

Region III Plan Summary
District of Columbia, Maryland, and Virginia; Attainment Demonstration for the 1997 8-Hour Ozone National Ambient Air Quality Standard for the Washington, DC-MD-VA Moderate Nonattainment Area

Title: District of Columbia, Maryland, and Virginia; Attainment Demonstration for the 1997 8-Hour Ozone National Ambient Air Quality Standard for the Washington, DC-MD-VA Moderate Nonattainment Area

Federal Register Dates: Final Rule 80 FR 19206 (April 10, 2015) Proposed Rule 78 FR 17161 (March 20, 2013)

EPA Effective date: May 11, 2015

State Submittal Date: DC- June 12, 2007, MD – June 4, 2007, and VA June 12, 2007

Affected Area: District of Columbia; Calvert, Frederick, Charles, Montgomery and Prince George’s Counties in Maryland; and Alexandria City, Arlington County, Fairfax City, Fairfax County, Falls Church City, Manassas and Manassas Park Cities, and Prince William County, Virginia

Background:

The District of Columbia, the State of Maryland, and the Commonwealth of Virginia submitted formal SIP revisions on June 12, 2007, June 4, 2007, and June 12, 2007, respectively (hereafter the June 2007 SIP revisions). These June 2007 SIP revisions were submitted to address CAA requirements for the 1997 ozone NAAQS and included the 2002 base year emissions inventory, the 15 percent reasonable further progress plan (RFP) (15 % RFP plan), RFP contingency measures, an attainment demonstration to show attainment of the 1997 ozone NAAQS by June 15, 2010, a reasonably available control measures (RACM) analysis, and contingency measures for failure to attain. In addition, the submission included the transportation conformity 2008, 2009, and 2010 year MVEBs associated with the RFP plan, the attainment demonstration and contingency measures, respectively. The District of Columbia Department of the Environment (DDOE), the Maryland Department of the Environment (MDE), and the Virginia Department of Environmental Quality (VADEQ) (hereafter referred to as the three States) jointly developed the June 2007 SIP revisions.¹

These elements of the Washington Area 8-hour ozone plan were required for the Washington Area by sections 172(c), 182(a), and 182(b)(1) of the CAA due to the classification of the Washington Area as a moderate ozone nonattainment area under the 1997 ozone NAAQS. The boundaries of the Washington Area are defined in the tables for “1997 8-Hour Ozone NAAQS (Primary and Secondary)” in 40 CFR 81.309, 81.321 and 81.347.²

¹ The three States developed and submitted the “Plan to Improve Air Quality in the Washington, DC–MD–VA Region, State Implementation Plan (SIP) for 8–Hour Ozone Standard, Moderate Area SIP” (hereafter the Washington Area 8-hour ozone plan).

² Effective July 20, 2012 (77 FR 30088, May 21, 2012), EPA designated and classified nonattainment areas under the 2008 ozone NAAQS codified at 40 CFR 50.15 for most areas of the country including the Washington Area. The Washington Area was designated as nonattainment and classified as marginal nonattainment. The boundaries

On September 11, 2011 (76 FR 58116), EPA approved portions of the June 2007 SIP revisions for the three States including the 2002 base year emissions inventory, 15% RFP plan and associated MVEBs for 2008, RFP contingency measures, and the RACM analysis.

Summary of the Plan:

In this rulemaking action, EPA has approved the remaining portions of the June 2007 SIP revisions for the 1997 ozone NAAQS including the attainment demonstration, the contingency measures, and the associated 2009 and 2010 year MVEBs.³ In a March 20, 2013 notice of proposed rulemaking (the March 20, 2013 NPR), EPA proposed to approve these remaining elements of the June 2007 SIP revisions. 78 FR 17161. The initial comment period closed on May 9, 2013 (78 FR 27160); however, EPA reopened the comment period until June 10, 2013. In this final rule, EPA has approved the portions of the June 2007 SIP revisions which we proposed for approval in the March 20, 2013 NPR: the attainment demonstration, contingency measures, and 2009 and 2010 year MVEBs.

Contingency Measures:

Contingency Measure Reductions for the Attainment Demonstration			
Plan Ref. No.	Contingency Measure	Reductions (tons per ozone season day)	
		VOC	NOx
6.4.5	Tier 2 Motor Vehicle Emission Standards	0.0	1.77
6.3.1	Phase I and Phase II Emissions Standards for Gasoline-Powered Non-Road Utility Engines	1.49	0.04
6.3.2	Emissions Standards for Diesel-Powered Non-Road Utility Engines of 50 or More Horsepower	0.39	3.28
6.3.3	Emissions Standards for Spark Ignition Marine Engine	1.42	0.0
6.3.4	Emissions Standards for Large Spark Ignition Engines	0.54	0.96
6.2.12 & 6.2.17	Ozone Transport Commission Portable Fuel Containers Rule	4.62	0.0
TOTAL REDUCTIONS		8.46	6.05

Control Measures and Emissions Reductions:

Control Measures and 2009 Emission Reductions in the Washington Area			
Plan Ref. No. <small>Note 1</small>	Source Sector	Reductions (tons per day)	
		VOC	NOx
Point Source Measures – RFP Plan Contingency Measures			

of the ozone nonattainment area classified as moderate under the 1997 ozone NAAQS are the same as those of the ozone nonattainment area classified as marginal under the 2008 ozone NAAQS. See 40 CFR 81.309, 81.321 and 81.347. Hereafter, when referring to the Washington Area in relation to SIP requirements required solely due to the 2008 ozone NAAQS, the term “Washington 2008 Ozone Nonattainment Area” will be used.

³ The attainment demonstration was required under 40 CFR 51.908 to demonstrate attainment of the 1997 ozone NAAQS by the applicable attainment date of June 15, 2010 (the June 2010 attainment date).

6.1.2	State NO _x RACT and Regional NO _x Transport Requirement (RACT, NO _x SIP Call, CAIR, HAA)	0.00	128.76
Subtotal ...Point Source Measures ...		0.00	128.76
Area Sources Measures			
RFP Plan Area Source Measures – 2009 reductions			
6.2.11	Mobile Equipment Repair and Refinishing Rule	3.59	0.0
6.2.12	Portable Fuel Containers Rule: Phase I	9.3	0.0
6.2.13	Architectural and Industrial Maintenance Coatings Rule	10.82	0.0
6.2.14	Reformulated Consumer Products Rule: Phase I	6.34	0.0
6.2.15	Solvent Cleaning Operations Rule	2.99	0.0
6.2.16	Industrial Adhesives and Sealants Rule	2.42	0.0
Additional Area Source Measures Beyond the RFP Plan – 2009 Reductions			
6.2.18	Reformulated Consumer Products Rule: Phase II	0.76	0.0
6.2.17	Portable Fuel Containers Rule: Phase II	0.75	0.0
Subtotal ... Area Sources Measures ...		36.97	0.00
Nonroad Measures (NONROAD Model) ^{Note 2}			
6.3.1	EPA Non-Road Gasoline Engines Rule	42.44	14.76
6.3.2	EPA Non-Road Diesel Engines Rule		
6.3.3	Emissions standards for spark ignition marine engines		
6.3.4	Emissions standards for large spark ignition engines		
Other Nonroad Measures (not covered by the NONROAD Model)			
6.3.6	Standards for Locomotive	0.06	2.74
Subtotal ...Nonroad Source Measures ...		42.50	17.50
Onroad Measures (MOBILE and TDM Model) ^{Note 3}			
6.4.2	Enhanced Vehicle Inspection/Maintenance (I/M)	7.17	37.63
6.4.4	National Low Emission Vehicle Program		
6.4.5	Tier 2 Motor Vehicle Emission Standards		
6.4.6	Heavy-Duty Diesel Engine Rule		
Other Onroad Measures ^{Note 4}			
6.4.7	Transportation Control Measures, Vehicle Technology, Fuel, or Maintenance Measures	0.18	0.45
Subtotal On-road Mobile Source Measures		7.35	38.08
Other Measures			
6.5	Voluntary Bundle	0.19	0.30
Subtotal Other Measures		0.19	0.30

Totals	87.01	184.64
Notes:		
1. The measure number assigned in Chapter 6 of the plan document of the June 2007 SIP Revisions.		
2. The NONRPOAD model can be run to project emissions from all classes of nonroad engines covered by this model for an entire geographic area. This model will apply all applicable emission standards to all classes of nonroad engines covered by this model for an entire geographic area... Therefore, the total emissions reductions from all applicable EPA nonroad engine rules are presented in aggregate. Locomotive engines are not included within the scope of the NONROAD Model.		
2. On-road mobile source emissions require the use of two models. The first is EPA's MOBILE6 model which generates emissions factors. The model can be configured to generate emissions factors that account for all EPA emissions standards, fuel standards and state implemented measures (such as I/M) applicable in the area for the year being modeled. The 3 States have elected to run the MOBILE6 model in this manner. The 3 States thus generated emissions factors that account for all the control programs simultaneously; therefore, the reductions from each individual program are not computed, only the aggregate reductions. The second model is the transportation demand model (TDM) which predicts future year activity levels for on-road mobile sources – vehicle miles travelled and vehicle starts – for the Washington Area which accounts for the planned changes in the highway network. The future year emissions factors are applied to the activity levels to generate predicted emissions level.		
3. Certain measures are not easy to quantify using MOBLE6 and the TDM because their impact is below the resolution of the TDM model. Some are transportation control measures designed to reduce vehicle miles traveled or vehicle trips. Other of these measures represents retrofit of transit vehicles or purchase of cleaner fueled transit buses.		

Attainment Status Based Upon Recent Air Quality Data:

Since the March 20, 2013 NPR, the three States have submitted and certified complete ambient air quality monitoring (AQ data) for the entire 2013 ozone monitoring season. EPA has released the final 2011-2013 design values and posted these at <http://www.epa.gov/airtrends/values.html>. The 2011-2013 design values show the Washington Area continues to attain the 1997 ozone NAAQS. Table 1 shows these design values for monitors in the Washington Area in parts per billion (ppb) ozone. These design values in Table 1 demonstrate that the Washington Area continues to meet the 1997 ozone NAAQS.

Table 1. Actual Monitored Design Values (DVs) for 2011 to 2013 Period				
Site Data				DV (ppb)
AIRS ID	Site Name	County/City	State	2011-2013
11-001-0041	River Terrace	---	DC	72
11-001-0043	McMillan	---	DC	79
24-009-0010	Calvert	Calvert Co.	MD	77
24-017-0010	Southern MD	Charles Co.	MD	77

24-021-0037	Frederick Municipal Airport	Frederick Co.	MD	74
24-031-3001	Rockville	Montgomery Co.	MD	74
24-033-0030	HU-Beltsville	Prince George's Co.	MD	76
24-033-8003	PG Equestrian Center	Prince George's	MD	81
24-033-8003	Beltsville	Prince George's	MD	72
51-013-0020	Aurora Hills	Arlington County	VA	79
51-059-0030	Franconia	Fairfax County	VA	79
51-107-1005	Ashburn	Loudoun County	VA	71
51-153-0009	Long Park	Prince William County	VA	69

EPA has also examined available 2014 ozone season AQ data. EPA notes that this AQ data is preliminary. EPA examined the data entered into EPA's Air Quality System (AQS) available as of February 10, 2015. It has not undergone all the quality assurance/quality control review and certification necessary to be used for regulatory purposes, and as of February 10, 2015 may not cover the entire 2014 ozone season for the Washington Area which ended October 31, 2014. See Table D-3 "Ozone Monitoring Season by State" in Appendix D to 40 CFR Part 58.

Transportation Conformity:

TRANSPORTATION CONFORMITY EMISSIONS BUDGETS FOR THE WASHINGTON, DC-MD-VA AREA

Type of control strategy SIP	Year	VOC (TPD)	NOX (TPD)	Effective date of adequacy determination or SIP approval
Attainment Demonstration	2009	66.5	146.1	February 22, 2013 (78 FR 9044), published February 7, 2013.
Contingency Measures Plan	2010	–	144.3	February 22, 2013 (78 FR 9044), published February 7, 2013.

Motor Vehicle Emission Budgets:

The Washington Area MVEBs for the attainment demonstration and contingency measures are based on the projected 2009 and 2010, respectively, mobile source emissions, accounting for all mobile control measures. The budgets are equal to the projected 2009 and 2010, respectively, on-road mobile source emission inventories minus reductions from transportation control measures.

The MVEBs for the 2009 attainment year and the 2010 contingency plan NOx MVEBs are shown in Table 8. These are the budgets EPA determined were adequate in the February 7, 2013 (76 FR 9044) notice of adequacy.

<p>The Washington Area MVEBS for the 2009 Attainment Plan and 2010 Contingency Plan</p>
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Budget Type	Budget Year	MVEBs	
		VOC (tons per day)	NOx (tons per day)
Attainment Year	2009	66.5	146.1
Contingency Plan	2010	N/A	144.3

Conclusion:

EPA has approved the attainment demonstrations, contingency measures, and associated 2009 and 2010 year MVEBs for the Washington Area which were submitted to EPA as SIP revisions by the three States in the June 2007 SIP revisions based on a determination that they meet applicable requirements in the CAA.

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