Region 3 Plan Summary

New Manchester-Grant Magisterial District, West Virginia Sulfur Dioxide (SO_2) Attainment Plan

Title: Revision to the West Virginia State Implementation Plan to Achieve and Maintain the National Ambient Air Quality Standards for Sulfur Dioxide in the New Manchester-Grant Magisterial District.

Federal Register Dates: November 27, 1996, 61 FR 60254 (proposed rule) and 61 FR 60191 (final rule)

EPA Effective date: January 27, 1997

State Submittal Dates: February 27, 1995; revision submitted on May 3, 1996

Affected Areas: New Manchester-Grant Magisterial District in Hancock County

Summary of the Plan: West Virginia submitted a formal SIP revision for the New Manchester-Grant Magisterial District nonattainment area. The SIP revision contains, among other things, individual consent orders between West Virginia and two major stationary sources limiting their SO2 emissions and allowing for the demonstration of attainment in the New Manchester-Grant nonattainment area. Subsequently, West Virginia identified potential minor errors with regard to the emissions inventory for a number of sources located in Ohio and the possible amendment of emission limits for two other Ohio sources. On May 3, 1996, West Virginia submitted an amended attainment demonstration that accounts for the identified changes in the Ohio emissions inventory.

Emission Inventory: West Virginia's SIP revision provides an adequate actual emissions inventory from all relevant sources of SO2 in the nonattainment area. The revision contains a current inventory of actual emissions data and stack parameter information for the Quaker State and Weirton Steel facilities as well as numerous nearby emission sources in West Virginia, Pennsylvania, and Ohio. The emission inventory also shows that sources located in Ohio, such as the Sammis Power Plant, significantly impacts the New Manchester-Grant area.

Control Measures/Regulations Included As Part of the Plan: The SIP revision consists primarily of consent orders entered into by and between the State of West Virginia and the Quaker State Refinery in Congo, West Virginia and the Weirton Steel Corporation in Weirton, West Virginia. The consent orders establish SO2 emission limits for numerous emission points at both facilities. The submittal contains an air quality dispersion modeling demonstration that indicates that the allowable emission limits will provide for the attainment of the NAAQS for SO2 in the New Manchester-Grant area.

The consent orders stipulate the following emission limitations for the Quaker State Corporation refinery and the Weirton Steel Corporation facility:

1. **Quaker State Corporation, Congo Refinery SO2 Emission Limits**

SO2 emission unit	**SO2 emission limit**

Coal-fired, Fluidized-bed Boiler No.1	1.2 lbs-SO2/MMBtu of heat input, at any time.
Coal-fired, Fluidized-bed Boiler No. 2	1.2 lbs-SO2/MMBtu of heat input, at any time.
Oil-fired Package Boiler A.....	1.2 lbs-SO2/MMBtu of heat input, at any time.
Oil-fired Package Boiler B.....	1.2 lbs-SO2/MMBtu of heat input, at any time.
Simultaneous operation of Coal-fired Fluidized-bed Boilers Nos.1 and 2.	192 lbs-SO2/hour, each boiler.
Simultaneous operation of Oil-fired Package Boilers A and B.	264 lbs-SO2/hour, combined.
Simultaneous operation of one Coal-fired Fluidized-bed Boiler and one Oil-fired Package Boiler.	264 lbs-SO2/hour, combined.
Process Heaters H-101 and H-102	1.1 lbs-SO2/MMBtu.
Process Heaters H-501/6 and H-601/4	0.8 lbs-SO2/MMBtu.
Vacuum Fractionator Heater H-701	Shall burn natural gas and/or treated refinery gas that contains <=10 grains of hydrogen sulfide per 100 dry standard cubic feet of gas, and 0.8 lbs SO2/MMBtu.
Process Heater H-201	Shall burn fuel oil, desulfurized fuel gas and/or natural gas, and 1.1 lbs-SO2/MMBtu.
Hydrogen Unit Heater H-605	Shall burn natural gas only.

2. Weirton Steel Corporation, Weirton Facility SO2 Emission Limits

SO2 Emission Unit	**SO2 Emission Limit**
High Pressure Boilers 1, 2, 3, 4	1.6 lbs-SO2/MMBtu and 864 lbs-SO2/hour, per boiler. No more than three boilers may be operated simultaneously.
High Pressure Boiler 5	0.8 lbs-SO2/MMBtu and 480 lbs-SO2/hour.
Sinter Plant	250 lbs-SO2/hour.
Slag Granulator	100 lbs-SO2/hour.
Basic Oxygen Process Waste Heat Boilers.	300 lbs-SO2/hour.

Hot Mill Reheat Furnaces, Foster-Wheeler Boilers and combustion sources at the Hydrochloric Acid Regeneration Plant, Continuous Annealing Facility, Jumbo Annealing Facility, and Blast Furnace Stoves.	Shall burn blast furnace gas, mixed gas (approximately 70 percent natural gas and 30 percent air), or natural gas.
Low Pressure Boilers LP1, LP2, LP3, LP4 and LP15.	Shall be permanently shut down.

Contingency Measures: West Virginia's SIP revision provides for adequate contingency measures. The SIP revision contains a comprehensive action plan to quickly identify and address SO2 impacts that may affect attainment of the NAAQS in the New Manchester-Grant area. The State's plan includes the continuous review of air quality monitoring data in the area of concern, including the two monitors located in the nonattainment area. In the event of a certified violation, West Virginia intends to contact all potential contributors to the violations both locally and in neighboring Ohio and Pennsylvania. West Virginia has provided assurances that appropriate mitigation measures will be pursued to remedy the causes of any violations.

EPA Region 3 Contact: Ellen Wentworth (3AP21), U.S. EPA Region III
1650 Arch Street, Philadelphia, PA 19103-2029
(215) 814-2034; wentworth.ellen@epa.gov