMATION CONTACT** by 5 p.m. Eastern Daylight Time on June 17, 2020. If a virtual hearing is held, it will take place on or before June 29, 2020 and further information will be provided on EPA's Stratospheric Ozone website at [www.epa.gov/ozone/snap](http://www.epa.gov/ozone/snap).

**ADDRESSES:** You may send comments, identified by docket identification (ID) number EPA-HQ-OAR-2019-0698, to the *Federal eRulemaking Portal*: <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or withdrawn. EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the web, cloud, or other file sharing system). For additional submission methods, EPA's full public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>. Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room was closed to public visitors on March 31, 2020, to reduce the risk of transmitting COVID-19. Our Docket Center staff will continue to provide remote customer service via email,

phone, and webform. We encourage the public to submit comments via <https://www.regulations.gov> or email, as there is a temporary suspension of mail delivery to EPA, and no hand deliveries are currently accepted. For further information on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

**FOR FURTHER INFORMATION CONTACT:** Christina Thompson, Stratospheric Protection Division, Office of Atmospheric Programs (Mail Code 6205T), Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460; telephone number: 202-564-0983; email address: [thompson.christina@epa.gov](mailto:thompson.christina@epa.gov). Notices and rulemakings under EPA's Significant New Alternatives Policy program are available on EPA's Stratospheric Ozone website at <https://www.epa.gov/snap/snap-regulations>.

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