

**Region 3 Plan Summary
Charleston, West Virginia Ozone Area**

Title: Maintenance Plan for the Charleston, West Virginia Ozone Area

Federal Register Dates: June 13, 1994, 59 FR 30326 (proposed rule); September 6, 1994, 59 FR 45986 (final rule); February 10, 2004, 69 FR 6224 (proposed rule-revision), 69 FR 6160 (final rule- revision).

EPA Effective Date: September 6, 1994; revisions effective April 12, 2004.

State Submittal Date: November 13, 1992; revisions submitted on February 28, 1994. August 10, 1994, and October 15, 2003.

Affected Areas: Kanawha and Putnam Counties

Summary of the Plan: The maintenance plan must provide for maintenance of the relevant NAAQS in the area for at least 10 years after redesignation. A revision of the SIP submitted within 8 years after the original redesignation request was approved to provide for maintenance of the NAAQS for an additional 10 years following the initial 10 year period.

The period covered by the state of West Virginia's maintenance plan SIP revision is 1990-2005 inclusive. The maintenance demonstration shows that future emissions of a pollutant or its precursors will not exceed the level of the attainment emissions inventory for a period of 10 years following the initial redesignation. The projected inventory considers future growth, including population and industry.

Emissions Budgets:

| Initial EPA Approved Emissions Budgets | | | |
|--|------------------|----------------------------------|-------|
| (September 6, 1994) | | | |
| Charleston (Kanawha/Putnam) | 1990 BASE | All emissions in Tons/Day | |
| POINT SOURCES: | | 1990 | 2005 |
| | VOC | 49.0 | 37.9 |
| | CO | 27.9 | 26.2 |
| | NOx | 389.2 | 366.9 |
| | | | |
| Charleston AREA SOURCES: (includes off- highway mobile) | | 1990 | 2005 |
| | VOC | 27.5 | 29.0 |
| | CO | 83.9 | 89.3 |
| | NOx | 16.9 | 17.6 |
| | | | |

| | | | |
|---|-----|-------|-------|
| Charleston HIGHWAY MOBILE (MOBILE5) SOURCES: | | | |
| | | 1990 | 2005 |
| | VOC | 28.5 | 23.0 |
| | CO | 222.2 | 179.5 |
| | NOx | 27.9 | 27.0 |
| <hr/> | | | |
| Charleston | | | |
| TOTAL (man-made) | | 1990 | 2005 |
| | VOC | 105.0 | 89.9 |
| | CO | 334.1 | 295.0 |
| | NOx | 434.0 | 411.5 |

| Revised Emissions Budgets using MOBILE6 (EPA Effective Date: April 12, 2004) | | | | | |
|---|------------|------------------|---------------------------|------------------|--|
| Charleston | | 1990 BASE | All emissions in Tons/Day | | |
| POINT SOURCES: | | 1990 | 2005 | | |
| | VOC | 49.0 | 37.9 | | |
| | CO | 27.9 | 26.2 | | |
| | NOx | 389.2 | 366.9 | | |
| <hr/> | | | | | |
| Charleston AREA SOURCES: (includes off- highway mobile) | | 1990 | 2005 | | |
| | VOC | 27.5 | 29.0 | | |
| | CO | 83.9 | 89.3 | | |
| | NOx | 16.9 | 17.6 | | |
| <hr/> | | | | | |
| Charleston HIGHWAY MOBILE (MOBILE6) SOURCES: | | 1990 | 2005 | Safety Margin | Charleston DAQ Adopted MOBILE6 Budget |
| | VOC | 38.2 | 14.4 | 30.1 | 2005 44.5 |
| | CO | 428.6 | 157.5 | na | na |
| | NOx | 35.8 | 24.5 | 29.6 | 54.1 |
| <hr/> | | | | | |
| Charleston TOTAL (man-made) | | 1990 | 2005 | 2005-Base | 2005 total |
| | VOC | 114.8 | 81.3 | 33.5 | 111.4 |
| | CO | 540.5 | 273.0 | na | 273.0 |
| | NOx | 441.9 | 409.0 | 32.9 | 438.6 |

Control Measures: Between 1988 and 1990, because of permanent and enforceable state and federal provisions, emissions of volatile organic compounds (VOCs) were reduced by 8.14 tons/day and emissions of nitrogen oxides (NO_x) were reduced by 3.1 tons/day in Charleston. Most of the reductions came from mobile sources and gasoline marketing-related activities. The Reid Vapor Pressure (RVP), of gasoline marketed for use in the Charleston, West Virginia area decreased from 10.5 pounds per square inch (psi) to 9.5 psi in 1990 and was reduced to 9.0 psi in 1992. Since 1992, the federal RVP requirement remains 9.0 psi. In addition, due to automobile fleet turnover, there was an increase in the percent of automobiles operated in the Charleston area meeting more stringent emission standards as required by the Federal Motor Vehicle Control Program (FMVCP).

The State of West Virginia maintenance plan requires the continuation of the federal RVP program. Permanent and enforceable decreases in VOCs at stationary sources contributed a small amount to the total VOC reduction in the Charleston, West Virginia area. In association with its emission inventory, the State of West Virginia demonstrated that point source VOC emissions were not artificially low due to local economic downturn during the period in which the Charleston, West Virginia area's ambient air quality came into attainment.

Contingency Measures: The level of VOC and NO_x emissions in the Charleston area will largely determine its ability to stay in compliance with the ozone NAAQS in the future. Despite the State of West Virginia's best efforts to demonstrate continued compliance with the NAAQS, the Charleston area may exceed or violate the NAAQS. Therefore, West Virginia has provided contingency measures with a schedule for implementation in the event of future ozone air quality problems. In the event that exceedances of the ozone NAAQS are measured such that nonattainment is indicated in any of the areas or in the event that periodic emission inventory updates or major permitting activity reveals that excessive or unanticipated growth in ozone precursor emissions has occurred or will occur, West Virginia will accordingly select and adopt measures including the following to assure continued attainment:

1. Extend the applicability of 45CSR21 (VOC/RACT rule) to include source categories previously excluded.
2. Revised new source permitting requirements requiring more stringent emissions control technology and/or emissions offsets.
3. NO_x RACT requirements, if such requirements are not already applicable.
4. Stage II Vapor Recovery Regulations.
5. Regulations to establish plant-wide emission caps (potentially with emissions trading provisions).
6. Implementation of basic (or enhanced) programs for motor vehicle inspection and maintenance.

One or more of these regulatory revisions would be selected within three (3) months after verification of a monitored ozone standard violation and a draft rule submitted to the WVDEQ. The regulatory measures shall be adopted as emergency rules and implemented within six months after adoption. In accordance with West Virginia law, the provisions of these emergency regulations are fully enforceable. The emergency rule(s), subsequently, will be filed as legislative rule(s) for permanent authorization by the legislature in accordance with West Virginia law.

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