

Region III Plan Summary
**Pennsylvania: Attainment Plan and Base Year Emissions Inventory for the North Reading
Nonattainment Area for the 2008 Lead NAAQS**

Title: Attainment Plan and Base Year Emissions Inventory for the North Reading Nonattainment Area for the 2008 Lead NAAQS

Federal Register Dates: Final Rule 81 FR 45613 (April 8, 2016) Proposed Rule 81 FR 1136 (January 11, 2016)

EPA Effective date: May 9, 2016

State Submittal Date: August 12, 2015

Affected Area: North Reading Area consists of Alsace and Muhlenberg Townships and Laureldale Borough, Berks County, Pennsylvania

Background:

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 North Reading 2008 lead nonattainment area (North Reading 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), modeling demonstration of lead attainment, and contingency measures for the Area. EPA has approved Pennsylvania's lead attainment plan with the base year emissions inventory for the North Reading Area as a revision to Pennsylvania's SIP in accordance with the requirements of the Clean Air Act (CAA).

On August 12, 2015, the Pennsylvania Department of Environmental Protection (PADEP) submitted a revision to its SIP for the purpose of demonstrating attainment of the 2008 lead NAAQS in the North Reading Area. Pennsylvania's lead attainment plan for the Area includes a base year emissions inventory, a modeling demonstration of lead NAAQS attainment, an analysis of RACM, RACT, and RFP, and contingency measures. The attainment plan includes portions of two Consent Order and Agreements (COA) between PADEP and Exide Technologies (Exide) and Yuasa Battery, Inc. (Yuasa) which demonstrate how Pennsylvania will achieve and maintain compliance with the 2008 lead NAAQS. The lead attainment plan specifically includes paragraph 3 of the COA between Exide and PADEP, dated June 15, 2015, and paragraphs 5 and 22 of the COA between Yuasa and PADEP, dated June 12, 2015.

Summary of the Plan:

EPA approved as a revision to the Pennsylvania state implementation plan the 2010 base year emissions inventory for the North Reading, Pennsylvania nonattainment area for the 2008 lead NAAQS. This SIP revision was submitted by the Secretary of the Pennsylvania Department of Environmental Protection on August 12, 2015. This submittal consists of the 2010 base year emissions inventories for all relevant sources in the North Reading nonattainment area for the pollutant lead (Pb).

EPA approved the state implementation plan for the North Reading, Pennsylvania nonattainment area for the 2008 lead NAAQS. This SIP revision including reasonably available control measures, reasonably available control technology, contingency measures, and attainment demonstration was submitted by the Secretary of the Pennsylvania Department of Environmental Protection on August 12, 2015.

Monitoring:

Pennsylvania's lead monitoring network consists of lead monitors that have been designated by EPA as either Reference or Equivalent monitors and are subject to the federal quality assurance requirements of 40 CFR part 58, appendix A. All samplers are located at sites that have met the minimum siting requirements of 40 CFR part 58, appendices D and E.

PADEP currently operates two ambient air monitors in the North Reading Area. The Laureldale South monitor has been in place since 1976 and the Laureldale North monitor since January 1, 2010.¹ As required in 40 CFR 58.10, Pennsylvania must provide EPA with an annual network design plan in order to inform both EPA and the public of any planned changes to the sampling network for the next year. EPA approved Pennsylvania's 2015 Annual Air Quality Monitoring Network Design Plan, the most recent year available at the time of this evaluation, on November 12, 2015.

Emissions Inventory:

PADEP submitted a 2010 inventory for the point sources of lead emissions in the North Reading Area, which includes Exide and Yuasa. For the nonpoint sources of lead emissions, PADEP submitted EPA's 2011 National Emissions Inventory (NEI) v2 data as a surrogate for the 2010 inventory. The nonpoint source values for the North Reading Area were calculated using Berks County data apportioned by population.

EPA reviewed the results, procedures, and methodologies for Pennsylvania's submission and found them to be reasonable for calculating the lead base year inventory for section 172(c)(3) of the CAA and in accordance with 40 CFR 51.117(e).

In its SIP submittal, Pennsylvania identified one facility as having the potential to emit 0.5 tpy or more of lead in the North Reading Area. This facility, Exide Technologies, a secondary lead smelter, was included in PADEP's modeling analysis. Yuasa, a lead-acid battery assembly plant located across the street from Exide, was also included in the modeling analysis. Lead emissions from nonpoint sources and mobile sources were also examined but found to be insignificant and while included in PADEP's lead inventory, they were not included in the lead modeling demonstration due to their insignificance.

¹ The Laureldale North monitor (AQS 42-011-0020) is associated with the Exide facility located in Berks County and was installed in accordance with EPA's network design requirements for the 2008 lead NAAQS. 73 FR 66964. EPA reaffirmed placement of lead ambient air monitors in Pennsylvania when approving Pennsylvania's lead infrastructure SIP for the 2008 NAAQS as meeting requirements in section 110(a)(1) and (2) of the CAA. See 79 FR 19009 (April 7, 2014). EPA's approval of the lead infrastructure SIP, particularly regarding the approval of Pennsylvania's monitoring locations for section 110(a)(2)(B), was upheld in 2015 by the United States Court of Appeal for the Third Circuit. *Berks County v. EPA*, 3rd Cir. No. 14-2913, 2015 U.S. App. LEXIS 14050 (August 11, 2015).

In accordance with 40 CFR part 51, appendix W, PADEP completed an air-dispersion modeling analysis for base year and future year emission inventories representing Exide and Yuasa, with reported lead emissions in 2010 and projected emissions for 2015. The 2015 lead emissions were used in the modeled attainment demonstration to determine if projected lead emission rates would comply with the 2008 lead NAAQS. The 2015 lead emissions for Exide and Yuasa were determined by incorporating emission reductions from the implementation of the control measures set forth in the National Emission Standards for Hazardous Air Pollutants for Secondary Lead Smelting sources (Secondary Lead Smelting NESHAP) and from the stack-specific emission limits identified in the COAs between Pennsylvania and Exide and Yuasa.² PADEP modeled seventy-seven lead emission sources for Exide and twenty-seven lead emission sources for Yuasa. Table 1 summarizes 2010 and 2015 lead emissions compiled by the Commonwealth for both Exide and Yuasa.

Table 1. North Reading Lead Source Emissions Summary (tpy)

Lead Source	2010 Lead Emissions (actual)	2015 Lead Emissions (projected)
Exide	1.0417	0.8991
Yuasa	0.1520	0.0850

EPA has found that PADEP’s modeling demonstration was done in accordance with appendix W of 40 CFR part 51 and the modeling indicates that the Area will meet the 2008 lead NAAQS.

RACM, RACT, and RFP Analysis:

In order to bring the North Reading Area into attainment for the 2008 lead NAAQS, Pennsylvania developed and modeled a control strategy for emissions from stacks at stationary sources and fugitive emissions from stationary sources from the two point sources of lead in the nonattainment area. Section IV of Pennsylvania’s attainment plan SIP revision details the control measures and emission limits for the North Reading Area.

EPA has approved Pennsylvania’s determination that the controls for lead emissions at Exide constitute RACM/RACT because PADEP conducted a reasonable analysis of controls that are technically and economically feasible and set the lowest achievable limits given those controls in accordance with the CAA requirements. By approving these control measures as RACM/RACT for Exide for purposes of the North Reading attainment plan, these control measures will become permanent and federally enforceable and will meet the requirements of the CAA and the 2008 lead NAAQS.

Contingency Measures:

For the North Reading Area attainment plan, Pennsylvania’s SIP submission provides that if the air quality data for any 3-month rolling period after the implementation of the control measures identified in the COAs and Plan Approval No. 06-05066I exceed the 0.15 µg/m³ lead NAAQS, at least one of the contingency measures set forth in the COAs shall be implemented.

² PADEP’s RACM/RACT proposal for Exide, which includes measures that would require the facility to meet the requirements of the Secondary Lead Smelting NESHAP, is contained within Exide’s Plan Approval No. 06-05066I.

The COA between Pennsylvania and Exide includes for contingency measures: Upgrade of existing fugitive dust control devices; increase existing lead emission stack heights; increased frequency of plant roadway surface cleaning; and an investigative study. PADEP will use two types of triggers, ambient air quality and emission events, for the implementation of contingency measures in the North Reading Area. Detailed information regarding the contingency measure actions and contingency measure triggers for Exide and Yuasa as well as EPA's analysis of these contingency measures for compliance with CAA requirements, can be found in the Control Strategies, Reasonable Further Progress, and Contingency Measures TSD located in the docket for this proposed action (EPA-R03-OAR-2015-0773) at www.regulations.gov.

EPA has found these contingency measure triggers and actions will help ensure compliance with the 2008 lead NAAQS and meet the requirements of section 172(c)(9) of the CAA to ensure continued attainment of the NAAQS if any events occur interfering with attainment. EPA has approved Pennsylvania's SIP revision as meeting section 172(c)(9) of the CAA.

Conclusion:

EPA has determined that Pennsylvania's attainment plan for the 2008 lead NAAQS for the North Reading Area meets the applicable requirements of the CAA. EPA has approved the lead attainment plan for the North Reading Area and paragraph 3 of the COA between PADEP and Exide and paragraphs 5 and 22 of the COA between PADEP and Yuasa, as submitted on August 12, 2015 as a revision to the Pennsylvania SIP. EPA has determined that the SIP meets the applicable requirements of the CAA. **Specifically, EPA has taken final action to approve Pennsylvania's August 12, 2015 SIP submission which includes the attainment demonstration, base year emissions inventory, RACM/RACT and RFP analyses, and contingency measures.** With the EPA's final approval of Pennsylvania's North Reading attainment plan submittal, EPA no longer has any obligation to promulgate a FIP for the North Reading Area pursuant to sections 110(c) or 172(c) of the CAA.

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