

Region III Plan Summary
Pennsylvania; Attainment Plan for the Lower Beaver Valley Nonattainment Area for the
2008 Lead National Ambient Air Quality Standard

Title: Attainment Plan for the Lower Beaver Valley Nonattainment Area for the 2008 Lead National Ambient Air Quality Standard

Federal Register Date: Final Rulemaking- April 25, 2016, 81 FR 24027, Proposed- Rulemaking - January 20, 2016 (81 FR 3078)

EPA Effective Date: May 25, 2016

State Submittal Date: January 15, 2015

Affected Area(s): Vanport, Potter, and Center Townships in Beaver County

Background of the Plan:

The Environmental Protection Agency (EPA) has approved a state implementation plan (SIP) revision submitted by the Commonwealth of Pennsylvania (Pennsylvania). The revision demonstrates attainment of the 2008 lead national ambient air quality standards (NAAQS) in the Lower Beaver Valley nonattainment area (Lower Beaver Valley Area or Area).

The attainment plan includes the base year emissions inventory, an analysis of reasonably available control technology (RACT), reasonably available control measures (RACM) and reasonable further progress (RFP), a modeling demonstration of attainment, and contingency measures for the Area.

Summary:

On January 15, 2015, Pennsylvania through the Department of Environmental Protection (PADEP) submitted an attainment plan for the Lower Beaver Valley Area as a SIP revision which includes a base year emissions inventory, an attainment demonstration, an analysis of RACM and RACT, provisions for RFP, and contingency measures. The SIP revision also includes as attainment control measures certain provisions of a November 21, 2012 consent order and agreement (COA) (specifically including paragraphs 3, 5, and 6) between PADEP and Horsehead Corporation (Horsehead), the largest source of lead in the Area at the time of designations. Pennsylvania's attainment demonstration relied primarily on the emissions reductions achieved by the shutdown of the smelter equipment at Horsehead, as required by the COA. EPA's analysis of the submitted attainment plan includes a review of these elements for the Lower Beaver Valley Area.

Base Year Inventory:

Table 1 identifies the 2010 base year emissions inventory for the Lower Beaver Valley Area. In 2010, lead emissions from point sources or stacks in the Area totaled 5.5961 tons. Lead emissions from nonpoint sources, including mobile sources, also were included in the lead inventory but found by PADEP to be insignificant. There are no other sources of lead emissions in the Area above 0.5 tpy of lead emissions nor smaller sources. According to Pennsylvania's inventory, the Monaca Smelter's emissions comprised almost all of the lead emissions in the Area in 2010.

Table 1. 2010 Base Year Lower Beaver Valley Nonattainment Area Emissions Inventory	
Source	Lead emissions (tpy)
Monaca Smelter	5.5531
AES Beaver Valley Plant	0.0430
Subtotal for Point Sources	5.5961
Nonpoint Sources	0.0009
Total	5.5970

Additional information regarding the emissions inventory for the Area and EPA's analysis of the inventory in accordance with CAA requirements in CAA section 172(c) and 40 CFR 51.117(e) can be found in the TSD for the Base Year Inventory for the Lower Beaver Valley Area which is included in the docket for this action (EPA-R03-OAR-2015-0112).

Contingency Measure(s):

The January 15, 2015 SIP submittal provides the following process for triggering the above contingency measures. Any single sample result exceeding $0.15\mu\text{g}/\text{m}^3$ at a monitor in the Lower Beaver Valley Area would trigger investigation by PADEP to determine what specific activities have caused the increased concentration level (because the only significant stationary source of lead emissions is no longer in operation). Should PADEP determine, as the result of observations by PADEP or receipt of a complaint, that specific activities are likely to have caused an exceedance or violation, PADEP will notify the party that an action appears to be adversely affecting the NAAQS or violating Pennsylvania regulations. Corrective action in the form of contingency measures would follow, involving enforcement as appropriate. Pennsylvania's SIP submission further provides that persistent lead exceedances at any monitor would trigger increased sampling frequency at the monitor where such an exceedance occurred.¹ Four or more sample results within any three-month rolling period reported to exceed $0.15\mu\text{g}/\text{m}^3$ would trigger expanded ambient air monitoring and investigation as needed to identify the potential source(s) and address the source of the exceedance.

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¹ Sampling would increase from once every six days to every three days if results from two samples during any three-month rolling period exceed $0.15\mu\text{g}/\text{m}^3$. Sampling frequency would further increase to daily if results from three samples during any three-month period exceed $0.15\mu\text{g}/\text{m}^3$.