

Region 3 Plan Summary
Reading Area Berks County, Pennsylvania Ozone Area

Title: Maintenance Plan for the Reading Area Berks County Ozone Area

Federal Register Dates: October 10, 1996, 61 FR 53174 (proposed rule); May 7, 1997, 62 FR 24826 (final rule); November 19, 2003, 68 FR 65234 (proposed rule); February 26, 2004 (final rule).

EPA Effective Date: June 6, 1997; revised, effective March 29, 2004.

State Submittal Date: November 12, 1993; revisions submitted on January 28, 1997 and December 9, 2003.

Affected Areas: Berks County

Summary of the Plan: Pennsylvania formally requested that EPA redesignate the Reading area on November 12, 1993. Pennsylvania submitted the maintenance plan and 1990 VOC, NO_x, and CO base year inventories for the Reading ozone nonattainment area as formal SIP revisions on November 12, 1993. Pennsylvania amended the maintenance plan on January 13, 1994 and May 12, 1995. Pennsylvania submitted a revised maintenance plan and revised inventories on January 28, 1997 and December 9, 2003. The plan includes a demonstration that emissions will remain below the 1992 attainment year levels for a 10 year period (2007) and provides an interim-year inventory for the year 2004, based on the MOBILE6 emissions model.

Emissions Inventory: Pennsylvania developed an attainment emissions inventory, for the year 1992, to identify the level of emissions sufficient to achieve the ozone standard. The revised maintenance plan contains comprehensive inventories for the 1990 base year, as well as the years 1992, 2004 and 2007, prepared according to EPA guidance for ozone precursors, VOCs, NO_x, and CO emissions to demonstrate attainment and maintenance. The inventories include area, stationary, non-road mobile and mobile sources. The 1992 inventory is considered representative of attainment conditions because the standard was not violated during 1992, and because that year was one of the three years upon which the attainment demonstration was based. Pennsylvania has demonstrated that emissions for ozone precursors through the year 2007 will remain below the 1992 attainment year levels because of permanent and enforceable measures, while allowing for growth in population and vehicle miles traveled (VMT).

The following table summarizes the average peak ozone season weekday VOC, NO_x, and CO emissions for the major anthropogenic source categories for the 1990 base year inventory, the 1992 attainment year inventory, and the projected 2004 and 2007 inventories for the Reading area.

Emissions (tons per day)	1990	1992	2004	2007
VOC's				
Point sources	12.41	12.01	11.73	12.03
Area sources	25.96	25.13	21.47	20.96
Mobile sources*	25.29	27.25	17.02	13.81
Total	63.66	64.39	50.22	46.80

*Revised through the use of the MOBILE6 emissions model.

Emissions (tons per day)	1990	1992	2004	2007
NO x				
Point sources	25.60	25.20	21.65	22.40
Area sources	2.63	2.65	2.78	2.82
Mobile sources*	29.54	35.57	28.99	23.06
Total	57.77	63.42	53.42	58.28
Emissions (tons per day)	1990	1992	2004	2007
CO				
Point sources	9.12	8.55	7.83	7.71
Area sources	2.65	2.66	2.74	2.76
Mobile sources	252.74	225.22	165.52	166.20
Total	64.51	236.43	176.09	176.67

*Revised through the use of the MOBILE6 emissions model.

Control Measures: Pennsylvania attributes the projected reductions of VOC emissions to the following national control measures: FMVCP (Tier 1); RFG (on-road and non-road), Stage II gasoline dispensing systems and pending EPA rules regulating emissions from Consumer/ Commercial Solvents reformulations; Architectural/Industrial Maintenance Coatings reformulation; and Automobile Refinishing. Pennsylvania predicts future NOx emission reductions from FMVCP Tier 1, RFG (Phase 2) and source specific seasonal NOx emission limits (emission caps) on 11 stationary sources located in the Reading Area.

Each control program and the anticipated emissions benefit is discussed briefly below:

1. Federal Motor Vehicle Control Program (Tier 1): Pennsylvania projects an anticipated reduction from the Tier 1 program due to fleet turnover, new Federal tailpipe standards, and a new Federal evaporative test procedure.

2. Stage I Vapor Recovery: This is a control measure which substantially reduces VOC emissions during the fueling of underground storage tanks at gasoline service stations. Pennsylvania projects an overall control effectiveness of 95% and a rule efficiency of 80%. Pennsylvania projects a VOC emissions reduction of 1.88 tons per day (tpd) in 2004 and 1.91 tpd in 2007.

3. Stage II Vapor Recovery: This is a control measure which substantially reduces VOC emissions during the fueling of motor vehicle tanks at gasoline service stations. Pennsylvania projects a VOC emissions reduction of 1.33 tons per day (tpd) in 2004 and 1.84 tpd in 2007.

4. Architectural and Industrial Maintenance Coatings (AIM): Pennsylvania projects a 20% reduction in VOC emissions from the 1993 attainment year inventory for this category which translates into 0.70 tons/day by 2004 and 0.71 tons/day by 2007.

5. Consumer and Commercial Products: Pennsylvania projects a 20% reduction in VOC emissions from the 1993 attainment year inventory in this category which translates into 0.62 tons/day by both 2004 and 2007.

6. Automobile Refinishing: Pennsylvania projects a 37% reduction in VOC emissions from the 1993 attainment year inventory in this category which translates into 0.36 tons/day by 2004 and 0.37 tons/day by 2007.

7. Source Specific VOC and NOx Emission Limits: Pennsylvania established VOC NOx emission limits for selected major point sources. On January 21, 1997 and January 28, 1997 Pennsylvania submitted RACT SIP revisions for specific sources located in the Reading Area. EPA has approved all of these RACT RACT SIPs for the Reading area, as summarized below:

SOURCE	Pennsylvania submittal date	approval signature	EPA approval publication

VOC RACT			

W.R. Grace and Co.--FORMPAC Div...	9/20/95	4/19/96	5/16/96
Glidden Co.--Reading.....	6/10/96	4/1/97	4/18/97
Garden State Tanning, Inc.--Fleetwood.....	8/1/95	4/1/97	4/18/97
Brentwood Industries, Inc.--Reading.....	5/2/96	3/31/97	4/18/97
Metropolitan Edison Co. (MetEd)--Titus....	3/27/95	3/31/97	4/18/97
Lucent Technologies (AT&T)--Reading.....	8/1/95	4/1/97	4/18/97
Morgan Corp.--Morgantown.....	1/15/95	3/31/97	4/18/97
Quaker Maid (Schrock Cabinet Group).....	5/2/96	3/31/97	4/18/97
North American Fluoropolymers Co.....	3/21/96	3/31/97	4/18/97
Maier's Bakery--Reading.....	11/15/95	3/31/97	4/18/97

 NOX RACT

Metropolitan Edison Co (MetEd)--Titus.....	3/27/95	3/31/97	4/18/97
Allentown Cement Co, Inc.--Evansville.....	11/15/95	3/31/97	4/18/97
Texas Eastern Transmission Corp.-- Bechtelsville.	1/28/97	3/31/97	4/18/97
Texas Eastern Transmission Corp.--Bernville..	2/3/97	3/31/97	4/18/97
Carpenter Technology Corp.--Reading.....	1/21/97	3/31/97	4/18/97
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Summary of Motor Vehicle Emissions Budgets (as revised by the MOBILE6 emissions model, effective March 29, 2004)

Year	VOCs tons/day	NOx tons/day
2004	17.02	28.99
2007	60.42	23.06

Contingency Measures: Pennsylvania has revised the maintenance plan for the Reading area to include appropriate triggers for its contingency measures. When the contingency plan is triggered, Pennsylvania has committed to adopt within one year, or as expeditiously as practicable, one or more contingency measures. The contingency measures will be triggered if the area experiences a violation of the ozone standard. In addition, Pennsylvania will develop a periodic inventory every 3 years. If a periodic inventory exceeds the attainment year inventory (1992) by 10 percent or more, Pennsylvania will evaluate the control measures to see if any contingency measure should be implemented. Finally, a contingency measure can be triggered if the Reading area experiences an exceedance of the ozone standard.

Pennsylvania's revised maintenance plan for the Reading area includes, as a contingency measure, improved rule effectiveness. In the contingency plan, Pennsylvania has included a list of rule effectiveness matrix activities that Pennsylvania intends to implement to achieve enhance rule compliance, and a schedule for implementation of these activities. Facilities that fall under the Standard Industrial Classification (SIC) codes 26, 27, 30, 31, 34, and 51 will be effected by this contingency measure, should it be triggered. Pennsylvania estimates that this measure, if triggered, would result in a VOC emission reduction of 1.05 tons per day in the Reading area.

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