

**Region 3 Plan Summary
Metropolitan Washington, DC Ozone Nonattainment Area**

Title: "State Implementation Plan (SIP) Revision, Phase I Attainment Plan, and Revision to Fifteen Percent Reduction in Volatile Organic Compound (VOC) Emissions, and Revision to the 1990 Base Year Emissions Inventory and Contingency Measure Plan for the Washington DC-MD-VA Nonattainment Area" dated October 23, 1997, as revised on April 16, 1999.

Federal Register Dates: January 12, 2005, 70 FR 2085 (proposed rule - full approval);
May 13, 2005, 70 FR 25688 (final rule - approval)

EPA Effective date: June 13, 2005

State Submittal Dates: **District of Columbia**– November 3, 1997, as revised on May 25, 1999.
Maryland– December 24, 1997, as revised on May 20, 1999.
Virginia– December 7, 1997, as revised on May 25, 1999.

Affected Areas: **District of Columbia**- Entire District
Maryland- Calvert, Charles, Frederick, Montgomery, and Prince George's Counties
Virginia- Arlington, Fairfax, Loudoun, Prince William, and Stafford Counties; Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park Cities

Summary of the Plan: Air quality planning for the Washington, D.C. ozone nonattainment area is done jointly by the District of Columbia, Maryland, Virginia and the Metropolitan Washington Air Quality Committee (MWAQC). The MWAQC is composed of state and local elected officials, state air quality and transportation planning directors and the chair of the National Capital Region Transportation Planning Board.

As a result of the recent reclassification of the Washington area to severe nonattainment, the District of Columbia, Maryland and Virginia must now develop a plan to show a further 18% reduction in base line emissions from November 15, 1999, through November 15, 2005; this 18% reduction is broken into two 9% increments - the first between 1999 and 2002, and the second between 2002 and 2005. This document summarizes the plan designed to achieve a 9% reduction between 1996 and 1999.

Comparison of Attainment Demonstration NOx Reductions and Post-1996 ROP Plan Target Levels for 1999		
	Emissions Tons per day)	
Plan	NOx	VOC

Modeled Attainment Demonstration Levels	538.3	360
Post-1996 Plan Target Levels for 1999	614.7	380.2

Emissions Reductions: The nonattainment area-wide plan apportions among the three jurisdictions the amount of creditable emission reductions that each jurisdiction must achieve in order for the entire nonattainment area to achieve as a region a 9% ROP reduction in VOC net of growth. Each jurisdiction's Post-1996 plan identifies the amount of creditable emission reductions that each jurisdiction must achieve for the nonattainment area-wide plan to get 9% ROP accounting for any growth in emissions from 1990 to 1999. The amount of creditable emission reductions needed for the entire nonattainment area to fulfill the 9% ROP requirement is:

1) for VOC emissions, the sum of 1% of the adjusted base year inventory for the region, and the amount of reductions needed to offset growth in the region from 1990 to 1999.

2) for NOx emissions, the sum of 8% of the adjusted base year inventory for the region, and the amount of reductions needed to offset growth in the region from 1990 to 1999.

The nonattainment area-wide sum of emission reductions required for the region was apportioned among the three jurisdictions. As shown in this summary document, the sum of the individual State commitments contained in the plan equals the required amount of creditable emission reductions calculated in the plan for the entire nonattainment area. Maryland, Virginia and the District each committed to achieving the NOx and VOC reductions as summarized below.

Transportation Conformity Budgets: The Post-1996 plan establishes VOC and NOx budgets for the entire Metropolitan Washington, DC ozone nonattainment area that are applicable for determinations for 1999 and are applicable in later years in the absence of other applicable budgets. The Post-1996 plan adopts and establishes the following transportation conformity budgets for the entire Metropolitan Washington, DC ozone nonattainment area:

1. A VOC budget for 1999 of 128.5 Tons Per Day (TPD)
2. A NOx budget for 1999 of 196.4 TPD

Summary of Control Measures:

District of Columbia Control Measures and Creditable Emissions Reductions in the Post-1996 Rate of Progress Plans for the Metropolitan Washington Nonattainment Area							
Control Measure	Type of Measure	Adopted	Implemented	Assumed in Modeling	Approval Status	Reduction by 1999 in tons/day	
On-Road and Non-Road Mobile Source Controls						VOC	NOx
Enhanced Inspection & Maintenance	state	yes	October 1997	Yes	Full approval June 11, 1999, 64 FR 31498	3.9	2.4
Federal Motor Vehicle Control program (Tier I)	federal	yes	beginning MY ¹ 1994	Yes	federal rule (40 CFR 86)	1.4	2.5
Reformulated Gasoline (Phase 1 & 2) ²	state opt-in	yes	Phase 1 - January 1995 Phase 2 - January 2000	Phase I only	Approved Opt-in to federal program (40 CFR 80 subpart D)	2.2 ³	0.0
Federal Non-road Heavy Duty diesel engine standards	federal	yes	beginning MY 1996	Yes	federal rule (40 CFR 8, 59 FR 31335, June 17, 1994)	0.0	0.4
Federal Small Gasoline Engine standards	federal	yes	beginning MY 1996	Yes	federal rule (40 CFR 90, 60 FR 34598, July 3, 1995)	0.9	(-0.1)
Stationary Point and Area Source Controls							
NOx RACT	state	yes	May 1995	Yes	SIP Approved 65 FR 81369 (December 26, 2000).		2.1

¹ Model Year (MY)

² Reduction benefits are beyond those achieved by federal Phase 2 Reid Vapor Pressure requirements that took effect in 1992.

³ Includes benefits in on-road and non-road vehicles, and refueling benefits.

District of Columbia Control Measures and Creditable Emissions Reductions in the Post-1996 Rate of Progress Plans for the Metropolitan Washington Nonattainment Area							
Control Measure	Type of Measure	Adopted	Implemented	Assumed in Modeling	Approval Status	Reduction by 1999 in tons/day	
Architectural & industrial maintenance coatings	federal	yes	September 1999	Yes	federal rule (40 CFR 59 subpart D, 63 FR 48848, September 11, 1998)	0.5	
Consumer & commercial products	federal	yes	December 11, 1998	Yes	federal rule (40 CFR 59 subpart C, 63 FR 48819, September 11, 1998)	0.6	
Autobody refinishing	federal	yes	January 11, 1999	Yes	federal rule (40 CFR 59 subpart B, 63 FR 48806, September 11, 1998)	0.5	
Graphic Arts Controls (Lithographic Printing)	state	yes	May 1, 1999	Yes	SIP approved 64 FR 57777, October 27, 1999	0.5	
NLEV	state opt-in	yes	Model year 1999	No	SIP approved - 65 FR 44981, July 20, 2000	0.2	0.2
Total Creditable Emissions Reductions						11.8	7.5

State of Maryland Control Measures and Creditable Emissions Reductions in the Post-1996 Rate of Progress Plans for the Metropolitan Washington Nonattainment Area							
Control Measure	Type of Measure	Adopted	Implemented	Assumed in Modeling	Approval Status	Reduction by 1999 in tons/day	
On-Road and Non-Road Mobile Source Controls						VOC	NOx
Enhanced Inspection & Maintenance	state	yes	October 1997	Yes	Full approval - 64 FR 58340, October 29, 1999	3.9	2.4
Federal Motor Vehicle Control program (Tier I)	federal	yes	beginning MY 1994	Yes	federal rule (40 CFR 86)	5.5	13.7
Reformulated Gasoline (Phase 1 & 2) ⁴	state opt-in	yes	Phase 1 - January 1995 Phase 2 - January 2000	Phase I only	Approved Opt-in to federal program (40 CFR 80 subpart D)	7.9 ⁵	0.1
Transportation Control Measures (TCM)- see below	state	yes	July 1993	Yes	Adopted -- Part of Post-1996 plan.	0.1	0.2
Federal Non-road Heavy Duty diesel engine standards	federal	yes	beginning MY 1996	Yes	federal rule (40 CFR 89 subpart A)	0.0	3.7
Federal Small Gasoline Engine standards	federal	yes	beginning MY 1996	Yes	federal rule (40 CFR 90 subpart A)	6.3	(-0.4)
Stationary Source Controls							
NOx RACT	state	yes	May 1995	Yes	66 FR 1866 (February 8, 2001).		67.9

⁴ Reduction benefits are beyond those achieved by federal Phase 2 Reid Vapor Pressure requirements that took effect in 1992.

⁵ Includes benefits in on-road and non-road vehicles, and refueling benefits.

State of Maryland Control Measures and Creditable Emissions Reductions in the Post-1996 Rate of Progress Plans for the Metropolitan Washington Nonattainment Area							
Control Measure	Type of Measure	Adopted	Implemented	Assumed in Modeling	Approval Status	Reduction by 1999 in tons/day	
Non-CTG RACT to 50 tpy -	state	yes	yes	Yes	SIP-approved 10/15/97 (62 FR 53544); 6/17/99 (64 FR 32415)	0.4	
Expanded State Point Source Regulations to 25 tons/year	state	yes	yes	Yes	SIP-approved 9/2/97 (62 FR 46199); 10/15/97 (62 FR 53544); 12/22/98 (63 FR 70667); 3/22/99 (64 FR 57989); 6/17/99 (64 FR 32415)	1.4	
Stage II Vapor Recovery & On-board Refueling Vapor Recovery (ORVR)	state federal	yes yes	January 1993 MY 1998	Yes Yes	SIP approved 6/9/94 59 FR 29730 Promulgated at 40 CFR 86	8.9 ⁶	
Stage I Vapor Recovery Enhancement	state	yes	April 26, 1993	Yes	SIP approved January 6, 1995, 60 FR 2018.	0.9	
Architectural & industrial maintenance coatings	federal	yes	September 1999	Yes	federal rule (40 CFR 59 subpart D, 63 FR 48848, September 11, 1998)	6.6	

⁶ State only provided aggregate reduction benefits for both programs .

State of Maryland Control Measures and Creditable Emissions Reductions in the Post-1996 Rate of Progress Plans for the Metropolitan Washington Nonattainment Area							
Control Measure	Type of Measure	Adopted	Implemented	Assumed in Modeling	Approval Status	Reduction by 1999 in tons/day	
Consumer & commercial products	federal	yes	December 11, 1998	Yes	Federal rule (40 CFR 59 subpart C, 63 FR 48819, September 11, 1998)	2.2	
Autobody refinishing	state	yes	July 1, 1995	Yes	SIP approved August 4, 1997 [62 FR 41853]	3.8	
Surface Cleaning/degreasing	state	yes	June 5, 1995	Yes	SIP approved August 4, 1997 [62 FR 41853]	2.9	
Graphic Arts Controls (Lithographic Printing)	state	yes	January 1, 1992	Yes	SIP approved September 2, 1997 [62 FR 46199]	1.0	
Open Burning Ban	state	yes	May 1995	Yes	SIP approved January 31, 1997, 62 FR 8380.	3.7	0.8
NLEV	state opt-in	yes	Model Year 1999	No	64 FR 72564, December 28, 1999	0.6	0.3
Total Creditable Emissions Reductions						71.2	101.1

Commonwealth of Virginia Control Measures and Creditable Emissions Reductions in the Post-1996 Rate of Progress Plans for the Metropolitan Washington Nonattainment Area							
Control Measure	Type of Measure	Adopted	Implemented	Assumed in Modeling	Approval Status	Reduction by 1999 tons/day	
On-Road and Non-Road Mobile Source Controls						VOC	NOx

Commonwealth of Virginia Control Measures and Creditable Emissions Reductions in the Post-1996 Rate of Progress Plans for the Metropolitan Washington Nonattainment Area							
Control Measure	Type of Measure	Adopted	Implemented	Assumed in Modeling	Approval Status	Reduction by 1999 tons/day	
Enhanced Inspection & Maintenance	state	yes	October 1997	Yes	SIP approved September 1, 1999 [64 FR 47670]	17.9	16.9
Federal Motor Vehicle Control program (Tier I)	federal	yes	June 1991	Yes	federal rule (40 CFR 86)	5.9	14.7
Reformulated Gasoline (Phase 1 & 2) ⁷	state opt-in	yes	Phase 1 - January 1995 Phase 2 - January 2000	Phase I only	Approved Opt-in to federal program (40 CFR 80 subpart D)	9.1 ⁸	0.1
Transportation Control Measures (TCM)	state	yes	July 1993	Yes	Adopted -- Part of Post-1996 plan.	0.1	0.2
Federal Non-road Gasoline Engine standards	federal	yes	beginning MY 1996	Yes	federal rule (40 CFR 89 subpart A)	6.8	(-0.5)
Federal Non-road Heavy Duty diesel engine standards	federal	yes	beginning MY 1996	Yes	federal rule (40 CFR 90 subpart A)	0.0	3.2
Stationary Source Controls							

⁷ Reduction benefits are beyond those achieved by federal Phase 2 Reid Vapor Pressure requirements that took effect in 1992.

⁸ Includes benefits in on-road and non-road vehicles, and refueling benefits .

Commonwealth of Virginia Control Measures and Creditable Emissions Reductions in the Post-1996 Rate of Progress Plans for the Metropolitan Washington Nonattainment Area							
Control Measure	Type of Measure	Adopted	Implemented	Assumed in Modeling	Approval Status	Reduction by 1999 tons/day	
NOx RACT	state	yes	May 1995	Yes	66 FR 8 (January 2, 2001).	0	12.0
Non-CTG RACT to 50 tpy -	state	yes	yes	Yes	SIP-approved 3/12/97, 62 FR 11334; 1/22/99, 64 FR 3425; 1/2/01, 66 FR 8; source shutdowns as of 1/91	0.4	
Stage II Vapor Recovery & On-board Refueling Vapor Recovery (ORVR)	state	yes	January 1993	Yes	SIP approved 59 FR 32353, June 23, 1994	7.9 ⁹	0
	federal	yes	MY 1998	Yes	Promulgated at 40 CFR 86		
AIM Surface Coatings	federal	yes	September 1999	Yes	federal rule (40 CFR 59 subpart D)	5.6	0
Consumer & commercial products	federal	yes	December 11, 1998	Yes	federal rule (40 CFR 59 subpart C)	1.9	0
Autobody refinishing	federal	yes	January 11, 1999	Yes	federal rule (40 CFR 59 subpart B)	2.7	0
Open Burning Ban	state	yes	May 1995	Yes	SIP Approved March 12, 1997 (62 FR 11334)	2.6	0.6

⁹ State only provided aggregate reduction benefits for both programs.

Commonwealth of Virginia Control Measures and Creditable Emissions Reductions in the Post-1996 Rate of Progress Plans for the Metropolitan Washington Nonattainment Area							
Control Measure	Type of Measure	Adopted	Implemented	Assumed in Modeling	Approval Status	Reduction by 1999 tons/day	
Stage I Vapor Recovery	state	yes	yes	Yes	SIP-Approved (3/31/94, 59 FR 15117; 10/19/94, 59 FR 52704)	0.3	0
Graphic Arts	state	yes	May 1995	Yes	SIP approved March 12, 1997 (62 FR 11334). 40 CFR 52.2520c113	1.5	0
NLEV	state opt-in	yes	Model Year 1999	No	64 FR 72564, December 28, 1999	1.3	1.5
Total Creditable Emissions Reductions						63.9	48.7

List of Transportation Control Measures in Maryland and Virginia:

The following chart summarizes the list of transportation control measures (TCM) which are adopted as part of the Post- 1996 rate of progress plans for Maryland and Virginia:

State	Description of Measure	1990 Estimated Emissions Reductions (Tons/day)	
		VOC	NO x
MD	Montgomery County bus replacement	0.007	0.020
	Lake Forrest Transit Center	0.001	0.004
	Tulagi Park-n-Ride	0.001	0.003
MD	MD 5/MD205 Park-n-Ride	0.005	0.017
	MARC Replacement/Expansion Coaches	0.044	0.129
	Bicycle Facilities	0.003	0.002
	MD 210/MD 373 Park-n-Ride	0.001	0.003

	Germantown Parking Facility	0.007	0.019
	Prince George's Bus Replacement	0.005	0.012
	Anacostia Bike Trail	0.008	0.001
	I-270/ MD 80 Park-n-Ride	0.001	0.002
Total MD Emission Reductions		0.083	0.212
VA	Burke VRE Park & Ride Lot	0.008	0.023
	Lorton VRE Station Access Road	0.007	0.018
	WMATA Metro bus purchase ('95 TIP)	0.025	0.071
	City of Fairfax CUE bus shelters	- 0-	0.001
	WMATA new bus purchases ('96 TIP)	0.006	0.015
	Lake Ridge Park & Ride Lot (Harbor Drive)	-0-	0.020
	Pedestrian Facilities- MetroRail Stations (4 locations)	0.001	0.002
	Tackett's Mill Park & Ride Lot	0.013	0.033
	Portsmouth Park & Ride Lot	0.008	0.021
	Horner Road Park & Ride Lot (expansion)	0.006	0.010
Total VA Emission Reductions		0.074	0.214

EPA Region 3 Contact: Christopher Cripps (3AP21), U.S. EPA Region III
1650 Arch Street, Philadelphia, PA 19103-2029
(215) 814-2179; cripps.christopher@epa.gov