

Region 3 Plan Summary
Allegheny County, Pennsylvania PM-10 Maintenance Plan

Title: Maintenance Plan and Contingency Measures for the Allegheny County PM₁₀ Maintenance Area

Federal Register Dates: July 18, 2003, 68 FR 42657 (proposed rule); September 11, 2003, 68 FR 53515 (final rule).

EPA Effective date: October 14, 2003

State Submittal: October 28, 2002

Affected Areas: Liberty, Lincoln, Port Vue and Glassport Boroughs; City of Clairton

Summary of the Plan: The maintenance plan includes the 1994 emission inventory used to perform the modeling demonstration of attainment and updates the inventory for 1999. Emissions declined between 1994 and 1999 in the Liberty Borough area due to the previously described shutdowns. Any future increases in emissions and/or significant changes to the stack configurations/parameters from those modeled in the attainment demonstration due to new or modifying stationary sources would be subject to new source review requirements including a demonstration that the NAAQS is protected.

The emission reductions due to the SIP-approved control measures and emission limitations imposed by the 1994 attainment plan and the emission reductions due to permanent and enforceable shutdowns have reduced the ambient levels of PM₁₀ such that the Liberty Borough area attained the NAAQS and continues to attain the NAAQS.

The maintenance demonstration is based upon maximum allowable PM₁₀ emission levels for stationary sources impacting the nonattainment area. Steel and coke facilities are the most significant contributors of PM₁₀ emissions in the area. The PM₁₀ emissions from public roads were less than 3% of the total emissions. Population has steadily decreased in the county since 1990 and this decline is expected to continue through 2020. Therefore, other sources of emissions related to population are expected to decline. Employment in manufacturing is expected to decrease significantly between 2002-2020. As a result of these factors, PM₁₀ emissions are expected to remain below the emission levels used to demonstrate attainment for the next 10 years and the area is expected to maintain the PM₁₀ NAAQS for the next 10 years.

The maintenance plan includes commitments to continue to operate and maintain the network of ambient PM₁₀ monitoring stations in the Liberty Borough area in accordance with provisions of 40 CFR part 58 to demonstrate ongoing attainment with the PM₁₀ NAAQS.

In addition to reviewing monitoring data in the Liberty Borough area to verify continued attainment, the Allegheny County Health Department (ACHD) will continue to examine the air quality impact of any new major sources or modifications through its Prevention of Significant Deterioration (PSD) program to insure protection of the NAAQS. Furthermore, the air quality

impacts of new minor sources or modifications resulting in any increases in emissions and/or significant changes to the stack configurations/parameters from those modeled in the attainment demonstration will be evaluated to assure protection and maintenance of the NAAQS in the area.

The PM₁₀ ambient air monitoring data shows that the Liberty Borough Area has met both the daily and annual PM₁₀ NAAQS. Four monitoring sites– Lincoln, Liberty, Glassport, and Clairton– have been operating in the maintenance area since 1992. The PM₁₀ NAAQS includes both a daily and an annual standard. The daily standard is met if the expected frequency of values above 150 ug/m³ is 1.0 or less. During the 1998 to 2000 time period, there were no actual exceedances of the daily standard, and the average annual number of expected exceedances was less than 1.0 for that same time period. In addition, air quality data recorded during 2001 and 2002 also shows that no exceedances were recorded. Also, between 1998 and 2002, the maximum annual average recorded at these sites was 41 ug/m³. The annual standard of 50 ug/m³ is based on the average annual mean over three years.

Control Measures/Regulations Included As Part of the Plan:

Article XXI, Regulation 2104.06 (Particulate Mass Emissions)
Article XXI, Regulation 2105.21 (Coke Ovens and Coke Oven Gas)
Article XXI, Regulation 2105.49 (Fugitive Emissions)
Article XXI Part G, Sections 2107.01, 2107.02 (Test Methods- Particulate Matter)
Article XXI, Regulation 2106.05 (USX-Clairton Works PM-10 Self Audit Emergency Action Plan), approved by EPA on June 12, 1998 (63 FR 32126).

The plan contains source-specific limits for ten industrial boilers, including some alternate limits, new source-specific limits for 21 other processes, a reduction of the leaking coke oven door limit from 10% (plus two) to 8% (plus two) on USX-Clairton Batteries #1, #2, #3, #7, #8, #9, and #19, a reduction in the coke pushing limit from 0.02 to 0.01 grains per dry standard cubic foot from USX-Clairton Batteries #1, #2, #3, #7, #8, #9, and #19; new definitions related to coke oven gas emissions. Emission limitations were also imposed for the coke ovens and coke oven gases at USX Steel Irvin Works, USX Edgar Thompson Works, LTV Steel. Additional PM₁₀ emission limitations are imposed Aristech (Koppers) Chemical, and the Glassport Transportation Center.

In addition to the emission reductions discussed above, other reductions have occurred due to the permanent and enforceable shutdowns from the following sources of PM₁₀ emissions: U.S. Steel Clairton Boilers 13 & 14; Duquesne Light (Orion Power)– Philips - all boilers and processes; LTV Steel– Hazelwood - all boilers and processes; and McGraw Edison Canonsburg - all boilers and processes. Any reactivation of these facilities would be subject to applicable new source review requirements.

Conformity Requirements: The Clean Air Act requires states to establish criteria and procedures to ensure that Federally supported or funded projects conform to the air quality planning goals in the applicable SIP. The Liberty Borough area was not required to have a transportation conformity budget for PM₁₀. The significant causes of nonattainment in this area

are emissions from steel and coke facilities in the area and not from mobile sources. The PM₁₀ emissions from public roads are less than 3% of the attainment emissions inventory for the Liberty Borough area. Because the PM₁₀ violations had been caused by industrial stationary sources and motor vehicles were not an important contributor to the nonattainment problem, for conformity purposes no additional quantitative analysis for transportation related PM₁₀ impacts is required.

Contingency Measures: The contingency measures for the Liberty Borough area will be triggered upon a violation of the PM₁₀ standard, and the ACHD will notify affected sources within 60 days of a violation that contingency measures must be implemented. The contingency measures require procedures to capture pushing emissions by holding hot coke under the hood of the pushing emissions control device for at least 67 seconds immediately after the pusher ram begins to move and the damper to the PEC device is opened, or for at least 15 seconds immediately following the fall of the last coke into the coke car, whichever is longer. The contingency measures are applicable to all US Steel-Clairton batteries except Battery B (which is equipped with a coke-side shed) and must be implemented within 30 days after receiving notification from ACHD that the measures were triggered. EPA had approved these contingency measures on September 8, 1998 (63 FR 47434).

Subsequent Maintenance Plan Revisions: The Clean Air Act requires the Commonwealth to submit a revision of the SIP eight years after the original redesignation request is approved to provide for maintenance of the NAAQS for an additional 10 years following the first 10 year period. Although an explicit committal was not made to submit this redesignation request, the Commonwealth is still required to submit a revision to the SIP 8 years after this request is approved.

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