WEST VIRGINIA ADMINISTRATIVE REGULATIONS

Subject: Regulation X - To Prevent and Control Air Pollution From the Emission of Sulfur Oxides

INDEX.

ABSTRACT

Regulation X (1978) was amended by the Commission on the 7th day of September, 1978, became effective October 16, 1978, and was filed with the Secretary of State September 8, 1978. Regulation X (1978), as amended, was retitled Regulation X (1978 A). Regulation X (1976) was amended by the West Virginia Air Pollution Control Commission on the 19th day of December, 1977, and became effective February 11, 1978, and was filed with the Secretary of State December 27, 1977. Regulation X (1976), as amended, was retitled Regulation X (1978). Regulation X (1973) was amended by the Commisson on the 4th day of November, 1976, and became effective December 10, 1976, and was filed with the Secretary of State November 5, 1976. Regulation X (1973), as amended, was retitled Regulation X (1976). Regulation X (1972) was amended by the Commission the 28th day of June 1973 and became effective July 30, 1973, and was filed with the Secretary of State June 29, 1973. Regulation X (1972), as amended, was retitled Regulation X (1973). Regulation X (1972) was promulgated by the Commission on the 19th day of January, 1972, and became effective March 15, 1972, and was filed with the Secretary of State February 1, 1972.

Title 45
Legislative Rule

~~WEST VIRGINIA ADMINISTRATIVE REGULATIONS~~
Air Pollution Control Commission

~~Chapter 16-20~~
Series ~~X~~ 10
~~(1978 A)~~

Subject: ~~Regulation X~~ To Prevent and Control Air Pollution From the Emission of Sulfur Oxides

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Section 1. General.

1.01. Scope, ~~Intent, and Purpose.~~

(a) The purpose of ~~Regulation X~~ Series 10 is to prevent and control air pollution from the emission of sulfur dioxide.

(b) Fuel Quality Goals. It is the intent of the Commission that all persons engaged in the burning of fuel make a maximum effort to utilize the best quality fuel available regardless of the requirements of this regulation.

1.02. Authority. W. Va. Code §16-20-5

This regulation is issued under the authority of the West Virginia Code, Chapter 16, Article 20, Section 5. This regulation relates to West Virginia Code, Chapter 16, Article 20, Sections 1 through 13 inclusive.

1.03. Filing Date.

This regulation was promulgated or last amended on the 7th day of September, 1978, was filed with the office of the Secretary of State the 8th day of September, 1978. Further, this regulation was filed pursuant to West Virginia Code, Chapter 29A, Article 2, Section 5 on the 30th day of December, 1982 in the office of the Secretary of State.

1.04. Effective Date.

The effective date of this regulation is the 16th day of October, 1978.

1.05. Type.

This regulation is a legislative rule as defined in West Virginia Code, Chapter 29A, Article 2.

Section 2. Definitions

2.01. "Air Pollution", 'statutory air pollution', shall have the meaning ascribed to it in Section Two of Chapter Sixteen, Article Twenty of the Code of West Virginia, as amended.

2.02. "Air Pollutants" shall mean solids, liquids, or gases which, if discharged into the air, may result in a statutory air pollution.

2.03. "Commission" shall mean the West Virginia Air Pollution Control Commission.

2.04. "Director" shall mean the Director of the West Virginia Air Pollution Control Commission.

2.05. "Person" shall mean any and all persons, natural or artificial, including any municipal, public or private corporation organized or existing under the laws of this or any other

state or country, and any firm, partnership, or association of whatever nature.

2.06. "Fuel Burning Unit" shall mean and include any furnace, boiler apparatus, device, mechanism, stack or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. For the purposes of this regulation, all fuel burning units are classified in the following categories:

(a) Type 'a' shall mean any fuel burning unit which has as its primary purpose the generation of steam or other vapor to produce electric power for sale.

(b) Type 'b' shall mean any fuel burning unit not classified as a Type 'a' or Type 'c' unit such as industrial pulverized-fuel-fired furnaces, cyclone furnaces, gas-fired and liquid-fuel-fired units.

(c) Type 'c' shall mean any hand-fired or stoker-fired fuel burning unit not classified as a Type 'a' unit.

2.07. "Waste Heat Boiler" shall mean any boiler which derives all or part of its heat input from the waste heat of a manufacturing process operation.

2.08. "Fuel" shall mean any form of combustible matter (solid, liquid, vapor, or gas) that is used as a source of heat.

2.09. "Priority I Regions", "Priority II Regions", and "Priority III Regions" are defined as follows:

Priority Classification	Federal Air Quality Control Region	Included West Virginia Counties
I	Region I, Steubenville-Weirton-Wheeling Interstate Air Quality Control Region (Ohio - West Virginia)	Brooke Hancock Marshall Ohio
	Region VII, Cumberland-Keyser Interstate Air Quality Control Region (West Virginia - Maryland)	Grant (Union District only) Mineral (Elk, New Creek, and Piedmont Districts)
II	Region II, Parkersburg-Marietta Interstate Air Quality Control Region (West Virginia - Ohio)	Jackson Pleasants Tyler Wetzel Wood
III	All other regions	All other counties or districts not listed above

2.10. "Air Pollution Control Equipment" shall mean any equipment used for collecting, confining, or converting air pollutants for the purpose of preventing or reducing the emission of these pollutants into the open air.

2.11. "Manufacturing Process" shall mean any action, operation or treatment embracing chemical, industrial, or manufacturing efforts, and employing, for example, heat-treating furnaces, by-product coke plants, core-baking ovens, mixing kettles, cupolas, blast furnaces, open hearth furnaces, heating and reheating furnaces, puddling furnaces, sintering plants, electric steel furnaces, ferrous and non-ferrous foundries, kilns, stills, pipe stills, reformers, furnaces associated with manufacturing processes, driers, crushers, grinders, roasters, and equipment used in connection therewith, and all other methods or forms of manufacturing or processing that may emit sulfur dioxide or other sulfur compounds.

2.12. "Source Operation" shall mean the last operation in a manufacturing process preceding the emission of air pollutants which operation:

(a) Results in the separation of the air pollutant from the process materials or in the conversion of the process materials into air pollutants; and

(b) Is not an air pollution abatement operation.

2.13. "Sulfur Dioxide" is an air pollutant which is a nonflammable, nonexplosive, colorless, gaseous molecule composed of one atom of sulfur and two atoms of oxygen. In concentrations of 0.3 to 1.0 parts per million and above, most people can detect it by taste; in concentrations greater than 3.0 parts per million it has a pungent, irritating odor to most people.

2.14. "Plant" shall mean and include all fuel burning units, source operations, equipment and grounds utilized in an integral complex.

2.15. "Equivalent Fuel Sulfur Content" shall mean that quantity of sulfur dioxide in pounds per million British Thermal Units (BTU's) which corresponds to a given percent sulfur in fuel being burned and is calculated on the basis of 100 percent conversion of the sulfur to sulfur dioxide and assuming that no sulfur or sulfur dioxide recovery or control measures are employed.

2.16. "Stack", for the purposes of this regulation, shall mean, but not be limited to, any duct, control equipment exhaust, or similar apparatus, which vents gases and/or particulate matter into the open air.

Section 3. Sulfur Dioxide Weight Emission Standards for Fuel Burning Units

3.01. Total Allowable Emission Rates for Similar Units in Priority I and Priority II Regions.

No person shall cause, suffer, allow, or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

(1) For fuel burning units of the Kammer Plant of Ohio Power Company, located in Air Quality Control Region I, the product of 6.8

and the total design heat inputs for such units discharging through those stacks in million British Thermal Units (BTU's) per hour.

(2) For fuel burning units of the Mitchell Plant of Ohio Power Company, located in Air Quality Control Region I, the product of 7.5 and the total actual operating heat inputs for such units discharging through those stacks in million BTU's per hour.

(3) For fuel burning units of the Willow Island Station of Monongahela Power Company, located in Air Quality Control Region II, the product of 2.7 and the total design heat inputs for such units discharging from those stacks in million BTU's per hour.

(4) For fuel burning units of the Mt. Storm Plant of Virginia Electric and Power Company, located in Air Quality Control Region VII, the product of 2.7 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

(5) For Type 'b' and Type 'c' fuel burning units, the product of 3.1 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

3.02. Maximum Allowable Emission Rates for Similar Units in Region IV (Kanawha Valley Air Quality Control Region: Kanawha County, Putnam County, and Falls and Kanawha Magisterial Districts of Fayette County).

No person shall cause, suffer, allow, or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

(1) For fuel burning units of the John Amos Plant of Appalachian Power Company, located in Air Quality Control Region IV, the product of 1.6 and the total design heat input for such units discharging from those stacks in million BTU's per hour.

(2) For fuel burning units of the Kanawha River Plant of Appalachian Power Company, located in Air Quality Control Region IV, the product of 1.6 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

(3) For Type 'b' and Type 'c' fuel burning units, the product of 1.6 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour, provided however, that no more than 5,500 pounds per hour of sulfur dioxide shall be discharged into the open air from all such stacks.

3.03. Maximum Allowable Emission Rates for Similar Units in All Priority III Regions Except Region IV.

No person shall cause, suffer, allow, or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

(1) For fuel burning units of the Harrison Power Station of Monongahela Power Company, located in Air Quality Control Region VI, the product of 5.12 and the total actual operating heat inputs for such units discharging from those stacks in million BTU's per hour.

(2) For fuel burning units of the Rivesville Power Station of Monongahela Power Company, located in Air Quality Control Region VI, the product of 3.2 and the total design heat inputs for such units discharging from those stacks in million BTU's per hour.

(3) For fuel burning units of the Albright Power Station of Monongahela Power Company, located in Air Quality Control Region VI, the product of 3.2 and the total design heat inputs for such units discharging from those stacks in million BTU's per hour.

(4) For fuel burning units of the Fort Martin Power Station of Monongahela Power Company, located in Air Quality Control Region VI, the product of 3.1 and the total actual operating heat inputs for such units discharging from those stacks in million BTU's per hour.

(5) For fuel burning units of the Philip Sporn Plant of Central Operating Company, located in Air Quality Control Region III, the product of 3.2 and the total design heat inputs for such units discharging from those stacks in million BTU's per hour.

(6) For Type 'b' and Type 'c' fuel burning units, the product of 3.2 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

3.04. Allowable Emission Rates for Individual Stacks.

The maximum allowable emission rate for an individual stack shall not exceed by more than 25 percent the emission rate determined by prorating the total allowable emission rate specified in Sub-Sections 3.01, 3.02, or 3.03 on the basis of individual unit heat input at design capacity for all fuel burning units discharging through that stack.

Subject to the provisions of this regulation, allowable emission rates for individual stacks shall be determined by the owner and/or operator and registered with the Commission at the request of and on forms provided by the Director. Such rates shall be subject to review and approval by the Director.

The approved set of individual stack allowable emission rates shall become an official part of the compliance schedule and any permits concerning such source or sources, and shall not be changed without the prior written approval of the Director.

3.05. The design heat input of a waste heat boiler shall not be included in computing the total plant design heat input for the purposes of Sub-Sections 3.01, 3.02, 3.03, or 3.04 of this regulation.

3.06. No person shall circumvent the provisions of this regulation by constructing fuel burning unit(s) larger than would be necessary to provide heat and/or power for an existing manufacturing plant, with a reasonable margin for plant expansion, in order to use that design heat input to raise the allowable sulfur content in fuel.

3.07. No person shall cause, suffer, allow, or permit the discharge of sulfur dioxide to the open air from the combustion of fuel in a fuel burning unit of a waste heat boiler

in excess of 2.2 pounds of sulfur dioxide per million BTU's of heat input per hour. This limitation is based on the heat input provided to the boiler by the combustion of this auxiliary fuel.

The provision of this Sub-Section applies only to the fuel used for the waste heat boiler(s) and does not replace or supersede the provisions of Sub-Section 3.08.

3.08. Weight Emission Standards for Manufacturing Process Source Operations.

(a) No person shall cause, suffer, allow, or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in Sub-Sections (b), (c), (d), (e), and (f) following.

(b) No person shall cause, suffer, allow, or permit sulfur dioxide tail gas emissions from sulfuric acid manufacturing plants to exceed the following:

(1) For plants using elemental sulfur as a feed stock, 30 pounds per ton of acid produced.

(2) For plants using other materials as a feed stock, 40 pounds per ton of acid produced.

(c) No person shall cause, suffer, allow, or permit the emission of sulfur oxides, calculated as sulfur dioxide, from a sulfur recovery plant to exceed 0.06 pounds per hour of sulfur processed.

(d) No person shall cause, suffer, allow, or permit the combustion of any refinery process gas stream or any other process gas stream that contains hydrogen sulfide in a concentration greater than 50 grains per 100 cubic feet of gas. In certain cases very small units may be considered exempt from this requirement if, in the opinion of the Commission, compliance would be economically unreasonable and if the contribution of the unit to the surrounding air quality could be considered negligible.

(e) No person shall cause, suffer, allow, or permit the emission of sulfur oxides, calculated as sulfur dioxide, from primary non-ferrous smelters to exceed that determined by the following equations:

Copper Smelters:	$Y = 0.2\ X$
Zinc Smelters:	$Y = 0.564\ X^{0.85}$
Lead Smelters:	$Y = 0.98\ X^{0.77}$

Where X is the total sulfur fed to the smelter in pounds per hour and Y is the allowable sulfur dioxide emissions in pounds per hour.

(f) No person shall cause, suffer, allow, or permit the total sulfite pulp mill emissions of sulfur oxides, calculated as sulfur dioxide, from operations such as blow pits, washer vents, storage tanks, digester relief, and recovery system, to exceed 9.0 pounds per air-dried ton of pulp produced.

Section 4. Registration

4.01. Within thirty (30) days after the effective date of this regulation all persons owning and/or operating a source(s) of sulfur dioxide subject to this regulation and not previously registered shall have registered such source(s) with the Commission. The information required for registration shall be determined and provided in the manner specified by the Director. Registration forms should be requested from the Director by the owner and/or operator of such source(s).

4.02. The owner and/or operator of a source(s) of sulfur dioxide that is under construction or on which construction is initiated within thirty (30) days after the effective date of this regulation shall register such source(s) within this thirty (30) day period.

Section 5. Permits

5.01. After the effective date of this regulation, no person shall construct or modify any source of sulfur dioxide without first obtaining a permit for such construction or modification. Applications for permits shall be made upon forms available from the Director and shall be filed no less than ninety (90) days prior to the construction or modification. These forms shall include such information as in the judgment of the Director will enable him to determine whether such source will be so designated as to operate in conformance

with the provisions of this regulation and the Code of West Virginia, and will not cause or contribute to the violation of Air Quality Standards. Within ninety (90) days of the receipt of an application the Director shall issue or deny such permit in accordance with the provisions of Section 2 of Chapter 16, Article 20, Paragraph 11b of the Code of West Virginia, as amended, and ~~Regulation XIII~~ Series 13 of this agency.

Section 6. Reports and Testing

6.01. (a) Tests to determine compliance with the allowable sulfur dioxide emission limitations from manufacturing process source operations shall be based on a two (2) hour averaging time.

(b) Tests to determine compliance with the allowable sulfur dioxide emission limitations from fuel burning units shall be based on a continuous twenty-four (24) hour averaging time. The owner and/or operator of a fuel burning unit shall not allow emissions to exceed the weight emission standards for sulfur dioxide as set forth in this regulation, stopped here except during one (1) continuous twenty-four (24) hour period in each calendar month and during this one (1) continuous twenty-four (24) hour period said owner and/or operator shall not allow emissions to exceed such weight emission standards by more than ten (10) percent without causing a violation of this regulation. A standard starting

time for all continuous twenty-four (24) hour periods shall be fixed in writing by mutual agreement between the Director and the owner and/or operator of the fuel burning unit.

6.02. (a) At the request of the Commission the owner and/or operator of a source shall install such stack gas monitoring devices as the Director deems necessary to determine compliance with the provisions of this regulation. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his duly authorized representative, such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of this regulation.

(b) Prior to the installation of calibrated stack gas monitoring devices, sulfur dioxide emission rates shall be calculated on an equivalent fuel sulfur content basis.

6.03. At such reasonable times as the Director may designate, the owner or operator of a source(s) of sulfur dioxide may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of Section 3. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness

or conduct such tests. Should the Director exercise his option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices.

6.04. The Director, or his duly authorized representative, may conduct such other tests as he may deem necessary to evaluate air pollution emissions other than those noted in Section 3.

6.05. The operators of the fuel burning units or persons selling fuel shall submit data on the fuel used or sold for use in such units. Such data shall be reported in the manner the Director may specify. However, reports on such data shall not exceed one (1) per month. Such reports must be filed within fifteen (15) days of the end of the established reporting period and will include, but not necessarily be limited to, information such as the quantity of fuel burned or sold and the sulfur, moisture, volatile matter, and the BTU content.

Section 7. Compliance Programs and Schedules

7.01. In the event that a source(s) of sulfur dioxide in existence prior to the adoption of this regulation does not meet the emission limitations, an acceptable program to fully comply

with the regulation shall be developed and offered to the Commission by the person responsible for the source. This program shall be submitted upon the request of, and within such time as shall be fixed by the Commission. Once this program has been approved by the Commission, the owner and/or operator of such installation shall not be in violation of this regulation so long as the approved or amended program is observed.

7.02. In the event that an owner or operator of such a source(s) of sulfur dioxide fails to submit a program or an acceptable program and schedule, the Commission shall, by order, determine the compliance program and schedule.

Section 8. Variance

8.01. Due to unavoidable malfunction of equipment or inadvertent fuel shortages, emissions exceeding those provided for in this regulation may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the equipment malfunction or fuel shortage. In cases of major equipment failure or extended shortages of conforming fuels, additional time periods may be granted by the Commission provided a corrective program has been submitted by the owner or operator and approved by the Commission.

Section 9. Exemptions and Recommendations

9.01. All fuel burning units having a heat input under ten (10) million BTU's per hour will be exempt from Section 3 through Section 8. However, failure to attain acceptable air quality in parts of some urban areas may require the mandatory control of these sources at a later date.

9.02. In an effort to avoid the necessity for such mandatory controls the Commission strongly recommends that specific fuel quality objectives be met. In Priority I and Priority II regions and in cities in Priority III regions with a population of more than 10,000 (based on the latest census) the Commission recommends that no person use or provide for sale fuel having a sulfur content greater than that listed in the following table for use in residential and other fuel burning units not otherwise restricted by this regulation:

Effective Date	Percent Sulfur Content of Fuels	
	Coal	Oil
June 30, 1972	3.0	2.0
June 30, 1975	2.0	1.5
June 30, 1978	1.0	0.5

Section 10. Severance

The provisions of this regulation are severable and if any provision or part thereof shall be held invalid, unconstitutional, or inapplicable to any person or circumstance, such invalidity, unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, sections, or parts of this regulation or their application to other persons and circumstances.

Section 11. Effective Date

Regulation X (1978 A), as amended, was adopted by the West Virginia Air Pollution Control Commission on the 7th day of September, 1978, and shall become effective the 16th day of October, 1978. Said amended regulation shall supersede Regulation X (1978) which was adopted by the West Virginia Air Pollution Control Commission on the 19th day of December, 1977, and which became effective the 11th day of February, 1978, and which superseded Regulation X (1976) which was adopted by the West Virginia Air Pollution Control Commission on the 4th day of November, 1976, and became effective December 10, 1976, which superseded Regulation X (1973) adopted by the West Virginia Air Pollution Control Commission on the 28th day of June, 1973, and became effective July 30, 1973, and Regulation X (1972) adopted by the West Virginia Air Pollution Control Commission on the 19th day of January, 1972, and became effective March 15, 1972.

The foregoing is a true and correct copy of the West Virginia Air Pollution Control Commission Regulation X (1978 A) as adopted on the 7th day of September, 1978.

Carl G. Beard, II
Secretary
West Virginia Air Pollution
Control Commission