Region 3 Plan Summary
Hampton Roads, Virginia Ozone Area

Title: Maintenance Plan for the Hampton Roads, Virginia Ozone Area

Federal Register Dates: March 12, 1997, 62 FR 11337 (original direct final rule), 62 FR 11405 (proposed rule), April 29, 1997, 62 FR 23196 (proposed rule-reopening of comment period); June 26, 1997, 62 FR 34408 (final rule).

EPA Effective Date: July 28, 1997

State Submittal Date: August 27, 1996; revision submitted on August 29, 1996.

Affected Areas: Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach and Williamsburg Cities; James City and York Counties.

Summary of the Plan:

The SIP revisions establish a maintenance plan for Hampton Roads, including contingency measures, which provides for continued attainment of the ozone NAAQS until the year 2007, and adjust the mobile source emissions budget established in the maintenance plan for Hampton Roads to support the area's long-range transportation plans in the horizon years 2015 and beyond.
The maintenance plan must provide for maintenance of the relevant NAAQS in the area for at least 10 years after redesignation. A revision of the SIP submitted within 8 years after the original redesignation request was approved to provide for maintenance of the NAAQS for an additional 10 years following the initial 10 year period.

Emissions Inventory: The emission inventories for the Hampton Roads Ozone Area include area, stationary, non-road mobile and mobile sources. The 1993 inventory is considered representative of attainment conditions because the NAAQS was not violated during 1993 and was one of the three years upon which the attainment demonstration was based. The plan includes a demonstration that emissions will remain below the 1993 attainment year levels for a 10 year period (2008) and provides an interim year inventory as required by EPA guidance for the year 2000.

The following table summarizes the average peak ozone season weekday VOC, NOx, and CO emissions for the major anthropogenic (non-biogenic) source categories for the 1993 attainment year inventory and projected 2000 and 2008 inventories.

Emissions (tons per year)	1993	2000	2008
VOCs:			
Point sources.....	25.044	27.395	30.040
Area sources[2].....	129.702	128.491	136.641
Mobile sources [3].....	73.244	50.853	51.862
Subtotal.....	227.990	206.739	218.543
NOx:			
Point sources.....	85.209	86.634	81.072
Area sources.....	66.887	72.184	78.088
Mobile sources.....	77.983	70.064	70.061
Subtotal.....	230.079	228.882	229.221
CO:			
Point sources.....	13.324	14.673	14.699
Area sources.....	300.167	320.364	340.541
Mobile sources.....	590.918	370.022	366.121
Subtotal.....	904.409	705.059	721.361
TOTALS.....	1362.478	1140.680	1169.125

2 Area source category includes non-road mobile emissions and emissions from motor vehicle refueling.

3 Mobile source estimates include emissions safety margins. A safety margin exists when the total emissions (stationary, mobile, area) projected for the attainment year (or years of a maintenance plan) are less than the emissions level necessary to demonstrate attainment or maintenance. That difference in emissions constitutes a safety margin. In this case, Virginia allocated such safety margins to the on-road portion of the mobile emissions budget to satisfy conformity requirements.

Control Measures: Virginia attributes the projected reductions of VOC emissions to the following national control measures: Federal Motor Vehicle Control Program (Tier 1); Reformulated Gasoline (on-road and non-road), and pending EPA rules regulating emissions from Consumer/Commercial Solvents reformulations; Architectural/Industrial Maintenance Coatings reformulation; and Automobile Refinishing. Additionally, the Commonwealth implemented source specific seasonal NOx emission limits (emission caps) on two point sources of NOx in the nonattainment area. Each control program and the anticipated emissions benefit is discussed briefly below. EPA believes these measures will contribute significant emissions reductions that will help keep the Hampton Roads area in attainment of the ozone NAAQS. Refer to the TSD for further detail.

1. Federal Motor Vehicle Control Program (Tier 1): Virginia projects an anticipated reduction from Tier 1 of VOCs of 18.187 tons/day in the year 2000 and 30.835 tons/day by the year 2008; and of NOx of 15.924 tons/day in 2000 and 24.778 tons/day in 2008.

2. Reformulated Gasoline Gasoline is reformulated to reduce combustion by-products and to produce fewer evaporative emissions. Virginia claims the following projected reductions in tons/day from this program:

	2000 (TPD)	2008 (TPD)
On-road sources	14.8	14.5
Non-road sources	1.15	1.2
Area sources	1.8	1.95

3. Architectural and Industrial Maintenance Coatings (AIM): Virginia projects a 20% reduction in VOC emissions from the 1993 attainment year inventory for this category which translates into 2.821 tons/day by 2000 and 2.831 tons/day by 2008.

4. Consumer and Commercial Products: Virginia projects a 20% reduction in VOC emissions from the 1993 attainment year inventory in this category which translates into 1.664 tons/day by 2000 and 1.765 tons/day by 2008.

5. Automobile Refinishing: Virginia projects a 37% reduction in VOC emissions from the 1993 attainment year inventory in this category which translates into 1.803 tons/day by 2000 and 1.809 tons/day by 2008.

6. Source Specific NOx Emission Limits: Virginia established NOx emission limits for selected major point sources. These emission limits are only effective during the peak ozone season months, June-August. In the maintenance plan, the permitted emission limits will result in 5.845 tons/day (2000) and 26.148 tons/day (2008) reduction in NOx emissions from the previously permitted emission levels in the 1993 attainment year inventory.

Motor Vehicle Emissions Budget: Virginia's August 29, 1996 SIP revision modifies the motor vehicle emissions budgets in the Hampton Roads maintenance plan in support of the area's transportation plans for the period beginning in 2015. Although mobile source emissions of NOX and VOC are predicted to rise in the year 2015 as VMT increases, Virginia anticipates that emission reductions will occur during this time period from pending national emission control programs on non-road sources to offset this growth, specifically new engine standards for marine engines, locomotive engines and heavy duty diesel engines. The Act requires that EPA promulgate new emission standards for marine engines, locomotive engines and heavy duty diesel engines. For the purposes of conformity, the motor vehicle emissions budgets in the maintenance plan are increased to 53.730 tons per day of VOC and 80.617 tons per day of NOX, with an effective date of January 1, 2015.

Contingency Measures: The level of VOC and NOx emissions in Hampton Roads will largely determine its ability to stay in compliance with the ozone NAAQS. In the event that the Hampton Roads Area exceeds or violates the NAAQS, Virginia has provided the following triggering events and

contingency measures with a schedule for implementation in the event of future ozone air quality problems.

1. In the event that VOC or NOx emissions exceed the projected emissions inventories, RACT regulations will be implemented for either VOC or NOx sources that have emissions of 100 tons per year or more, depending on the pollutant of concern.

2. In the event that a violation of the ozone NAAQS occurs at any individual monitor, either VOC RACT or NOx RACT regulations will be implemented for all sources with emissions of over 100 tons per year or more.

These contingency measures will be implemented on the following schedule:

A. Notification received from EPA that a contingency measure must be implemented, or three months after a recorded violation;

B. Applicable regulation to be adopted 12 months after date established in A above;

C. Regulation implemented within 6 months of adoption;

D. Compliance with regulation achieved within 12 months of adoption.

EPA Region 3 Contact: Janice Lewis(3AP21), U.S. EPA Region III
1650 Arch Street, Philadelphia, PA 19103-2029
(215) 814-2185; lewis.janice@epa.gov