

A REPORT TO
the HONORABLE MARK R. WARNER
GOVERNOR

and the

GENERAL ASSEMBLY OF VIRGINIA

AIR POLLUTION CONTROL POLICIES of the COMMONWEALTH

2004 LEGISLATIVE REPORT
in response to
§ 10.1-1307 G of the Code of Virginia

prepared by the

DEPARTMENT OF ENVIRONMENTAL QUALITY

October 1, 2004

MEMORANDUM:

TO: The Honorable Mark R. Warner

 The Honorable Charles R. Hawkins, Chair
 Senate Agriculture, Conservation and Natural Resources Committee

 The Honorable M. Kirkland Cox, Chair
 House Agriculture, Chesapeake and Natural Resources Committee

FROM: Robert G. Burnley

SUBJECT: Annual Air Quality Report

In accordance with § 10.1-1307 G of the *Code of Virginia*, the Department of Environmental Quality has completed its annual report on the Commonwealth's air pollution control policies and the status of the Commonwealth's air quality.

The Department of Environmental Quality is working closely with local governments, businesses and the citizens of the Commonwealth to develop and implement strategies that will protect and improve Virginia's air quality and Virginia's economic vitality. This past year, we saw additional localities designated as not in attainment with air quality standards. We also worked for implementation of new programs and enforcement of existing air quality regulations. Of significant impact was the resolution of the Mirant Power Plants air quality violations and two enforcement actions that will not only significantly reduce the NOx emissions in Alexandria and the entire Northern Virginia region, but also reduce particulate emissions in the surrounding community.

This report is being made available at www.deq.state.va.us/regulations/legislation. If you need further information or would like a hard copy of this report, please contact Melissa Porterfield at 804/698-4238.

INTRODUCTION

Section 10.1-1307 G of the Code of Virginia contains the following provision:

"The Board shall submit an annual report to the Governor and General Assembly on or before October 1 of each year on matters relating to the Commonwealth's air pollution control policies and on the status of the Commonwealth's air quality. . . ."

In most areas, air quality in Virginia meets national air quality standards. This is good news for Virginians as Governor Warner, the State Air Pollution Control Board and the Department of Environmental Quality strive to maintain and improve air quality. However, seven regions of the state do not meet the air quality standard for ozone. The following report details the status of Virginia's air quality and the policies and regulations that govern Virginia's air quality program.

EXECUTIVE SUMMARY

- Status of Air Quality
 - Although overall air quality is gradually improving, certain areas do not comply with the new 8-hour ozone standard (see list on the following page).
 - Northern Virginia region is still in violation of the 1-hour standard.
 - EPA proposes to designate 9 localities in Northern Virginia area as not meeting the new standard for PM_{2.5} (fine particulate matter), alleging that the emissions from these localities contribute to nonattainment conditions in the Maryland and Washington, D.C. areas.

- Planning for the 1-hour Ozone Standard
 - The Northern Virginia area has been "bumped up" from a serious classification to a severe classification for the 1-hour ozone standard. However, EPA has promulgated a regulation to remove the 1-hour ozone standard as of April 15, 2005.
 - Violations based on 1996-1998 data triggered contingency measures for the Richmond maintenance area. A new maintenance plan with revised contingency measures was submitted to EPA; proposed approval was issued on October 7, 2002.
 - Violations based on 1999-2001 data triggered contingency measures for the Hampton Roads maintenance area. A new maintenance plan with revised contingency measures is being developed.
 - Development of a maintenance plan for the White Top Mountain nonattainment area is on-hold due to a lack of recent air quality data. The original designation was based on air quality data from a federal monitoring station which is now removed. Virginia and EPA are exploring ways to redesignate to attainment without the need for the data.

The Commonwealth of Virginia

8-hour Ozone Nonattainment Areas

Frederick County Early Action Area

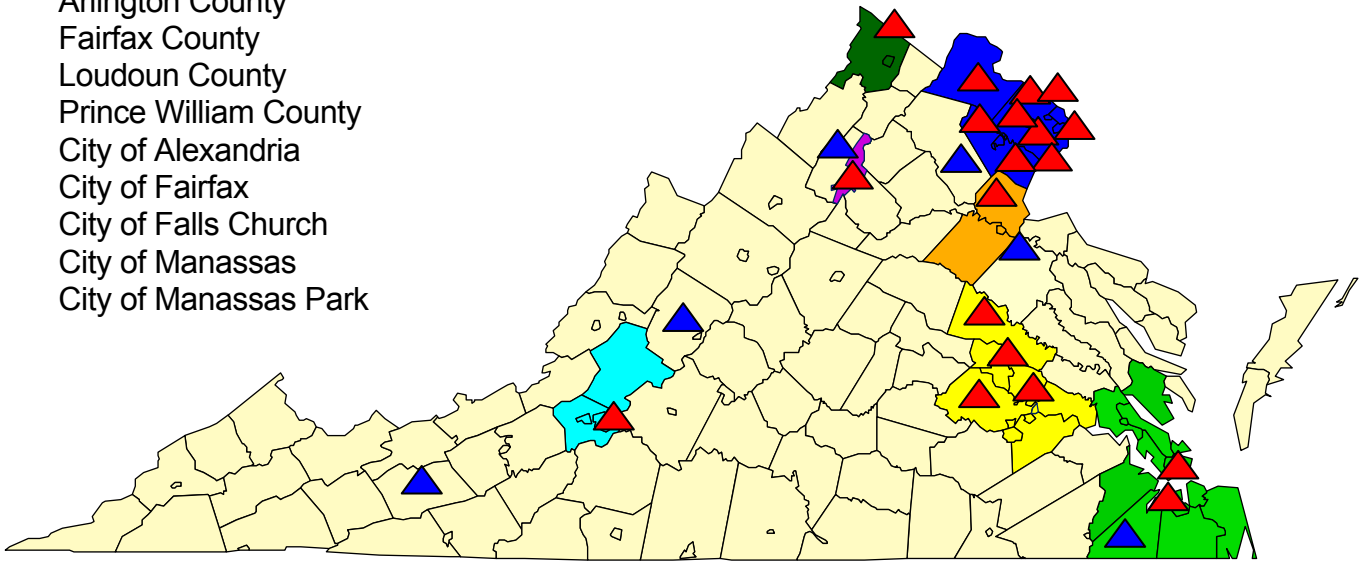
Frederick County
City of Winchester

Fredericksburg Nonattainment Area

Classification - moderate
Spotsylvania County
Stafford County
City of Fredericksburg

Northern VA/MD Nonattainment Area

Classification - moderate
Arlington County
Fairfax County
Loudoun County
Prince William County
City of Alexandria
City of Fairfax
City of Falls Church
City of Manassas
City of Manassas Park



Shenandoah National Park Nonattainment Area

Shenandoah National Park
(the portions in Page and Madison Counties)

Roanoke Early Action Area

Botetourt County
Roanoke County
City of Roanoke
City of Salem

Hampton Roads Nonattainment Area

Classification - marginal
Gloucester County
Isle of Wight County
James City County
York County
City of Chesapeake
City of Hampton
City of Newport News
City of Norfolk
City of Poquoson
City of Portsmouth
City of Suffolk
City of Virginia Beach
City of Williamsburg

Richmond Nonattainment Area

Classification - moderate
Charles City County
Chesterfield County
Hanover County
Henrico County
Prince George County
City of Colonial Heights
City of Hopewell
City of Petersburg
City of Richmond

 Nonattainment Monitor

 Attainment Monitor

- Planning for the 8-hour Ozone Standard
 - On June 2, 2003, EPA released its options for the planning requirements for areas that will be nonattainment under the new 8-hour standard.
 - The Commonwealth submitted its recommendations for the 8-hour nonattainment areas on July 9, 2003 (see page 13).
 - The final decision by EPA regarding designation of the 8-hour nonattainment areas was promulgated on April 15, 2004. The affected localities are in the Northern Virginia area, Fredericksburg area, Richmond Area, and Hampton Roads area. Most of the localities were at one time designated nonattainment for the 1-hour ozone standard but there are a few new localities.
 - Two areas (Frederick County and Roanoke areas) that have been identified as potential nonattainment areas by both Virginia and EPA have agreed to abide by EPA's early action compact policy. Under this policy, the areas will have the nonattainment designation delayed in exchange for implementing emissions reduction controls earlier than otherwise required
 - On July 12, 2004, the Commonwealth submitted a request to reclassify the Richmond Ozone Nonattainment Area from moderate to marginal. EPA is required to make a final decision by September 15, 2004. Approval by EPA would remove the need to implement some control measures.

- Planning for the PM_{2.5} Standard
 - On April 1, 2003, EPA issued guidance to states on the process for designating areas for the purpose of implementing the PM_{2.5} (fine particulate matter) national ambient air quality standard.
 - The Commonwealth submitted its recommendations on the designations of areas under the PM_{2.5} standard on February 13, 2004, requesting that all areas be designated attainment.
 - On June 29, 2004, EPA released its proposed intentions regarding the designation of areas in Virginia under the PM_{2.5} standard. Although there were no violations of the PM_{2.5} standard in the Commonwealth, EPA has proposed to designate 9 localities in Northern Virginia area as nonattainment, alleging that the emissions from these localities contribute to nonattainment conditions in the Maryland and Washington, D.C. areas.
 - Plans are due February 2008.

- NO_x SIP Call
 - The State Air Pollution Control Board adopted a NO_x SIP Call regulation on May 21, 2002, with an amendment being adopted on November 5, 2003.
 - On August 25, 2004, EPA granted full approval of the regulation.
 - The Appropriations Act enables DEQ to auction the NO_x emission credits set-aside for new units. The allowances allocated to existing units have been distributed. The allowances set-aside for new units were distributed by auction held on June 24, 2004. Approximately \$10.5 million was generated by the auction and deposited in the general

fund.

I. STATUS OF AIR QUALITY

The Department of Environmental Quality maintains an extensive air quality monitoring network throughout the Commonwealth. Ambient air quality was measured by 109 instruments at 51 sites during 2003. These monitoring sites were established in accordance with EPA's siting criteria contained in Code of Federal Regulations, Title 40, Part 58, Appendices D and E, and monitoring network operations conform to EPA guidance documents and generally accepted air quality monitoring practices. All data reported for the Virginia air quality monitoring network were quality assured in accordance with requirements contained in 40 CFR Part 58, Appendix A. These data are published annually in the Virginia Ambient Air Monitoring Data Report (you can now get a copy of this report on the Department website at www.deq.state.va.us/airmon).

Ambient concentrations of carbon monoxide, nitrogen dioxide, and sulfur dioxide were within the EPA's national ambient air quality standards (NAAQS) in 2003. Virginia continues to experience problems with summertime ozone pollution, particularly in Northern Virginia, Richmond, and Hampton Roads. In 2003, Northern Virginia had two days when a one-hour ozone average greater than .12 ppm was recorded at one or more monitoring stations in the area. Richmond and Hampton Roads each had one day greater than .12 ppm. Implementation of the stricter 8-hour ozone standard has begun, following a delay resulting from several years of litigation. Effective June 15, 2004, the following areas have been designated nonattainment: Richmond, Hampton Roads, Northern Virginia, Fredericksburg, and portions of Madison and Page Counties. The Roanoke and Winchester areas also exceeded the 8-hour ozone standard for the period from 2001-2003. To address the possibility of ozone nonattainment, these two areas signed Early Action Compacts (EACs) in December 2002. EACs are plans that are designed to reduce ozone precursor pollutants and improve air quality in an area prior to receiving an official nonattainment designation by EPA. In exchange, EPA has granted these areas a delay in the effective date of the nonattainment designation, and the requirements that accompany that designation.

Virginia is meeting the NAAQS for PM₁₀ (particulate matter with an aerodynamic diameter equal to or less than 10 microns). Also, the 24-hour standard for fine particulate matter (PM_{2.5}) is being met in all areas, and the annual standard for PM_{2.5} is being met everywhere in the state for the period from 2001-2003.

II. AIR POLLUTION CONTROL POLICIES

CLEAN AIR PROGRESS AND AIR QUALITY MANAGEMENT

The State Air Pollution Control Board and the Department of Environmental Quality have worked diligently to promote environmental stewardship and enhance the Commonwealth's

natural beauty. Today, Virginia's air is getting cleaner thanks to a working partnership between agencies of the Commonwealth, the business community and the public. To continue this progress and to avoid the health effects and the costly economic consequences of increased federal regulations that poor air quality can bring, Virginians have cooperated in several air quality initiatives.

In addition to meeting most national standards and requirements for clean air, Virginia also has numerous voluntary programs designed to promote environmental stewardship. Large companies, small businesses, institutions, and private citizens are all encouraged to participate in keeping the air clean. Such voluntary measures can help Virginia avoid activities mandated by the federal government. For example, Virginians have adjusted their routines on the hot summer days that help raise ozone levels. Citizens have reduced unnecessary driving, lawn mowing, and other activities on extremely hot, still, sunny, summer days when weather conditions make unhealthy ozone levels possible.

MAJOR PROGRAM ACTIVITIES

Ozone Attainment Planning for 1-Hour Standard

States are required to prepare a state implementation plan (SIP) to attain and maintain the national air quality standards (see Appendix A on page 27 for more details). A SIP is revised, as needed, based upon changes in air quality or statutory requirements. For the most part Virginia's SIP has worked, and the standards have been attained for most pollutants in most areas. However, attainment of NAAQS for one pollutant--ozone--has proven problematic. While ozone is needed at the earth's outer atmospheric layer to shield out harmful rays from the sun, excess concentrations at the surface have an adverse effect on human health and welfare. Ozone is formed by a chemical reaction between volatile organic compounds (VOCs), nitrogen oxides (NO_x), and sunlight. When VOC and NO_x emissions from mobile sources (such as cars) and stationary sources (such as industrial processes, combustion of fuels, gasoline storage and transfer, printing, and dry cleaning) are reduced, ozone is reduced.

Congress enacted the 1977 Amendments to the original 1970 Clean Air Act in order to address unsuccessful SIPs and areas that had not attained the NAAQS (that is, nonattainment areas). Although SIP revisions submitted pursuant to the requirements of the 1977 amendments did achieve some progress in eliminating nonattainment areas, some areas remained.

In 1990 Congress once again enacted comprehensive Amendments to the Clean Air Act to address SIP requirements for nonattainment areas. The new Act established a process for evaluating the air quality in each region and identifying and classifying each nonattainment area according to the severity of its air pollution problem. As a result of this process, Virginia had three ozone nonattainment areas located in the metropolitan areas of Hampton Roads, Richmond, and Northern Virginia. There was one rural ozone nonattainment area on White Top Mountain in Smyth County. There were also two

localities in the Northern Virginia area designated nonattainment for carbon monoxide. All of these areas, with the exception of Northern Virginia ozone area and White Top Mountain ozone rural transport area, have been redesignated attainment by EPA in response to a request from the Commonwealth.

In view of its promulgation of a new 8-hour ozone standard (see below), EPA revoked applicability of the 1-hour standard from all areas, with the exception of those areas that did not meet it. In Virginia, this left the Northern Virginia area as the only area to which the 1-hour standard applies.

Subsequently, EPA moved to reinstate its older, 1-hour ozone standard in nearly 3000 counties across the United States where it had been revoked, but gave a number of areas where the data shows compliance with the standard ("clean data areas") additional time to show that they are in attainment with the standard. EPA was forced to make this move in the aftermath of a May 1999 federal court ruling (see below) that had essentially stopped implementation of a more stringent 8-hour standard. As a result of the ruling, EPA had to either reinstate the 1-hour standard, or leave much of the country without enforceable ozone standards.

On July 20, 2000 (65 FR 45182), EPA officially reinstated the older, 1-hour standard, requiring the affected counties to take some additional action to protect their air quality or to avoid future increases in air pollution. Generally, this restores areas to the air quality designation they had when EPA moved to revoke the standard. In most areas, the action will have little practical effect, but will trigger air quality maintenance plans in areas that have had air quality problems since the standard was revoked.

At the same time, EPA also delayed the effective date for the reinstatement for at least 90 days, and gave areas with clean air quality data the full 180 days before the standard took effect. Many of the "clean data areas" had postponed obtaining formal redesignation to attainment status because EPA had revoked the 1-hour standard. But reinstatement threatened to trigger immediate imposition of additional air quality controls in these "clean data" areas, including more stringent permitting requirements for new and modified stationary sources. Giving the clean data areas a full 180 days before the reinstatement takes place allowed them more time to prepare requests to EPA asking for redesignation to attainment.

Although the White Top Mountain nonattainment area, at one time, met the criteria for a clean data area, development of a maintenance plan for the area is on-hold due to a lack of recent air quality data. The original designation was based on air quality data from a federal monitoring station which is now removed. Virginia and EPA are exploring ways to redesignate to attainment without the need for the data.

The reinstatement triggered pre-existing air quality contingency measures in the Richmond Ozone Nonattainment Area, which is legally in attainment with the older ozone standard, but violated it based on 1996-1998 data. Because the contingency measures in the current maintenance plan for the Richmond area are not consistent with the policies of the

Commonwealth, the plan was revised. The most significant change to the plan is the removal of a motor vehicle inspection and maintenance program as a contingency measure. The final revised plan was submitted to EPA on November 20, 2001.

On August 15, 2002, the Sierra Club notified the state and EPA of its intent to commence a civil action against Virginia for failure to implement the original maintenance plan for the Richmond area approved by EPA in a SIP revision on November 17, 1997. They state that the maintenance plan--in particular, the contingency measures (including I/M) found in the maintenance plan to be implemented in the event of ozone violations in the area-- was not carried out according to schedule. States are allowed by the Clean Air Act to revise their SIPs and maintenance plans in order to more expeditiously attain the ozone standard. As discussed in the previous paragraph, the plan was revised to replace the I/M program with more effective measures because it would have imposed considerable expense with negligible air quality improvement. On October 7, 2002 (67 FR 62427), EPA issued a notice of its proposed approval of the maintenance plan.

The pre-existing air quality contingency measures were also triggered for the Hampton Roads Ozone Nonattainment Area, which is legally in attainment with the older ozone standard, but has violated it based on 1999-2001 data. By letter of October 29, 2001, EPA officially notified the Commonwealth of the violation and the need to implement the contingency measures. However, as was the case with the Richmond area, changes will be needed before this is done.

Meanwhile, EPA had approved plans and control strategies to achieve the 1-hour standard in the Northern Virginia area. However, on July 2, 2002, the U.S. Court of Appeals for the DC circuit overturned EPA's approval of the SIP revisions (Virginia, along with Maryland and the District) submitted for the Washington D. C. metropolitan area, which extended the area's attainment deadline for ozone from 1999 to 2005. The court found that EPA lacked the authority to grant an extension of the attainment deadline from 1999 to 2005 without reclassifying the area as a severe nonattainment area. Although EPA had argued that it could extend the attainment deadline because of the impact of upwind emissions impeding the area's ability to attain the standard, the court responded that the Clean Air Act details the conditions under which EPA may extend an attainment deadline due to transport, and none of these conditions applied in this case. The court also directed EPA to determine which measures, if any, are reasonably available control measures (RACM) to be implemented by the states, as EPA's failure to analyze whether particular measures constituted RACM was arbitrary and capricious. Additionally, the court held the EPA had no authority to approve the SIPs when they failed to include a rate of progress plan for the years after 1999, as the Clean Air Act makes inclusion of such a plan a requirement for approving a revised SIP. Finally, the court held that since the SIPs did not meet the Clean Air Act requirement to include contingency measures, then EPA did not have the authority to approve the SIPs. The court thus vacated EPA's approval of the SIPs, and remanded the matter to EPA for further consideration.

On December 27, 2002 (67 FR 79460), EPA issued notice of a proposal to stay the authority to revoke the 1-hour ozone standard until the 8-hour ozone implementation

rulemaking. EPA is proposing to stay its authority under 40 CFR. 50.9(b) to determine that an area has met the 1- hour ozone standard and that the 1-hour standard no longer applies, until it conducts a subsequent rulemaking addressing whether it should modify the second sentence of 40 CFR 50.9(b). (The second sentence provides that, after the 8-hour ozone standard has become fully enforceable and no longer subject to further legal challenge, the 1-hour ozone standard will no longer apply to an area once EPA determines that the area has air quality meeting the 1-hour standard.) EPA plans to consider the timeframe and basis for revoking the 1-hour standard as part of its upcoming rulemaking dealing with implementation of the 8-hour ozone standard.

On January 24, 2003 (68 FR 3410), EPA published a final rule which included a determination that the Metropolitan Washington, D.C. serious ozone nonattainment area (D.C. area) did not attain the 1-hour ozone ambient air quality standard by the November 15, 1999 CAA deadline for serious ozone nonattainment areas. As a result, the D.C. area is reclassified by operation of law as a severe ozone nonattainment area on the effective date of this rule (March 25, 2003). EPA took this action in response to a ruling by the U.S. Court of Appeals for the District of Columbia Circuit that vacated EPA's decision to give the area five more years to attain the 1-hour ozone standard without changing the area's classification.

On April 17, 2003 (68 FR 19106), EPA published a final rule granting conditional approval of the D.C. area one-hour ozone SIP. The conditional approval included the following requirement, codified as 40 CFR 52.2450(b):

(b) Virginia's severe ozone nonattainment area SIP for the Metropolitan Washington area, which includes the 1996-1999 portion of the rate-of-progress plan submitted on December 19, 1997 and May 25, 1999 and the transportation control measures in Appendix H of the May 25, 1999 submittal, and the severe ozone attainment demonstration submitted on April 29, 1998, August 18, 1998, February 9, 2000, and section 9.1.1.2 of the March 22, 2000 submittal and the transportation control measures in Appendix J of the February 9, 2000 submittal, is conditionally approved contingent on Virginia submitting a revised SIP by April 17, 2004 that satisfies certain conditions. This conditional approval also establishes motor vehicle emissions budgets for 2005 of 101.8 tons per day of volatile organic compounds (VOC) and 161.8 tons per day of nitrogen oxides (NOx) to be used in transportation conformity in the Metropolitan Washington, DC serious ozone nonattainment area until revised budgets based upon the MOBILE6 model are submitted and found adequate. Virginia must submit a revised SIP by April 17, 2004 that satisfies the following conditions.

(1) Revises the 1996-1999 portion of the severe area ROP plan to include a contingency plan containing those adopted measures that qualify as contingency measures to be implemented should EPA determine that the Washington area failed to achieve the required 9 percent rate-of-progress reductions by November 15, 1999.

(2) Revises the 1999-2005 portion of the severe area rate-of-progress plan to provide MOBILE6-based mobile source emission budgets and adopted measures sufficient to achieve emission reductions of ozone precursors of at least 3 percent per year from November 15, 1999 to the November 15, 2005 severe ozone attainment date.

(3) Revises the severe area ROP plan to include a contingency plan containing those adopted measures that qualify as contingency measures to be implemented should EPA determine that the Washington area failed to achieve the ROP reductions required for the post-1999

period.

(4) Revises the Washington area severe attainment demonstration to include a contingency plan containing those adopted measures that qualify as contingency measures to be implemented for the failure of the Washington area to attain the one-hour ozone standard for serious areas by November 15, 1999.

(5) Revises the Washington area severe attainment demonstration to reflect revised MOBILE6-based motor vehicle emissions budgets, including revisions to the attainment modeling/weight of evidence demonstration and adopted control measures, as necessary, to show that the SIP continues to demonstrate attainment by November 15, 2005.

(6) Revises the Washington area severe attainment demonstration to include a contingency plan containing those measures to be implemented if the Washington area does not attain the one-hour ozone standard by November 15, 2005.

(7) Revises the Washington area severe attainment demonstration to include a revised RACM analysis and any revisions to the attainment demonstration including adopted control measures, as necessitated by such analysis.

(8) Revises the major stationary source threshold to 25 tons per year.

(9) Revises Reasonably Available Control Technology (RACT) rules to include the lower major source applicability threshold.

(10) Revises new source review offset requirement to require an offset ratio of at least 1.3 to 1.

(11) Includes a fee requirement for major sources of volatile organic compounds (VOC) and nitrogen oxides (NO_x) should the area fail to attain by November 15, 2005.

(12) Includes a revision that identifies and adopts specific enforceable transportation control strategies and transportation control measures to offset any growth in emissions from growth in vehicle miles traveled or number of vehicle trips and to attain reductions in motor vehicle emissions as necessary, in combination with other emission reduction requirements in the Washington area, to comply with the rate-of-progress requirements for severe areas. Measures specified in section 108(f) of the Clean Air Act will be considered and implemented as necessary to demonstrate attainment.

In the preamble (68 FR 19129) to the April 17 notice, EPA included the following statement:

Should the Washington area jurisdictions fail to fulfill these conditions by May 19, 2003 (later changed to April 17, 2004 at 68 FR 26495, May 16, 2003), this conditional approval will convert to a disapproval pursuant to CAA section 110(k).

Prior to the April 17 notice, the Commonwealth made a formal commitment by letter of April 8, 2003 to implement the requirements specified by the conditional approval as discussed above.

On June 23, 2003, the Sierra Club re-filed its lawsuit challenging EPA's acceptance of the Washington, D.C., area's plan to reduce ozone. The suit, *Sierra Club v. U.S. EPA*, is specifically challenging EPA's ability to grant "conditional approval" to a plan that a federal

appeals court already declared unlawful. If the court agrees with the environmentalists, the D.C. area would lose millions of federal highway dollars and potentially lose its authority to run key parts of its clean air program. The legal brief to the U.S. Court of Appeals for the D.C. Circuit says “In [the original case referred to as] Sierra Club I, this court expressly held that EPA could not lawfully approve the ozone plans for the Washington area because those plans lacked [required additional pollution reduction measures],” and goes on to say “In the action challenged here, EPA has once again approved the very same plans that this court held the agency could not approve in Sierra Club I. The plans have not changed in any material respect.” The brief also alleges that EPA cannot “circumvent the express rulings of Sierra Club I via the artifice of 'conditional' approval. . . . The effect of conditional approval is the same as full approval -- namely, to forestall the commencement of clocks for imposition of sanctions and federal plans that disapproval would require.” The outcome of the litigation is pending.

On June 26, 2003 (68 FR 38160), EPA issued a final rule staying its authority to determine that the 1-hour ozone national ambient air quality standard (NAAQS) no longer applies to an area that attains the NAAQS. EPA is addressing how it will revoke the 1-hour ozone NAAQS in its proposed rule for implementing the 8-hour ozone NAAQS (see 68 Federal Register 32802 (June 2, 2003)). The stay will remain effective until EPA takes final action revising or reinstating its authority to remove the 1-hour ozone NAAQS. The rule is effective August 25, 2003.

On February 3, 2004, the U.S. Court of Appeals for the District of Columbia Circuit issued a decision in *Sierra Club v. EPA* that overturned EPA's approval of an air quality plan for the Washington, D.C., metropolitan area but rejected most of the challenges to the plan's key elements. The court ruled against EPA's use of “conditional approval,” a legal tool that would have allowed the region to submit a plan that omitted some of its required elements based on a promise to submit them later. This vacated EPA's April 17, 2003 notice (see above).

While rejecting this aspect of the plan, the court also dismissed challenges to other major parts of it. The court upheld EPA's use of a method for modeling the region's ability to come into attainment, known as the “weight-of-evidence” approach, in lieu of a specific methodology known as photochemical grid modeling. The court ruled that EPA had the discretion to use this other modeling approach.

The court also rejected challengers' argument that EPA should have imposed earlier deadlines for submitting a new SIP when it reclassified the region from a “serious” to a “severe” nonattainment area in January 2003. The challengers argued that EPA unlawfully extended the deadline for submitting a new SIP until March 2004. However, the court said that to rule in the challengers' favor would have retroactively imposed deadlines that occurred before the region was reclassified.

The region was then required to submit a new SIP by the March 1 deadline in order to meet the new requirements for a “severe” nonattainment area, while also including additional requirements that should have been included in the previous SIP if the region

had not been granted conditional approval. The required submittal was made on February 25, 2003.

On August 19, 2003, the Commonwealth submitted (i) a plan demonstrating rate of progress for 2002 and 2005; (ii) a revision to 1990 base year emissions; and (iii) a severe area attainment demonstration for the Washington DC-MD-VA Ozone Nonattainment Area.

Mirant Potomac River Plant

The Commonwealth of Virginia, in cooperation with Maryland, the U.S. Environmental Protection Agency and the U.S. Department of Justice, have completed a far-reaching agreement to settle alleged air quality violations at the Mirant Potomac River power plant in Alexandria.

The proposed consent decree stems from a notice of violation that the Virginia Department of Environmental Quality issued against Mirant in September 2003 for allegedly exceeding the Potomac River plant's permit limit for nitrogen oxide emissions. The settlement will require improved pollution control technology and reduction of nitrogen oxide emissions, which contribute to ozone pollution, at the coal-fired Potomac River plant beginning this year. In addition, the settlement requires Mirant to make similar improvements at three larger coal-fired plants in Maryland.

In reaching this settlement, Virginia concluded that achieving significant pollution reductions from all four Mirant facilities was more beneficial than the smaller improvements that could be made at the Potomac River plant alone. The settlement will bring a total reduction of 29,000 tons per year of ozone-forming nitrogen oxides by 2010, which is 23,000 tons more than the entire amount emitted by the Potomac River plant in 2003.

In a separate agreement with Department of Environmental Quality and in cooperation with the local community in Alexandria, Mirant has agreed to conduct a study of the Potomac River plant's emissions. The study will use computer modeling to determine whether key pollutants such as ozone and mercury exceed air quality standards. If they do, Mirant will be required to reduce the pollution. Highlights of the settlement include:

- By 2010, nitrogen oxide emissions during the May-through-September ozone season will decline from recent levels of 2,100 tons to 1,475 tons at the Potomac River plant in Alexandria. The facility also is required to install state-of-the-art pollution control equipment.
- Also by 2010, nitrogen oxide emissions during ozone season will drop from the 2002 level of 19,249 tons per year to 5,200 tons from the four Mirant plants combined. Year-round nitrogen oxide emissions will decline from 45,000 tons to 16,000 tons.
- The three Maryland plants (in Charles County, Montgomery County and Prince George's County) currently have no nitrogen oxide emission limits. The settlement imposes limits on these plants and the Alexandria plant during ozone season and on an annual basis.

- The air quality improvements must be made at the Mirant facilities, not through trading of emission credits. This will ensure that these air quality improvements focus specifically on the Northern Virginia-Maryland-D.C. region.
- The large reductions in nitrogen oxide emissions will help improve water quality in the Chesapeake Bay and its tributaries by lowering the amount of airborne nitrogen that contributes to nutrient pollution in the water.
- Mirant will complete several environmental projects at the Potomac River plant, at a total cost of at least \$1 million, to reduce pollution from airborne particles. These projects are expected to reduce particle pollution by more than 47 tons annually from the Alexandria plant's ash silos, trucks, coal piles and other equipment. The projects were developed in cooperation with the city of Alexandria.
- Mirant will pay a civil penalty of \$500,000 to be divided evenly between Virginia and the United States.

Ozone Attainment Planning for New 8-Hour Standard

On July 17, 1997, EPA announced revisions to the National Ambient Air Quality Standards (NAAQS) for ozone. These changes were made following a lengthy review process, and were deemed necessary to protect public health and the environment.

For ozone, EPA initially phased out the 1-hour average concentration standard and replaced it with an 8-hour average concentration standard. All areas currently meeting the 1-hour ozone standard must demonstrate attainment with the 8-hour standard, and attainment status will be determined initially from data collected in the years 1997 through 1999. Those areas currently in nonattainment with the 1-hour standard must demonstrate attainment with that standard before complying with the 8-hour standard. Only the Northern Virginia area remains in nonattainment with the 1-hour standard.

In May 1999, the D.C. Circuit Court remanded the new 8-hour ozone standard on constitutional grounds and rules that EPA may not enforce the new 8-hour standard. As a result, EPA has reinstated the previously revoked 1-hour standard (see discussion above).

The Clean Air Act and various other federal laws require that states make recommendations to EPA concerning the geographic boundaries with respect to attainment or nonattainment after promulgation of new or revised air quality standards. For the revised ozone standard, the recommendation was due by July 1, 1999. However, the Commonwealth did not make any recommendations as to the geographic boundaries but instead expressed the view that it was premature to do so in light of the uncertainty associated with the revised air quality standard due to the court rulings. The standard is currently unenforceable and, ultimately, EPA might have to revise the level in the revised ozone standard. In spite of this uncertainty, EPA indicated that it is duty bound by law to make its decision and put forth a new deadline of July 1, 2000 for the states to make their submittals. On June 29, 2000, the Commonwealth submitted recommendations as to the geographic areas to be designated nonattainment for the 8-hour ozone air quality standard. The final decision on the designations lies with EPA.

On July 26, 2002 (67 FR 48896), EPA published a notice of a proposed settlement agreement between the Department of Justice and environmental groups affecting how EPA will implement the transition from the 1-hour ozone standard to the 8-hour ozone standard. The settlement would require EPA to issue a notice of proposed rulemaking stating that it will stay its authority to determine that an area has met the 1-hour ozone standard, which under 40 CFR 50.9(b) would mean the 1-hour ozone standard would no longer apply to that area (assuming the 8-hour standard has become fully enforceable and is not subject to any further legal challenge). Instead, the settlement provides that EPA will propose that the stay be effective until EPA takes final agency action on a subsequent rulemaking addressing whether EPA should modify this provision (on the applicability of the 1-hour standard after the 8-hour standard has become fully enforceable), given the Supreme Court's decision of February 27, 2001 regarding implementation of the 8-hour standard. Furthermore, EPA agreed in the settlement that in this subsequent rulemaking, EPA will state that it will consider and address any comments concerning (a) which, if any, implementation activities for an 8-hour standard would need to occur before EPA determines that the 1-hour standard no longer applies to an area, and (b) the effect of revising the ozone NAAQS on existing ozone designations. The environmental groups agreed to dismiss their lawsuit if EPA meets the terms of the settlement agreement.

On December 23, 2002, EPA issued its final response to a May 1999 court remand of the 8-hour ozone standard, reaffirming the 8-hour standard the agency issued in 1997. EPA decided to reaffirm the standard after carefully considering the scientific and technical information available when the 1997 standard was issued, in addition to public comments on the November 2001 proposed response to the remand. The U.S. Court of Appeals for the District of Columbia ordered EPA in May 1999 to reconsider the standard, taking into account the possible beneficial effects of ground-level ozone on UVB radiation. EPA concluded that information about such possible beneficial effects is too uncertain to allow for credible estimates, and any beneficial effects are likely to be small from a public health perspective; thus relaxation of the 8-hour ozone standard is not warranted. The response will be effective 60 days after it is published in the Federal Register. [For further information: www.epa.gov/airlinks/uvb-fs.pdf or www.epa.gov/ttn/naaqs]

On January 7, 2003, it was reported that thirty-four areas (including two in Virginia) submitted voluntary 8-hour ozone ("early action") compacts to EPA by the December 31, 2002 deadline set by EPA. The purpose of an early action compact is to provide a local area with flexibility to control air emissions from its sources and offer a means to achieve cleaner air faster than would otherwise be required under the Clean Air Act. Areas that approach or monitor exceedances of the 8-hour ozone standard but are designated attainment for the 1-hour ozone standard were eligible to submit compacts, which must contain enforceable measures and milestones and schedules established by EPA. In exchange, EPA agreed to defer the effective date of a nonattainment designation as long as all the terms and the milestones in the compacts are met.

On February 27, 2003, EPA agreed to give states a 3-month extension, until July 15, 2003, to submit their updated, revised or new recommendations for 8-hour ozone designations.

Initially, EPA required that states submit this information by April 15, 2003. The states requested that the deadline be extended because EPA's proposed implementation rule for the 8-hour ozone standard was not scheduled for release until March 15, 2003, and states needed time to review the rule and explain its implications to stakeholders in nonattainment areas. States will also be provided an opportunity to update their recommendations after the final implementation rule is released.

On May 14, 2003, EPA released its proposed implementation rule for the 8-hour ozone standard, which would establish guidelines for state and tribal authorities to implement the 8-hour National Ambient Air Quality Standard for ozone enacted by EPA in 1997. The proposal seeks public comment on options for planning and control requirements for states and tribes, as well as for making the transition from the 1-hour ozone standard to the 8-hour standard. In particular, EPA proposes two options for classifying nonattainment areas. One option would place all nonattainment areas under Subpart 2 of Part D of the Clean Air Act, which contains detailed and prescriptive requirements for areas depending on the severity of their violation of the 8-hour ozone level. EPA's other classification option – and its preferred one – would generally place areas that are nonattainment only for the 8-hour standard, and not the 1-hour standard, under Subpart 1, with other areas subject to Subpart 2. Subpart 1 contains more flexible requirements for nonattainment areas. The Supreme Court in 2001 held that EPA could not ignore Subpart 2 completely in implementing the 8-hour ozone standard and remanded EPA's original implementation scheme to the agency to reasonably resolve the ambiguity in the Clean Air Act concerning the manner in which Subpart 1 and Subpart 2 interact with regard to revised ozone standards.

On June 2, 2003 (68 FR 32802), EPA issued notice of a proposal for implementing the new 8-hour ozone standard. EPA did not include regulatory text in the proposal because a number of options are being proposed for many of the implementation elements, and the agency believed it to be preferable to first obtain public comment on the conceptual options. After consideration of the public comment on the proposed options, EPA issued the proposed regulatory text (see below).

On July 9, 2003, the Commonwealth made a submittal for the 8-hour ozone designations in which it confirmed the designation of the geographic areas recommended in its July 29, 2000 submittal. EPA will determine the final designations. Under a consent decree (see above), EPA must meet a deadline of April 15, 2004 for promulgating the final designations.

On August 6, 2003 (68 FR 46536), EPA released the draft regulatory text for its proposal to implement the 8-hour ozone standard. On June 2, 2003, EPA published a proposal outlining various options for each element or feature of implementation. In the newly released draft regulatory text, the agency provides language for only one of the options proposed for each feature or element, to demonstrate how the regulatory text would appear for that particular option. In the preamble to the draft regulatory text, EPA says that selection of a particular option was generally based on the preferences stated in the June 2, 2003 proposal and should not be interpreted as a decision by EPA to proceed with that

option in final rulemaking. In this draft regulatory text, EPA did not address the options concerning New Source Review (i.e., the transitional program and the Clean Air Development Communities program).

On December 3, 2003, EPA notified the Governor of EPA's proposed intentions regarding the designation of areas in Virginia under the 8-hour ozone air quality standard.

On February 10, 2004, the Commonwealth submitted its final recommendations and comments on the designations of areas in Virginia under the 8-hour ozone air quality standard. On April 30, 2004 (69 FR 23858), EPA's nonattainment and attainment/unclassifiable designations for the 8-hour ozone standards were published in the Federal Register, along with area classifications. The designations will be effective June 15, 2004 (except for early action compact areas). Below is a comparison EPA's final designations and Virginia's recommendations.

Area	Commonwealth's 2/10/04 proposal	EPA's 4/30/04 response/classification
Northern Virginia	Same as previous 1-hour nonattainment area; transfer Stafford County to Fredericksburg.	No change/moderate.
Richmond	Same as previous 1-hour nonattainment area.	Add all of Charles City County, City of Petersburg and Prince George County/moderate.
Hampton Roads	Same as previous 1-hour nonattainment area.	Add Gloucester and Isle of Wight Counties/marginal.
Fredericksburg	Establish area separate from Northern Virginia but with same classification; transfer Stafford County from Northern.	No change/moderate.
Caroline County	New nonattainment area.	Denied.
Roanoke	New nonattainment area; designation deferred by EAC.	No change/basic.
Frederick County/ Winchester	New nonattainment area; designation deferred by EAC.	No change/basic.
Shenandoah National Park	Portion of park within Madison and Page Counties.	No change/basic.

On April 30, 2004 (69 FR 23951), part one of EPA's final rule for implementing the 8-hour ozone standard was published in the Federal Register. Part one covers two key implementation issues: classifying areas for the 8-hour standard and transitioning from the 1-hour to the 8-hour standard, which includes revocation of the 1-hour standard and the anti-backsliding principles that should apply upon revocation. As expected, EPA selected its preferred method for classifying nonattainment areas: each area with a 1-hour design value at or above 0.121 parts per million (the lowest 1-hour design value in Table 1 of subpart 2) will be classified under subpart 2 based on its 8-hour design value; all other

areas will be covered under subpart 1 using their 8-hour design values. EPA will revoke the 1-hour standard in full, including the associated designations and classifications, one year following the effective date of the 8-hour ozone designations (June 15, 2005). However, EPA maintains that its rule preserves control obligations mandated by subpart 2 for an area's classification for the 1-hour standard, though a state may revoke or modify discretionary measures in a SIP so long as it demonstrates that such removal or modification will not interfere with attainment of or progress toward the 8-hour ozone standard (or any other applicable requirement of the Act). States with unmet 1-hour ozone attainment demonstration obligations have three options for meeting this obligation. Areas will not be obligated to continue to demonstrate conformity for the 1-hour NAAQS as of the effective date of the revocation of the 1-hour NAAQS. EPA will no longer make findings of failure to attain the 1-hour standard and, therefore, 1) EPA will not reclassify areas to a higher classification for the 1-hour standard based on such a finding and 2) areas that were classified as severe for the 1-hour NAAQS are not obligated to impose fees as provided under sections 181(b)(4) and 185A of the Clean Air Act (CAA). (These antibacksliding provisions and others are covered in section 51.905 of the final rule.) The rule also covers attainment dates. For areas subject to subpart 2, the maximum period for attainment will run from the effective date of designations and classifications for the 8-hour standard and will be the same periods as provided in Table 1 of section 181(a) of the CAA. For areas subject to subpart 1 of the CAA, the period for attainment will be no later than five years after the effective date of the designation, with a five-year extension possible. The rule is effective June 15, 2004.

On July 12, 2004, the Commonwealth submitted a request to reclassify the Richmond Ozone Nonattainment Area from moderate to marginal. EPA is required to make a final decision by September 15, 2004. Approval by EPA would remove the need to implement some control measures such as a basic motor vehicle emissions inspection and maintenance program. Section 181 (a) (4) of the federal Clean Air Act provides that an ozone nonattainment area may be reclassified in another category if the design value in the area were 5 percent greater or 5 percent less than the level on which the classification was based.

Fine Particles (PM_{2.5}) Standard - Designation of Nonattainment Areas

On April 1, 2003, EPA issued guidance to states on the process for designating areas for the purpose of implementing the fine particle national ambient air quality standards. The guidance describes the process for developing state recommendations on designations and the timeline for EPA action leading to the final designations. EPA plans to issue final designations on December 15, 2004.

On July 18, 1997 (62 FR 38652), EPA promulgated the air quality standards for fine particulate matter (known as PM_{2.5}). The standards were based on a number of health studies showing that increased exposure to PM_{2.5} is correlated with increased mortality and a range of serious health effects, including aggravation of lung disease, asthma, and heart problems. Estimates show that attainment of these standards would result in tens of

thousands fewer premature deaths each year and would prevent tens of thousands of hospital admissions and millions of work absences and respiratory illnesses in children annually. The designation process for PM_{2.5} is the next step toward developing and implementing emission control programs that will address this important public health problem.

The first step in the designation process is the submittal of state recommendations. EPA requests that states provide a list of recommended designations to EPA by February 15, 2004. EPA plans to announce its intended designations in July 2004 and will provide 120 days for states to comment on any modifications that EPA makes to the recommended designations. EPA plans to publish final PM_{2.5} designations for all areas on December 15, 2004. EPA also intends to propose and finalize its implementation rule for PM_{2.5} early enough to be taken into consideration during the designation process. EPA hopes that by following a designation schedule for PM_{2.5} similar to that for the 8-hour ozone program, the states will be able to harmonize area boundaries and future control strategies to the extent possible.

As explained in the guidance, EPA intends to apply a presumption that the boundaries for urban nonattainment areas should be based on metropolitan area boundaries. A metropolitan area, as defined by the Office of Management and Budget, may consist of a single Metropolitan Statistical Area in some cases, and a Consolidated Metropolitan Statistical Area in other cases. These metropolitan areas provide presumptive boundaries for the geographic extent of urban areas. The presumptive use of metropolitan area boundaries to define urban nonattainment areas is based on recent evidence that violations of the PM_{2.5} air quality standards generally include a significant urban-scale contribution as well as a significant larger-scale regional contribution. For rural areas that are identified as violating the PM_{2.5} standards, the guidance sets forth EPA's presumption that the full county should be designated nonattainment. The approach taken in this guidance is similar to our approach to designations for the 8-hour ozone standard, and EPA urges states harmonize their ozone and PM_{2.5} designation recommendations where appropriate.

The guidance provides EPA's current views on how boundaries should be determined for designations. This guidance is not binding on states, the public, or EPA. Issues concerning nonattainment area boundaries will be addressed in actions to designate nonattainment and attainment/unclassifiable areas under sections 107 and 301(d) of the Clean Air Act. When EPA promulgates designations, that action will be final and binding on states, the public, and EPA as a matter of law.

On May 19, 2003, EPA filed a consent decree setting out a schedule for reviewing the particulate matter (PM) National Ambient Air Quality Standard (NAAQS) to settle a lawsuit brought by a coalition of environmental and health groups. EPA agreed to issue its final criteria document by December 19, 2003, publish a proposed rule (including review of PM standards, any revisions and any new standards) in the Federal Register by April 10, 2005 and publish a final rule in the Federal Register by December 30, 2005. The groups had filed a lawsuit alleging that the EPA Administrator had failed to meet the Clean Air Act

deadlines for reviewing the PM standard. The Act requires EPA to conduct a thorough review of NAAQS and make revisions as appropriate every five years. EPA issued revised criteria for PM in 1996 and revised the standard in 1997. The proposed settlement was filed in U.S. District Court for the District of Columbia.

On February 13, 2004, the Commonwealth submitted its initial recommendations on the designations of areas in Virginia under the fine particulate matter (PM_{2.5}) air quality standards. This was submitted in response to the request and schedule set forth in the EPA designation guidance memorandum dated April 1, 2003.

The letter explained that based on the most recent three years of fine particulate matter monitoring data from 2001 to 2003, all monitors within the Commonwealth of Virginia are currently measuring PM_{2.5} concentrations that are in compliance with the standards. It went on to say that no short-term (24-hour) exceedances of the standard have ever been recorded in the Commonwealth. Based on these monitoring data, the initial recommendation of the Commonwealth is that all areas in Virginia should be designated attainment for the fine particulate matter standards.

On June 29, 2004, EPA notified the Governor of EPA's proposed intentions regarding the designation of areas in Virginia under the PM_{2.5} air quality standard. Despite any violations of the PM_{2.5} air quality standard in the Commonwealth, EPA proposes to designate 9 localities (Arlington County, Alexandria City, Fairfax County, Fairfax City, Falls Church City, Loudoun County, Manassas City, Manassas Park City, Prince William County) in Northern Virginia area as nonattainment, alleging that the emissions from these localities contribute to nonattainment conditions in the Maryland and Washington D. C. areas.

EPA NO_x SIP Call

In September 1998, EPA announced the final version of its NO_x SIP call. The SIP call requires Virginia, along with 21 other states, to implement a program to reduce NO_x emissions with the objective being the attainment of the ozone air quality standard. Background on activities related to the development of the original EPA proposal and associated litigation may be found below.

In March 1995, EPA agreed to work with the Environmental Commissioners of 37 states to deal with the issue of ozone nonattainment in areas designated "Serious" and above as established by the 1990 Clean Air Act Amendments. The 37 states included the OTC states, southern states, midwestern states, and other states bordering the Mississippi River on the west plus Texas, Oklahoma, Kansas, Nebraska and the Dakotas. This group of states was called the Ozone Transport Assessment Group (OTAG). The Serious and above areas included the Northeast corridor from northern Virginia through New England or the OTC (Ozone Transport Commission) states; Atlanta, Georgia and the greater Chicago area. The study was to include extensive air quality modeling to determine whether transport of ozone precursor pollutants (nitrogen oxides or NO_x and volatile organic compounds or VOCs) was affecting the ability of these nonattainment areas to

attain the health based one-hour ozone air quality standard. Five states did not support the OTAG recommendations because they felt that more detailed technical analysis should be performed before recommendations were made or a SIP call issued. Many also questioned the legality of a SIP call at this time. These five states were Alabama, Kentucky, Michigan, Virginia, and West Virginia. Some of the dissenting states, including Virginia, did not simply take issue with the EPA proposal but developed an alternative proposal under the auspices of the Southeast and Midwest Governor's Ozone Coalition. This alternative proposal was developed because the EPA SIP call requires infeasible and unnecessary emission reductions that will adversely affect the economy of the Commonwealth of Virginia without a commensurate improvement in air quality.

In November 1997 EPA proposed a NO_x SIP call based upon selected OTAG recommendations. During the public comment period on the proposed SIP Call Rule, thirteen states, including Virginia, submitted an alternative proposal to EPA. EPA rejected that proposal, however, and on September 30, 1998, the EPA Administrator signed the final version of the SIP call requiring submission of revised SIPs by September 30, 1999. The final version of the SIP call appeared in the federal register on October 27, 1998 (63 FR 57356).

On April 21, 2004 (69 FR 21604), EPA published the Phase II requirements of the NO_x SIP Call; the requirements take effect June 21, 2004. In this rulemaking, EPA 1) finalizes the definition of electric generating unit as applied to certain small cogeneration units, 2) establishes control levels for stationary internal combustion engines, 3) excludes portions of Georgia, Missouri, Alabama and Michigan from the NO_x SIP Call, 4) revises statewide emissions budgets in the NO_x SIP Call to reflect the disposition of the first three issues above, 5) sets a SIP submittal date, 6) sets the compliance date for implementation of control measures and 7) excludes Wisconsin from NO_x SIP Call requirements. It requires states that submitted SIPs to meet the Phase I NO_x SIP Call budgets to submit Phase II SIP revisions as needed to achieve the necessary incremental reductions of NO_x. It also requires Georgia and Missouri to submit SIP revisions meeting the full NO_x SIP Call budgets, since they were not required to submit Phase I SIPs. Sources in Alabama and Michigan will implement Phase II for the portion of the states covered by the NO_x SIP Call. All Phase II sources have a compliance date of May 1, 2007, and SIPs will be due from all affected states in 2005. Under the NO_x SIP Call, EPA determined that sources in 22 states and the District of Columbia were emitting NO_x in amounts that significantly contribute to nonattainment of the 1-hour ozone standard in downwind states and set forth requirements for each of the affected upwind states to submit SIP revisions prohibiting those amounts of NO_x emissions that significantly contribute to downwind air quality problems.

Virginia's Response to NO_x SIP Call

Many areas within the eastern half of the United States petitioned EPA regarding their inability to achieve the ozone standard due to significant amounts of ozone and oxides of nitrogen (NO_x), a precursor to ozone, being transported across state boundaries. EPA made a determination (Finding of Significant Contribution and Rulemaking for Certain

States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone; 63 FR 57491, October 27, 1998, as amended at 63 FR 71225, December 24, 1998; 64 FR 26305, May 14, 1999; and 65 FR 11230, March 2, 2000) that sources in 22 states and the District of Columbia emitted NO_x in amounts that significantly contribute to nonattainment of the ozone NAAQS in one or more downwind states. EPA also required that each of the affected upwind jurisdictions (sometimes referred to as upwind states) submit SIP revisions prohibiting those amounts of NO_x emissions that significantly contribute to downwind air quality problems. Virginia was included as one of the upwind states.

The rulemaking, known as the NO_x SIP Call Rule (40 CFR 51.121), also includes statewide NO_x emissions budget levels that each state must achieve by the year 2007. Furthermore, the NO_x SIP Call Rule identifies specific source categories that are covered by the budget; these include electric generating units (EGUs) with a nameplate capacity greater than 25 MWe and non-electric generating units (non-EGUs) above 250 mmBtu. Failure to achieve the budget will result in a Federal Implementation Plan (FIP) which EPA has promulgated as 40 CFR Part 97 (65 FR 2727, January 18, 2000).

The NO_x SIP Call Rule identifies Virginia, along with other states and the District of Columbia, as having substantially inadequate SIPs to comply with requirements of the Clean Air Act that address interstate transport of nitrogen oxides in amounts that will contribute significantly to nonattainment in one or more other States with respect to the ozone national ambient air quality standard. It mandates that, for each jurisdiction identified, a SIP revision must be submitted to EPA that imposes enforceable mechanisms to assure that, collectively, all sources identified in the budget will not exceed the NO_x emissions projected for the year 2007 ozone season. The SIP revisions must include control measures to limit the amount of NO_x so that the jurisdiction's budget is not exceeded. The control measures must be implemented no later than May 1, 2003 (later adjusted by the United States Court of Appeals for the District of Columbia Circuit to May 31, 2004). Emission reductions used to demonstrate compliance with the revision must occur during the ozone season. The revision must include a description of enforcement methods including monitoring compliance with each selected control measure and procedures for handling violations. For large electric generators and industrial boilers, the control measures must include a NO_x mass emissions cap on each source, and impose a NO_x emission rate so that the State can comply with the 2007 ozone NO_x budget.

The NO_x SIP Call Rule permits the states to include a budget trading program as an option in their SIP revisions. The use of this type of program is allowed under 40 CFR 51.121(p), and EPA provides a model NO_x budget trading rule (hereafter called the EPA Model Rule) in 40 CFR Part 96 (63 FR 57514, October 27, 1998) of the NO_x SIP Call Rule. In fact, EPA encourages states to use the EPA Model Rule and if the state chooses this approach the state's SIP revision will be automatically approved according to 40 CFR 51.121(p).

The original NO_x SIP Call rule had a SIP submittal deadline of September 30, 1999, but this was later changed to October 30, 2000 to accommodate the delay caused by the litigation.

On November 8, 2000, the State Air Pollution Control Board approved 9 VAC 5 Chapter 140 (hereafter called the proposed regulation) and authorized it for release to seek public comment. On July 16, 2001, the Department issued a notice seeking comment on the proposed regulation. A public hearing was held August 22, 2001 and the comment period closed September 14, 2001. Final action was taken on the regulation at the February 27 meeting but publication of the final regulation in the Virginia Register on March 25, 2002 was accompanied by a notice of suspension and reopening for public comment. This action was taken due to the substantive differences between the proposed regulation and the final. The second comment period closed on April 24, 2002 and the Board approved the final regulation at its May 21, 2002 meeting.

The purpose of the final regulation is to establish general provisions addressing applicability, permitting, allowance allocation, excess emissions, monitoring, and opt-in provisions to create a Virginia NO_x Budget Trading Program as a means of mitigating the interstate transport of ozone and nitrogen oxides in order to protect public health and welfare. The regulation creates an enforceable mechanism to assure that collectively, all affected sources will not exceed the total NO_x emissions budget established by regulation for the year 2007 ozone season and to provide the regulatory basis for a program under which the creation, trading (buying and selling) and registering of emission credits can occur. Furthermore, the regulation identifies specific source categories that are covered by the budget; these include electric generating units (EGUs) with a nameplate capacity greater than 25 MWe and non-electric generating units (non-EGUs) above 250 mmBtu.

On June 25, 2002, the regulation was submitted to EPA as Virginia's response to the NO_x SIP Call, along with the initial allocations for the affected units. On July 23, 2002 (67 FR 48032), EPA issued a notice determining the submittal to be administratively complete.

On July 8, 2003 (68 FR 40520), EPA issued a notice to grant conditional approval of Virginia's NO_x budget trading program, with the exception of its NO_x allowance banking provisions. According to EPA, the program does not meet federal requirements with regard to the start date for flow control. The current VA program regulation uses 2006 as the start date, and EPA indicates that Virginia must revise its regulation at 9 VAC-140-550 to establish the start of flow control to be 2005. A revised VA regulation needs to be submitted by August 7, 2004 or EPA's conditional approval will convert to a final disapproval and trigger a sanctions clock.

On November 5, 2003, the Board adopted a revision to 9 VAC-140-550 to establish the year 2005 as the start of flow control. It appeared in the Virginia Register on February 23, 2003 and became effective on March 24, 2004. The revised regulation was submitted to EPA on June 23, 2004.

On August 25, 2004 (69 FR 52174), EPA issued a notice to grant full approval of Virginia's NO_x budget trading program, by approving the revision to 9 VAC-140-550 to establish the year 2005 as the start of flow control.

The state budget bill includes a provision to enable the auctioning of NO_x emission credits. Subsection D of Item 383 of Chapter 1042 of the 2003 Acts of Assembly indicates that the Department of Environmental Quality may auction the NO_x emissions credits allocated under the NO_x SIP Call as set asides for new sources. On December 8, 2003, the Board adopted 9 VAC 5-140-421 to establish the process for auctioning the new source set-aside for the years 2004 and 2005. The auction was held on June 24, 2004 and approximately \$10.5 million was generated by the auction and deposited in the general fund. The regulation expired on July 1, 2004 and starting with year 2006, distribution of set-aside is limited to newly permitted Virginia industries on a pro-rata basis as provided by the currently effective regulation.

Section 126 Petitions

On March 18, 2004, North Carolina filed a petition with EPA under Clean Air Act section 126 seeking relief from air pollution from 13 states that it claims is contributing significantly to nonattainment, or interfering with maintenance, of the National Ambient Air Quality Standards (NAAQS) in North Carolina. The 13 states are Alabama, Georgia, Illinois, Indiana, Kentucky, Maryland, Michigan, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia and West Virginia. The petition alleges that NO_x and SO₂ emissions from electric generating units in these 13 states are preventing North Carolina from meeting the NAAQS for PM_{2.5} and ozone. The petition says that compliance with the proposed EGU emission budgets in EPA's proposed Interstate Air Quality Rule (IAQR) "would satisfy the requirements of this petition" and that North Carolina "does not oppose the flexibility discussed by EPA [in the IAQR proposal] to allow equivalent reductions from other source categories in a given state . . . so long as those reductions are real and enforceable." However, North Carolina is concerned that the interstate trading regime proposed in the IAQR might deny the state the benefit of needed reductions in states whose emissions particularly affect North Carolina's quality. In addition, section 110 (under which the IAQR is being promulgated) and section 126 do not provide mutually exclusive remedies; North Carolina believes its section 126 petition will assist in assuring expeditious implementation of controls on interstate transport affecting North Carolina. Section 126(b) of the Clean Air Act states that, within 60 days after receiving a section 126 petition, EPA must make a finding of violation of the Act's "significant contribution" provision or deny the petition. Section 307(d)(10) authorizes EPA to extend this period.

On May 19, 2004, EPA announced that it is extending by six months its final action on a petition from North Carolina filed under section 126 of the Clean Air Act. In the petition, North Carolina requests that EPA make a finding that emissions of sulfur dioxide and nitrogen oxides from large electric generating units in 13 states are contributing significantly to fine particulate matter and/or 8-hour ozone nonattainment and maintenance problems in North Carolina. EPA is delaying its response because it has determined that the 60-day time limit provided under section 126(b) is not sufficient for the agency to develop an adequate proposal on whether the sources identified in the petition contribute significantly to nonattainment problems downwind and, further, to allow public input regarding the promulgation of any controls to mitigate or eliminate those contributions. Citing authority

under Clean Air Act section 307(d)(10), EPA will extend to November 18, 2004 the deadline for its response to North Carolina's petition.

Clean Smokestacks Legislation

HB 1473 would establish requirements to reduce NO_x, SO₂ and mercury emissions from powerplants. It was introduced in the 2004 General Assembly Session and continued for further evaluation. If passed, it would improve Virginia air quality, reduce nitrogen deposition in the Chesapeake Bay and help respond to North Carolina's 126 petition.

Motor Vehicle Emissions Inspection and Maintenance Program

Since passage of the 1990 Clean Air Act Amendments, Virginia has put forth considerable effort to design a workable emissions inspection program that would improve upon the previous program. These program improvements are mandated by Congress but the initial EPA regulation required a centralized inspection system which was not the best type of program for Virginia. In 1995, the General Assembly passed legislation that specified both the type of inspection system (decentralized) and inspection equipment that would be used in the Northern Virginia program. In 1996, Congress and the EPA changed their requirements to allow a decentralized program as adopted by the General Assembly. The Department has worked hard to create a program that retains the convenience of having emissions inspections and emissions repairs performed in the same stations, while upgrading the equipment to more accurately identify those vehicles which emit excessive pollutants while operating under roadway conditions. With the help of service stations, repair garages and auto dealerships a program has been designed that is a model for other states to follow. Acceptance by and support from the repair industry has been very good. The program operation commenced in April of 1998. The program provides an enhanced automation inspection process and improved testing of vehicle emissions under conditions simulating driving at 15 and 25 miles per hour. The new program is several times more effective in reducing vehicle emissions than the previous program. This enhanced emissions inspection program is a significant air pollution reduction measure in the Northern Virginia Air Quality Attainment Plan.

In 2005, the Department plans to add testing of the on-board diagnostics or OBD system on model year 1996 and newer vehicles. All light duty vehicles 1996 and newer must be equipped with OBD according to federal law. The OBD system monitors key components of the vehicle's emission control system, records any "diagnostic trouble codes" and warns the driver if there is a condition that could cause excess emissions. The information from the diagnostic trouble codes can be used by the repair technician to facilitate effective and efficient repairs. It is a requirement of the Clean Air Act that each vehicle emissions inspection program monitor the OBD system and fail the vehicle if the OBD warning light is illuminated and if other malfunctions are detected. For most vehicles the OBD test will take the place of a tailpipe test and will thus greatly reduce the amount of time for an emissions test. The Department will substitute the OBD test for the tailpipe test after an OBD

advisory period during which OBD results will be recorded, but will not result in an emissions test failure.

As required by the Clean Air Act, each vehicle emissions inspection program must conduct remote sensing of vehicle emissions in the program area. In response to this requirement, the General Assembly passed legislation in 1996 to authorize the Department of Environmental Quality to perform remote sensing of vehicle emissions throughout the Northern Virginia area. A preliminary remote sensing study was undertaken in 1996 through 1997 to assess remote sensing technology. Additional legislation was adopted in 2002 to promote the remote sensing program and to authorize the Department to establish a repair subsidy program for low-income vehicle owners that fail the remote sensing test. A comprehensive pilot study was conducted in 2002 to obtain information regarding the feasibility of such a program.

The later study indicated that vehicles subject to emission inspections are from 16% to 30% cleaner than those in other areas that are not, a greater difference than was observed in the earlier study. The later study confirmed that out-of-state vehicles comprise about 15% of the fleet in Northern Virginia and another 13% of the automobiles in the program area are registered in other areas of Virginia. Most of the out-state vehicles are subject to emission inspection programs in other states; the other Virginia vehicles (13%) could be subject to emission inspections in the new program if identified by remote sensing as regular commuters and gross polluters.

The study indicated that remote sensing has the potential to identify gross polluting vehicles and supports a program that will require that those vehicles be repaired. The Department is currently in the process of finalizing regulations to implement a remote sensing program that will identify gross polluting vehicles and require out-of-cycle retesting. A contractor has been hired to provide remote sensing services beginning late 2004 and data procedures have been coordinated with VA DMV. After inspection station equipment software is updated, DEQ will begin notifying owners of high emitting vehicles that their vehicle must receive an out-of-cycle emissions test. At the same time DEQ is developing procedures to provide repair assistance to low-income vehicle owners whose vehicles were found to be high emitters through remote sensing, and a "clean screening" program that will be implemented to exempt certain very clean vehicles, so identified by remote sensing, from their next regular emissions test.

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APPENDIX A

DESCRIPTION OF AIR QUALITY PLANS AND PROGRAMS

STATE IMPLEMENTATION PLAN

Among the primary goals of the Clean Air Act are the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) and the prevention of significant deterioration (PSD) of air quality in areas cleaner than the NAAQS.

The NAAQS, developed and promulgated by the U.S. Environmental Protection Agency (EPA), establish the maximum limits of pollutants that are permitted in the outside ambient air. The Clean Air Act requires that each state submit a plan (called a State Implementation Plan or SIP), including any laws and regulations necessary to enforce the plan, showing how the air pollution concentrations will be reduced to levels at or below these standards (i.e. attainment). Once the pollution levels are within the standards, the plan must also demonstrate how the state will maintain the air pollution concentrations at the reduced levels (i.e., maintenance). The Virginia State Implementation Plan was submitted to EPA in early 1972. More than 100 revisions (mostly regulation revisions) to the plan have been made since the original submittal in 1972. Generally, the plan is revised, as needed, based upon changes to the Clean Air Act and its requirements.

A state implementation plan is the key to the air quality programs. The Clean Air Act is specific concerning the elements required for an acceptable SIP. If a state does not prepare such a plan, or EPA does not approve a submitted plan, then EPA itself is empowered to take the necessary actions to attain and maintain the air quality standards - that is, it would have to promulgate and implement an air quality plan for that state. EPA is also, by law, given authority to impose sanctions in cases where there is no approved plan or the plan is not being implemented, the sanctions consisting of loss of federal funds for highways and other projects and/or more restrictive requirements for new industry. Generally, the plan is revised, as needed, based upon changes to the Clean Air Act and its requirements.

The basic approach to developing a SIP is to examine air quality across the State, delineate areas where air quality needs improvement, determine the degree of improvement necessary, inventory the sources contributing to the problem, develop a control strategy to reduce emissions from contributing sources enough to bring about attainment of the air quality standards, implement the strategy, and take the steps necessary to ensure that the air quality standards are not violated in the future.

The heart of the SIP is the control strategy. The control strategy describes the emission reduction measures to be used by the State to attain and maintain the air quality standards. There are three basic types of measures: stationary source control measures, mobile source control measures, and transportation source control measures. Stationary source control measures are directed at limiting emissions primarily from commercial/industrial facilities and operations. Mobile source control measures are directed at limiting tail pipe

and other emissions primarily from motor vehicles and include the following: Federal Motor Vehicle Emission Standards, fuel volatility limits, reformulated gasoline, emissions control system anti-tampering program, and inspection and maintenance program. Transportation source control measures are directed at limiting the location and use of motor vehicles and include the following: carpools, special bus lanes, rapid transit systems, commuter park and ride lots, bicycle lanes, signal system improvements, and many others.

Most of the agency's regulations are designed to provide the means for implementing and enforcing SIP control measures (primarily stationary source and some mobile source) necessary to obtain emissions reductions. About 95 percent of the agency's regulations fall into this category and are, therefore, subject to EPA approval.

In addition, development and enforcement of regulations under the Virginia State Implementation Plan must be continually pursued, as well as development of new plan revisions as federal laws and regulations change.

REGULATORY PROGRAMS

The state's air quality programs are developed in order to implement the provisions of the Virginia Air Pollution Control Law and to fulfill the Commonwealth's mandates under the Federal Clean Air Act (originally enacted in 1970) to implement air quality programs required by the Act. The regulations are adopted in order to provide a legally enforceable means to implement air quality programs required by the Act.

The basic approach and content of these two laws greatly influence agency program development. The state law is very broad, giving the agency much latitude and addressing the general development and processing of regulations with little guidance on their content or other aspects of the programs. The federal law, however, differs sharply by laying out, often in explicit detail, the exact requirements for an air quality program. In cases where the law is not explicit, the accompanying federal regulations fill in the gap in even greater detail, in some cases, going as far as actually requiring states to adopt certain federal regulations verbatim. The chief influences on the Commonwealth's air quality programs are the federal law and the regulations drawn pursuant to it. For any air quality program to become acceptable under the Clean Air Act, it must be submitted to and approved by the U.S. Environmental Protection Agency (EPA). Although the programs of the State Air Pollution Control Board are heavily influenced by federal legislation, it is state law that provides the legal basis for programs developed by the Board and the Department. Below is a summary of the basic programs established by the laws, both federal and state.

State Implementation Plan Regulatory Programs. The SIP is designed to attain and maintain the ambient air quality standards throughout the state. The standards prescribe limits for six "criteria pollutants": carbon monoxide, lead, nitrogen oxides, ozone, particulate matter, and sulfur oxides. Regulations are one element of the plan and are included to provide a legal basis to restrict the emission of air pollution from individual sources. The Board's SIP regulations may be divided into four general categories as follows:

Stationary Source Regulatory Program. Covers existing sources and requires compliance with emission standards based on emission limits achievable through the use of reasonably available control technology.

New and Modified Source Permit Program. Covers new facilities and expansions to existing ones and requires a permit be obtained prior to beginning construction of the new facility or the expansion to the existing one. There are three permit programs and applicability depends on the type, size and location of the source. The first, prevention of significant deterioration, applies to major sources and major modifications locating in areas in which the air quality meets or is better than the air quality standards. The second, nonattainment, applies to major sources and major modifications locating in areas in which the air quality does not meet the air quality standards. The third covers smaller sources not covered by the other two.

Motor Vehicle Emissions Control Programs. Emissions inspection program covers motor vehicles in the Northern Virginia area and requires compliance with tailpipe emission limits. Compliance is determined by a period inspection of the vehicle emissions. The National Low Emissions Vehicle (NLEV) program provides a legal mechanism to allow automobile manufacturers to have the option of agreeing to comply with tailpipe standards that are more stringent than EPA can mandate prior to model year 2004. Once the manufacturers commit to the program, the standards are enforceable in the same manner as other federal motor vehicle emissions control requirements. These manufacturers have agreed to volunteer these tighter emission standards because EPA and affected states agreed to certain conditions, including providing manufacturers with regulatory stability and reducing regulatory burdens by harmonizing federal and California motor vehicle emission standards.

Air Pollution Episode Prevention Program. Covers certain sources subject to the SIP regulatory program and requires the filing of plans to prescribe steps to be taken should air quality levels exceed the standards by a substantial amount.

Conformity Program. Establishes criteria and procedures for federal agencies to determine that federal non-transportation related actions or transportation plans and projects are in conformance with the SIP in the Northern Virginia, Richmond, and Hampton Roads areas.

Other Clean Air Act Regulatory Programs.

New Source Performance Standards (NSPS). Nationwide technology-based performance standards consisting of emission limits and other limitations to control certain pollutants from certain newly built plants and modifications to existing ones. Enforced by the state through delegation of authority from EPA and designed to provide a minimum level for consistency among the states in requirements for new industrial development.

National Emission Standards for Hazardous Air Pollutants (NESHAP). Nationwide health-based emission standards consisting of emission limits and other limitations to

control certain pollutants from certain industry and other activities which emit hazardous air pollutants. Enforced by the state through delegation of authority from EPA and designed to provide a minimum level for consistency among the states.

Maximum Achievable Control Technology Standards (MACTs). Nationwide technology based emission standards consisting of emission limits and other limitations to control certain pollutants from certain industry and other activities which emit hazardous air pollutants. Enforced by the state through delegation of authority from EPA and designed to provide a minimum level for consistency among the states.

Designated Pollutant Plan Regulatory Program. Similar to a SIP but applies only to designated pollutants. These are pollutants for which a NSPS has been promulgated but are not criteria pollutants or hazardous pollutants (NESHAP). Covers existing sources and requires compliance with emission standards based on emission limits achievable through the use of reasonably available control technology.

Operating Permit (Title V) Program. Covers major regulated industrial/commercial facilities and requires a renewable permit be obtained to operate the facility.

Acid Deposition Control Program. Designed to reduce sulfur dioxide and nitrogen oxide emissions from electric utilities by 10 million tons per year nationwide in two stages by the year 2000.

State-Only Regulatory Programs.

Toxic Pollutant Control Program. Provides for case-by-case source-specific assessment and establishment of control requirements after evaluation against threshold levels derives from occupational health and safety standards. Covers most regulated sources and several hundred substances.

Medical Waste Incinerator Emissions Control program. Designed to limit emissions of dioxins/furans, particulate matter, carbon monoxide, and hydrogen chloride from regulated medical waste incinerators.

Odor Emissions Control Program. Provides a general standard for odor and a general approach to use in determining whether an odor is objectionable. The purpose is to require the source to take action to eliminate or reduce the odorous emissions if deemed to be objectionable to individuals of ordinary sensibility. However, unlike most other emission standards, there are no definitive requirements in the standard itself; the standard merely provides a mechanism for the Department, on a case-by-case basis, to require the owner to reduce emissions after investigation by the Department.

Open Burning Emissions Control Program. Limits or prohibits, in some instances, open burning and restricts emissions of particulates and volatile organic compounds during the peak ozone season to the level necessary for the protection of public health and welfare and provides guidance to local governments on the adoption of ordinances to regulate

open burning. Efforts are being made to encourage local adoption of open burning control programs in response to a recommendation by the 1990 Governor's Commission on Efficiency in Government that open burning should be regulated by local governments rather than by the state.