

**Region 3 Plan Summary**  
**Pennsylvania – Carbon Monoxide Second Limited Maintenance Plan for the Pittsburgh Area through 2022**

**Title:** Pennsylvania – Carbon Monoxide Second Limited Maintenance Plan for the Pittsburgh Area through 2022...second 10 year update to the CO NAAQS maintenance plan from 2013 to 2022.

**Federal Register Dates:** March 27, 2014, 79 FR 17054 (Final Rule); March 27, 2014, 79 FR 17091 (Proposed Rule).

**EPA Effective date:** March 27, 2014

**State Submittal Dates:** July 18, 2011 with a supplemental submission on November 26, 2013.

**Background:**

For nonclassifiable CO areas seeking redesignation to attainment whose design value at the time of redesignation is 85 percent or less than the 8-hour CO NAAQS, or 7.65 ppm, a state may choose to submit a less rigorous maintenance plan than generally required. This option is termed a limited maintenance plan (LMP). EPA believes that the full maintenance plan requirements do not need to be applied to these areas because they have achieved air quality levels well below the standard without application of control measures required by the CAA for moderate and serious nonattainment areas. Also, these areas do not have either a recent history of monitored violations of the CO NAAQS or a long prior history of monitored air quality problems. Therefore, EPA believes that for a limited maintenance area, the air quality along with the continued applicability of prevention of significant deterioration (PSD) permitting requirements, any control measures already in the SIP, and Federal measures, should provide adequate assurance of maintenance over the 10-year maintenance period. The same applies for areas submitting their second maintenance plans.

On July 18, 2011, the Pennsylvania Department of Environmental Protection (PADEP) submitted, on behalf of Allegheny County Health Department (ACHD), as a SIP revision a second 10-year CO maintenance plan for the Pittsburgh Area. In recognition of the continuing record of monitoring data showing ambient CO 8-hour concentrations in the Pittsburgh Area well below 7.65 ppm, **ACHD once more chose the LMP option for the development of this second maintenance plan.**

Monitoring data shows that the Pittsburgh Area continues to attain the CO NAAQS. As shown in Table 1, the second highest 8-hour CO average concentrations recorded at all monitoring stations in the Pittsburgh Area have remained below 7.65 ppm since 1994. In addition, ACHD reported that the 1-hour CO NAAQS has not been violated in the Pittsburgh Area since 1980,

and has been below 15 ppm since 1988. Thus, monitoring data show that Pittsburgh Area continues to be eligible for the LMP option.

**Table 1. Pittsburgh Area's CO Second Highest 8-Hour Average Concentrations during 1988-2013, in ppm**

<b>Year</b>	<b>Oakland <sup>a</sup> (42-003-0026)</b>	<b>Forbes Avenue at Grant Street (Courthouse) (42-003-0038)</b>	<b>Gateway Center Subway Entrance (Point) <sup>b</sup> (42-003-0052)</b>	<b>Flag Plaza (Bedford Avenue) <sup>b</sup> (42-003-0031)</b>
<b>1988</b>	8.4	6.6	6.5	-
<b>1989</b>	6.5	7.8	6.7	-
<b>1990</b>	6.9	8.1	6.5	-
<b>1991</b>	5.0	6.2	6.6	-
<b>1992</b>	7.7	7.8	6.7	-
<b>1993</b>	4.8	6.2	5.2	-
<b>1994</b>	5.6	7.5	6.8	-
<b>1995</b>	4.3	5.9	3.8	-
<b>1996</b>	5.0	4.8	3.9	-
<b>1997</b>	2.5	3.9	2.9	-
<b>1998</b>	-	4.9	3.1	-
<b>1999</b>	-	4.0	3.1	-
<b>2000</b>	-	3.5	2.6	-
<b>2001</b>	-	3.4	-	-
<b>2002</b>	-	2.9	-	-
<b>2003</b>	-	3.5	-	2.2
<b>2004</b>	-	2.5	-	1.9
<b>2005</b>	-	2.3	-	1.8
<b>2006</b>	-	2.1	-	1.8
<b>2007</b>	-	3.5	-	1.3

<b>2008</b>	-	1.6	-	1.3
<b>2009</b>	-	1.5	-	1.3
<b>2010</b>	-	1.7	-	1.2
<b>2011</b>	-	1.6	-	1.4
<b>2012</b>	-	1.7	-	1.5
<b>2013<sup>c</sup></b>		1.5		1.4

Source: Pennsylvania's July 18, 2011 SIP submittal and EPA's January 9, 2014 AQS Reports AMP450.

<sup>a</sup> The CO monitor at the Oakland site (AQS ID: 42-003-0026) was terminated in October 1997, as approved by EPA.

<sup>b</sup> EPA approved the removal of the CO monitor at the Gateway Center Subway Entrance (Point) (AQS ID: 42-003-0052) in May 2000 and its relocation to the Flag Plaza (AQS ID: 42-003-0031) near the Civic Arena, which started operating in 2003.

<sup>c</sup> Air quality monitoring data for 2013 is preliminary.

The 2008 emissions inventory was taken from EPA's 2008 National Emissions Inventory (NEI) (Version 2, April 10, 2012) for the months of January, February, and December, and was adjusted as necessary to reflect typical winter day CO emissions. The submitted 2008 attainment inventory contains emissions estimates of point, area, mobile onroad and mobile nonroad road sources in the Area. The primary source of CO emissions in the Allegheny Area is the onroad (highway) sources, contributing to 54% of total CO emissions of the Area.

Table 2 provides a summary of the 2008 attainment inventory submitted with the maintenance plan. Table 2 presents the 2008 attainment inventory in annual CO emissions and CO emissions for a typical winter day. For a more detailed evaluation of the 2008 emissions inventory, see EPA's Technical Support Document (TSD) dated February 4, 2014 for this rulemaking action, which is available online at [www.regulations.gov](http://www.regulations.gov), Docket number EPA-R03-OAR-2012-0248.

**Table 2. Pittsburgh Area's CO 2008 Attainment Emissions Inventory (tons per day)**

<b>Source Category</b>	<b>CO Annual Emissions</b>	<b>CO Typical Winter Day Emissions</b>
Point	25.28	22.76
Area	43.12	57.65
Onroad	265.48	396.38
Nonroad	155.11	96.99
<b>TOTAL</b>	<b>488.99</b>	<b>573.78</b>

Although not required, ACHD included a demonstration as part of its second maintenance plan to show maintenance of the CO NAAQS during the second 10-year period for the Pittsburgh Area. For a maintenance demonstration, emissions inventories are required to be projected to future dates to assess the influence of future growth and controls; however, the demonstration

need not be based on modeling. See *Wall v. EPA*, supra; *Sierra Club v. EPA*, supra. See also 66 FR 53099-53100 and 68 FR 25430-32. ACHD used projected inventories to show that the Pittsburgh Area continues to remain in attainment and developed projected inventories for an interim year of 2013 and a maintenance end year of 2022. Where the emissions inventory method of showing maintenance of the NAAQS is used, a state may demonstrate maintenance by showing that the future emissions of a pollutant or its precursors will not exceed the level of the attainment inventory. The demonstration should project emissions for a period of 10 years following the redesignation or the initial 10-year maintenance period. The projected inventory should consider future growth, should be consistent with the attainment inventory, and should document data inputs and assumptions.

EPA finds that the 2011 and 2013 emissions inventories were developed in conformance with EPA’s guidance, and therefore, are approvable as part of the maintenance demonstration. A summary of the projected onroad CO emissions inventories for the Pittsburgh Area is provided in Table 3.

**Table 3. Pittsburgh Area’s CO Projected 2013 and 2022 Vehicle Miles Traveled (VMT) and Typical Winter Day Emissions for Onroad Sources, in tons per day (tpd)**

2013		2022	
VMT	CO Typical Winter Day Emissions	VMT	CO Typical Winter Day Emissions
25,727,530	394.53	28,377,731	336.27

EPA finds that maintenance demonstration shows that the Pittsburgh Area will continue to maintain the CO NAAQS during the second maintenance period, throughout 2022.

**Table 3. Comparison of the 2008, 2013, and 2022 CO Typical Winter Day Emissions for Onroad Sources in the Pittsburgh Area, in tpd**

Emissions of Onroad Sources			Emissions Reductions	
2008	2013	2022	2008-2013	2008-2022
396.38	394.53	336.27	1.85	60.11

**Monitoring Network and Verification of Continued Attainment:**

In accordance with 40 CFR part 58, ACHD operates and maintains an EPA-approved CO monitoring network in the Pittsburgh Area, in order to verify attainment of the CO NAAQS and ensure the need to trigger contingency measures. Currently, the monitoring network consists of 2 monitoring sites, the Forbes Avenue and Grant Street site (AQS ID: 42-003-0038) and the Flag

Plaza site (AQS ID: 42-003-0031), whose data is eligible for comparison to the CO NAAQS. ACHD operated a CO monitoring site in Oakland (42-003-0026) until its termination on October 1997. The monitor at the Gateway Center Subway Entrance (42-003-0052) was shut down in May 2000 to accommodate local construction work and, as approved by EPA, was permanently relocated to the Flag Plaza site (42-003-0031) in 2003.

EPA previously determined that the CO monitoring network for the Pittsburgh Area is adequate. EPA found that the number of monitors in the Area meets the minimum regulatory requirements given in 40 CFR part 58, appendix D, section 4.2, and that the monitoring network in place is in accordance with ACHD's most recent annual monitoring network plans approved by EPA, as required by 40 CFR 58.10.

#### **Contingency Plan:**

The Pittsburgh Area's second CO maintenance plan carries forward the same contingency provisions that were included in the first maintenance plan and previously approved by EPA. The plan relies on quality-assured air quality monitoring data in the Pittsburgh Area to identify the triggering indicator necessary to implement contingency measures.

#### **Transportation Conformity:**

**While EPA's LMP option does not exempt the Pittsburgh Area from the need to affirm conformity, under this option the Area may demonstrate transportation conformity without submitting MVEBs.** ACHD did not submit any MVEBs with the Pittsburgh Area's CO second maintenance plan. However, EPA believes that the second maintenance plan demonstrates that it is unreasonable to expect that the Area would experience enough growth in motor vehicle (onroad) emissions for a violation of the CO NAAQS to occur, and on that basis, EPA is proposing to approve this plan for transportation conformity purposes.

Evaluation of transportation conformity for transportation projects in Allegheny County is usually performed by the Southwestern Pennsylvania Commission and other agencies. This determination waives the need for CO MVEB, although it does not relieve the Pittsburgh Area of the other transportation conformity requirements. After EPA's approval of this finding, there will be no requirement for ACHD to satisfy the regional emissions analysis with respect to CO under 40 CFR 93.118 and/or 40 CFR 93.119 in determining the conformity of transportation plans, programs and projects in the Pittsburgh Area. See 40 CFR 93.109(j).

#### **Conclusion:**

**EPA finds that the second CO maintenance plan for the Pittsburgh Area, submitted by the Commonwealth as a SIP revision on July 18, 2011 and supplemented on November 26, 2013, provides an acceptable update of the various elements of the initial EPA-approved CO maintenance plan, and essentially carries forward all of the control measures and contingency provisions relied upon in the earlier plan. EPA concludes that the Pittsburgh Area's second CO maintenance plan concurs with EPA's guidance for limited maintenance plans and thus, satisfies the requirements of CAA section 175A.**