WEST VIRGINIA

SECRETARY OF STATE

KEN HECHLER

ADMINISTRATIVE LAW DIVISION

FORM #6

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OFFICE OF WEST VIRGINIA SECRETARY OF STATE

NOTICE OF FINAL FILING AND ADOPTION OF A LEGISLATIVE RULE AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.

AGENCY: Division of Environmental Protection, Office of Air Quality **TITLE NUMBER:** 45

AMENDMENT TO AN EXISTING RULE: YES X , **NO** ____

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 7

TITLE OF RULE BEING AMENDED: "To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations"

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: ____

TITLE OF RULE BEING PROPOSED: ____

THE ABOVE RULE HAS BEEN AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.

AUTHORIZATION IS CITED IN (house or senate bill number) HB 4223

SECTION 64-3-1(g) , **PASSED ON** March 11, 2000

THIS RULE IS FILED WITH THE SECRETARY OF STATE. THIS RULE BECOMES EFFECTIVE ON THE FOLLOWING DATE: August 31, 2000

Carrie L. Chambers

Authorized Signature

SCANNED

$5.00

Executive Office
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West Virginia Bureau of Environment

Cecil H. Underwood
Governor

Michael C. Castle
Commissioner

June 2, 2000

Ms. Judy Cooper
Director, Administrative Law
Division
Secretary of State's Office
Capitol Complex
Charleston, WV 25305

RE: 45CSR7 - "To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations"

Dear Ms. Cooper:

This letter will serve as my approval to file the above-referenced rule with your Office and the Legislative Rule-Making Review Committee as "Notice of Final Filing and Adoption of a Legislative Rule."

Your cooperation in the above request is very much appreciated. If you should have any questions or require additional information, please call Carrie Chambers in my Office at 759-0515.

Sincerely,

Michael C Castle

Michael C. Castle
Commissioner

MCC:cc

cc: Karen Watson
Carrie Chambers

LEGISLATIVE HISTORY ABSTRACT
45CSR7

To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations

Bureau of Environment
Division of Environmental Protection
Office of Air Quality
House Bill 4223 Section 64-3-1(q)

6/16/99	Filed Notice of Public Hearing with Secretary of State.
6/16/99	Initial Filing with Legislative Rule-Making Review Committee.
7/14/99	Filed Notice of Extension of Public Comment Period.
7/19/99	Held Public Hearing.
7/28/99	End of Public Comment Period.
8/6/99	Agency Approved Rule Filed with Secretary of State and Legislative Rule-Making Review Committee.
9/13/99	Rule Approved by Legislative Rule-Making Review Committee with Modifications.
9/24/99	Modified Rule Filed with Secretary of State and Legislative Rule-Making Review Committee.
3/11/00	Passed the West Virginia Legislature.
4/3/00	Signed by the Governor.
6/2/00	Rule Final Filed with Secretary of State.
8/31/00	Effective Date of Rule.

TITLE 45
LEGISLATIVE RULE
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF AIR QUALITY

SERIES 7
TO PREVENT AND CONTROL PARTICULATE MATTER AIR POLLUTION FROM MANUFACTURING PROCESSES AND ASSOCIATED OPERATIONS

§45-7-1. General.

1.1. Scope. -- The purpose of this rule is to prevent and control particulate matter air pollution from manufacturing processes and associated operations.

1.2. Authority. -- W. Va. Code §22-5-1 et seq.

1.3. Filing Date. -- June 2, 2000

1.4. Effective Date. -- August 31, 2000

1.5. Former Rules. -- This legislative rule amends 45CSR7 "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations" which was filed on May 1, 1998, and which became effective May 1, 1998.

§45-7-2. Definitions.

2.1. "Air Pollution", 'statutory air pollution' shall have the meaning ascribed to it in W. Va. Code §22-5-2.

2.2. "Air Pollution Control Equipment" means any equipment used for collecting or converting smoke and/or particulate matter for the purpose of preventing or reducing emission of these materials into the open air.

2.3. "Blowing Tap" means any tap associated with ferroalloy submerged arc furnace in which an evolution of gas forces or projects jets of flame or metal sparks beyond the ladle, runner or collection hood.

2.4. "By-Product Coke Production Facility" means the production of coke by the destructive distillation of coal in recovery type ovens in which gaseous and liquid distillates are separated and recovered as by-products, and includes any on-site coal preparation, charging, coking, coke pushing, hot coke transfer, coke quenching, coke handling and the separation and preparation of distillates.

2.5. "Charging Emissions" means any smoke and/or particulate matter emissions from one or more charging ports, space between charging port rings and oven refractory, drop sleeves, larry car hoppers or emissions from any devices used for the capture and cleaning of emissions resulting from charging operations, but shall not include emissions resulting from the temporary removal of a charging port lid for the purpose of sweeping coal spillage into the oven just charged after all lids have been seated over the charging ports following removal of the larry car.

2.6. "Charging Operation" means any operation or procedure by which coal is introduced into a coke oven. For coke oven batteries employing larry cars, the charging operation shall begin when the gate(s) on the larry car coal hopper is (are) opened or the mechanical feeders start the flow of coal into the first charging port(s) until the oven is completely charged and the last charging port lid is seated.

2.7. "Charging Port" means any opening through which coal is, or may be, introduced into a coke oven, whether or not such opening is regularly used for that purpose.

2.8. "Chemical Change" means, for the purpose of this rule, any change in a substance which does change the properties of the substance and by which a new substance is formed.

2.9. "Coke Battery Topside" means the top of the coke battery including, but not necessarily limited to, charging ports, charging port lids, inspection lids, refractory ceiling, offtake piping and the coke oven gas collector main.

2.10. "Director" means the director of the division of environmental protection or such other person to whom the director has delegated authority or duties pursuant to W. Va. Code §§22-1-6 or 22-1-8.

2.11. "Door Area" means the vertical face of a coke oven between two adjacent buckstays.

2.12. "Door Area Emissions" means any smoke and/or particulate matter emissions from any door area including, but not limited to, emissions from the door, chuck door, door seal, jamb or refractory.

2.13. "Duplicate Source Operation" means any combination of two (2) or more individual source operations of any size that have the same nomenclature, either formerly adopted and/or commonly sanctioned by usage such as, but not limited to, two or more rotary driers, basic oxygen furnaces or electric arc furnaces contained in the same plant.

2.14. "Ferroalloy Electric Submerged Arc Furnace" means any furnace used in production of ferroalloys wherein electrical energy is converted to heat energy by transmission of current between electrodes partially submerged in the furnace charge.

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

2.16. "Fugitive Particulate Matter" means any and all particulate matter which, if not confined, would be emitted directly into the open air from points other than a stack outlet.

2.17. "Furnace Charge" means any material introduced into a ferroalloy electric submerged arc furnace, and may consist of, but is not limited to, ores, slag, carbonaceous material and limestone.

2.18. "Maintenance Operation" means maintenance activities that have zero process weight rate and that are not defined as a manufacturing process.

2.19. "Malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

2.20. "Manufacturing Process" means 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, driers, crushers, grinders, roasters, and equipment used in connection therewith and all other methods or forms of manufacturing or processing that may emit smoke, particulate matter or gaseous matter.

2.21. "Non-Recovery Coke Production Facility" means the destructive distillation of coal in which the gaseous and liquid distillates are separated from coal, but not recovered as by-products, and includes any on-site coal preparation, charging, coking, coke pushing, hot coke transfer, coke quenching and coke handling.

2.22. "Offtake Piping" means the piping that transports gaseous by-products of the coking cycle from an oven to the coke oven gas collector main, such as standpipes, standpipe caps, goosenecks and slipjoints.

2.23. "Opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

2.24. "Oxygen Lancing" shall mean the burning open of a taphole to remove slag or product from the taphole associated with

operations of a ferroalloy electric submerged arc furnace.

2.25. "Particulate Matter" means any material, except uncombined water, that exists in a finely divided form as a liquid or solid.

2.26. "Person" means any and all persons, natural or artificial, including the state of West Virginia or any other state, the United States of America, any municipal, statutory, 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.

2.27. "Physical Change" means, for the purpose of this rule, any change in a substance which does not change the properties of the substance. Such changes include but are not limited to crushing, grinding, drying, change of state and sizing.

2.28. "Plant" means and includes all equipment, grounds, source operations and any manufacturing processes utilized in an integral complex.

2.29. "Poling" shall mean pushing a log timer into the furnace taphole to clear slag from the furnace tapping channel associated with operation of a ferroalloy electric submerged arc furnace.

2.30. "Potential To Emit", for the purpose of subsections 10.5 and 10.6, means the maximum capacity of a source, on an hourly and annual basis, to emit any air pollutant(s) under its physical and operational design, prior to any air pollution control equipment.

2.31. "Process Weight" means that total weight of all materials introduced into a source operation, excluding solid, liquid and gaseous fuels used solely as fuels, and excluding all process and combustion air.

2.32. "Process Weight Rate" means a rate established as follows:

2.32.a. For continuous or long-run steady-state source operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

2.32.b. For cyclical or batch unit operations, or unit processes, the total process weight for a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period.

2.32.c. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this definition, the interpretation that results in the minimum value for allowable emission shall apply.

2.33. "Pushing Emissions" means any smoke and/or particulate matter emissions resulting from the pushing operation.

2.34. "Pushing Operation" means the removal of coke from a coke oven and shall begin when the coke mass starts to move and shall continue until the coke transfer car enters the quenching station.

2.35. "Quenching Emissions" means any smoke and/or particulate matter emissions resulting from the quenching operation.

2.36. "Quenching Operation" means the process by which the combustion of hot coke is stopped by application of water or any other procedure achieving the same effect.

2.37. "Smoke" means small gasborne and airborne particulate matter emitted in sufficient numbers to be visible.

2.38. "Source Operation" means the last operation in a manufacturing process preceding the emission of air contaminants which operation:

2.38.a. Results in the separation of air contaminants from the process materials or in the conversion of the process materials into air contaminants; and

2.38.b. Is not an air pollution abatement operation.

2.39. "Source Operation Type" means a categorization established as follows:

2.39.a. Type 'a' means any manufacturing process source operation involving glass melting, calcination or physical change except as noted in Type 'c' below.

2.39.b. Type 'b' means any metallurgical manufacturing process source operation. Gray iron cupolas located in the counties of Brooke, Hancock, Ohio, Marshall and Kanawha; and the Magisterial Districts of Valley (Fayette County), Scott and Pocatalico (Putnam County), Tygart (Wood County) and Union and Winfield (Marion County west of I-79) shall be classified as Type 'b' source operations.

2.39.c. Type 'c' means any wet cement manufacturing process source operation which is used for the primary purpose of calcination. Gray iron cupolas located in the areas of the state other than those defined in subsection 2.39.b shall be classified as Type 'c' source operations.

2.39.d. Type 'd' means any manufacturing process source operation in which materials of any origin undergo a chemical change, and this chemical change results in the emission of particulate matter to the atmosphere, unless otherwise classified.

2.39.e. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of source operation type, the interpretation of the Director shall apply.

2.40. "Stack", for the purpose of this rule, means, but is not limited to, any duct, control equipment exhaust or similar apparatus, which is designed to vent gases containing particulate matter into the open air.

2.41. "Standard Conditions" means, for the purposes of this rule, a temperature of 68 degrees F and a pressure of 29.92 inches of mercury column.

2.42. "Tapping" means the removal of product and slag from a ferroalloy electric submerged arc furnace under normal operating conditions, such as removal of metal under normal pressure and movement by gravity down the spout into a ladle.

2.43. "Topside Emissions" means any smoke and/or particulate matter emissions from one or more points on the topside of a coke oven battery excluding charging emissions.

2.44. "Transport Emissions" means any smoke and/or particulate matter emissions which are emitted once the transport of the hot coke begins during the pushing operation and continues until the coke transfer car enters the quenching station.

2.45. Other words and phrases used in this rule, unless otherwise indicated, shall have the meaning ascribed to them in W. Va. Code §22-5-1, et seq.

§45-7-3. Emission of Smoke and/or Particulate Matter Prohibited and Standards of Measurement.

3.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7.

3.2. The provisions of subsection 3.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.

3.3. Existing By-Product Coke Production Facility--No person shall cause, suffer, allow or permit the emission of smoke and/or particulate matter into the open air in excess of the following provisions from the operation of a by-product coke production facility in production on the effective date of this rule or a by-product coke production facility which is constructed as a replacement for a by-product coke production facility which shut down not more than three (3) years prior to the

effective date of this rule:

3.3.a. Charging emissions from charging of any four consecutive ovens shall not exceed an aggregate time of more than one hundred (100) seconds.

3.3.b. Pushing emissions from pushing shall be vented into air pollution control equipment. Particulate matter emissions discharged from this air pollution control equipment shall not exceed a mass particulate rate as determined by the following formula:

$$E = C^{.09}$$

Where E = particulate matter emissions rate in pounds per push and C = actual charge of coal in tons per oven.

3.3.b.1. The smoke and/or particulate matter emissions discharged from this air pollution control equipment and noncaptured pushing emissions shall not exceed twenty percent (20%) opacity.

3.3.c. Transport emissions from an enclosed quench car shall not exceed twenty percent (20%) opacity. Transport emissions from an open quench car shall not exceed ten percent (10%) opacity except that batteries employing pushing emissions control systems that were constructed prior to July 1, 1982 and which do not involve enclosed quench cars during transport shall meet the provisions of subsections 3.1 and 3.2.

3.3.d. Coke side sheds and similar structures used to capture pushing emissions shall be designed and operated so as to prevent the escape of smoke and/or particulate matter from points other than the stack of the air pollution control equipment.

3.3.e. Coke oven topside emissions shall not exceed the following:

3.3.e.1. No more than two percent (2%) of the charging ports or charging port lids shall have smoke and/or particulate matter emissions excluding the last oven charged.

3.3.e.2. No more than ten percent (10%) of the off-take piping shall have smoke and/or particulate matter emissions.

3.3.e.3. No smoke and/or particulate matter emissions are permitted from the coke oven gas collector main or any other topside point except as provided by 3.3.e.1 or 3.3.e.2.

3.3.f. No more than ten percent (10%) of the door areas of operating coke ovens shall have door area emissions, excluding the door areas representing the last oven charged.

3.3.g. Quench towers shall employ as a minimum good baffle design with make-up water from the receiving stream, except that the blowdown from scrubbers of a pushing emission control system, dedicated to a specific battery, may be used as make-up water for the quench tower of that battery so long as suspended solids do not exceed two hundred (200) milligrams per liter. For batteries which this section applies the receiving stream shall be the Ohio River.

3.3.h. Smoke and/or particulate matter emissions from combustion stacks shall meet the requirements of subsections 3.1 and 3.2 and shall not exceed a concentration of 0.040 grains per dry standard cubic foot.

3.3.i. Good operating practices must be maintained to prevent the atmospheric entrainment of particulate matter resulting from the spillage or other deposition of coal and/or coke.

3.4. New By-Product Coke Production Facility--No person shall cause, suffer, allow or permit the emission of smoke and/or particulate matter into the open air in excess of the following provisions from the operation of a new by-product coke production facility, other than a replacement by-product coke production facility that is constructed as per the provisions of subsection 3.3, that begins production after July 1, 1970:

3.4.a. Charging emissions from the charging of any four (4) consecutive ovens shall not exceed an aggregate time of more than sixty (60) seconds.

3.4.b. Pushing emissions from pushing shall be vented into air pollution control equipment. The particulate matter emissions discharged from this air pollution control equipment shall not exceed a mass emission rate of 0.04 lb/ton of coal charged. The smoke and/or particulate matter emissions discharged from this air pollution control equipment and non-captured pushing emissions shall not exceed twenty percent (20%) opacity.

3.4.c. Transport emissions from an enclosed quench car shall not exceed twenty percent (20%) opacity. Transport emissions from an open quench car shall not exceed ten percent (10%) opacity.

3.4.d. Coke side sheds and similar structures used to capture pushing and/or quenching emissions shall be designed and operated so as to prevent the escape of smoke and/or particulate matter emissions from points other than the stack of the air pollution control equipment.

3.4.e. Coke oven topside emissions shall not exceed the following:

3.4.e.1. No more than two percent (2%) of the charging ports or charging port lids shall have smoke and/or particulate matter emissions excluding the last oven charged.

3.4.e.2. No more than five percent (5%) of the offtake piping shall have smoke and/or particulate matter emissions.

3.4.e.3. No smoke and/or particulate matter emissions are permitted from the coke oven gas collector main or any other topside point, except as provided by 3.4.e.1 and 3.4.e.2.

3.4.f. No more than eight percent (8%) of the door areas of operating coke ovens shall have door area emissions, excluding the door areas representing the last oven charged. Any battery affected by subsection 3.4 shall be constructed in a manner that will allow for the retrofitting of the battery with hooding to capture door emissions and air pollution control equipment designed to at least a ninety percent (90%) particulate control efficiency.

3.4.g. Quench towers shall employ, as a minimum, multiple row baffles and use make-up water not to exceed eight hundred (800) milligrams per liter of total dissolved solids and one hundred (100) milligrams per liter of total suspended solids.

3.4.h. Smoke and/or particulate matter emissions from combustion stacks shall meet the requirements of subsections 3.1 and 3.2 and shall not exceed a grain loading of 0.025 grains per dry standard cubic foot.

3.4.i. Good operating practices must be maintained to prevent the atmospheric entrainment of particulate matter resulting from the spillage or other deposition of coal/coke.

3.5. Non-Recovery Coke Production Facility- No person shall cause, suffer, allow or permit the emission of smoke and/or particulate matter into the open air in excess of the following provisions from the operation of a non-recovery coke production facility:

3.5.a. Charging emissions from charging of any five (5) consecutive ovens shall not exceed an aggregate time of more than fifty (50) seconds.

3.5.b. No more than two percent (2%) of the coal charging ports shall have smoke and/or particulate matter emissions.

3.5.c. No more than two percent (2%) of the coke oven doors shall have smoke and/or particulate matter emissions excluding the ovens being charged and/or pushed.

3.5.d. Pushing emissions shall be vented to air pollution control equipment. The particulate matter emissions from this air pollution control equipment shall not exceed a mass emission rate as determined by the following formula:

$$E = C^{.09}$$

Where E = particulate emission rate in pounds per push and C = actual charge of coal in tons per oven.

3.5.d.1. The smoke and/or particulate

matter emissions discharged from the air pollution control equipment and non-captured pushing emissions shall not exceed twenty percent (20%) opacity.

3.5.e. Transport emissions from an enclosed quench car shall not exceed twenty percent (20%) opacity. Transport emissions from an open quench car shall not exceed ten percent (10%) opacity.

3.5.f. Coke side sheds and similar structures used to capture pushing and/or quenching emissions, shall be designed and operated so as to prevent the escape of smoke and/or particulate matter emissions from points other than the stack of the air pollution control equipment.

3.5.g. Quench towers shall employ as a minimum, multiple row baffles and use make-up water not to exceed eight hundred (800) milligrams per liter of total dissolved solids and one hundred (100) milligrams per liter of total suspended solids.

3.5.h. Smoke and/or particulate matter from the combustion stack shall meet the requirements of subsections 3.1 and 3.2. The particulate matter emissions rate from combustion stacks shall not be greater than 0.060 grains per dry standard cubic foot or 1.0 lb/ton of coal charged, whichever is most restrictive.

3.5.i. Good operating practices must be maintained to prevent the atmospheric entrainment of particulate matter resulting from the spillage or other deposition of coal and/or coke.

3.6. Basic Oxygen Roof and Blast Furnace Cast House Roof Monitors--The provisions of subsections 3.1 or 3.2 shall not apply to smoke and/or particulate matter emitted from the roof monitor(s) of a basic oxygen process or from a blast furnace cast house. The following provisions will apply:

3.6.a. Visible emissions from a basic oxygen process roof monitor shall not exceed twenty percent (20%) opacity except for a period or periods aggregating no more than three (3) minutes in any sixty (60) minute period where the average opacity for the aggregated period shall not exceed forty percent (40%) opacity.

3.6.b. Visible emissions from a blast furnace cast house shall not exceed twenty percent (20%) opacity except for a period or periods aggregating no more than five (5) minutes in any sixty (60) minute period where the average opacity for the aggregated period shall not exceed forty percent (40%) opacity.

3.7. No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to subsection 5.1 is required to have a full enclosure and be equipped with a particulate matter control device.

§45-7-4. Control and Prohibition of Particulate Emissions by Weight from Manufacturing Process Source Operations.

4.1. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of this rule.

4.2. Mineral acids shall not be released from any type source operation or duplicate source operation or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity given in Table 45-7B found at the end of this rule.

4.3. No person shall circumvent the provisions of this rule by adding additional gas to any exhaust or group of exhausts for the purpose of reducing the stack gas concentration.

4.4. If a duplicate source operation that meets the requirements of this rule is expanded or if a source operation that meets the requirements of this rule is expanded to form a duplicate source operation, the total allowable emission rate for the expanded portion shall be determined by the

following formula:

$$R_e = \left(\frac{W_e}{W_{et}} \right) R_{et}$$

Where,

R_e is the total allowable emission rate in pounds per hour for the new expanded portion of the duplicate source operation;

W_{et} is the total operating process weight rate in pounds per hour of the source operation or duplicate source operation prior to expansion plus the operating process weight rate of the new expanded portion;

R_{et} is allowable emission rate in pounds per hour found in subsection 4.1 opposite the process weight rate, W_{et}; and

W_e is the operating process weight rate in pounds per hour for the new expanded portion.

4.5. Separate stack emission rates for the new expanded portions of concern in subsection 4.4 shall be calculated as per subsection 4.9. The applicable stack emission rate(s) so calculated shall be additive with the existing emission rate for any stack used to vent both an existing source operation or duplicate source operation(s) and addition(s) or portion(s) thereof.

4.6. The operating process weight for new plants which will contain duplicate source operations shall include the total process weight of those duplicate units to be installed during the initial five (5) year operating period.

4.7. Except as noted in subdivisions 4.7.a through 4.7.c, the increase of the operating process weight rate of any manufacturing process source operation or duplicate source operation by the operation of new, replacement, reactivated and/or altered source operation(s) shall be considered as an expansion and the allowable emission rates from the source operation(s) which resulted in the increase shall be determined as per subsection 4.4.

4.7.a. Type 'b' duplicate source operations whose air pollution control equipment efficiency is a minimum of ninety-nine percent (99%) by weight and whose total process weight rate is less than two hundred fifty thousand (250,000) pounds per hour shall be exempted from the requirements of subsection 4.1 provided that smoke emitted into the open air from any such duplicate source operation is less than twenty percent (20%) opacity. If a duplicate source operation is expanded by the addition of a new source operation(s) and the total operating process weight rate is then greater than two hundred fifty thousand (250,000) pounds per hour, the allowable emission rates from the source operation which resulted in the increase above two hundred fifty thousand (250,000) pounds per hour shall be determined as per subsection 4.4.

4.7.b. Primary aluminum reduction potlines which are equipped with a fluidized bed reactor or other similar gas cleaning device which utilizes particulate matter as a media or as a component of a media for collecting or reducing the emissions of gaseous fluorides, shall be exempted from the requirements of subsections 4.1 and 4.4 provided that:

4.7.b.1. At least ninety-nine percent (99%) of the gaseous fluoride is removed from the exit gas stream by such device prior to discharging the cleaned gas stream to the open air;

4.7.b.2. The particulate matter loading in the exit gas stream is not greater than 0.01 grains per standard cubic foot of dry stack gas; and

4.7.b.3. The smoke emitted into the open air from any such duplicate source operation is less than twenty percent (20%) opacity. If a duplicate source operation is expanded by the addition of new source operation(s) and the total operating process weight rate is then greater than two hundred fifty thousand (250,000) pounds per hour, the allowable emission rates from the source operation which resulted in the increase above two hundred fifty thousand (250,000) pounds per hour shall be determined as per subsection 4.4.

4.7.c. The emissions of gaseous fluorides and particulate fluorides from prebake

cells within an existing primary aluminum plant in operation on or before January 26, 1976, shall be controlled by a system for continuous emission reduction which system shall achieve at least ninety percent (90%) fluoride emissions capture efficiency through its primary collection system and at least ninety-nine percent (99%) fluoride emissions removal efficiency through its primary removal system; and

4.7.d. Anode butts from such a plant which are recycled in an on-site anode bake plant shall be cleaned as necessary to minimize adherent fluoride bearing bath material.

4.8. Where more than one source operation or combinations thereof, which are part of a duplicate source operation, are vented through separate stacks, the allowable stack emission rates for the separate stacks shall be determined by the following formula:

$$R_s = R_t \left(\frac{W_s}{W_t} \right)$$

Where,

R_s is the allowable stack emission rate for the separate stack venting the source operation(s) in question;

R_t is the total allowable emission rate for the duplicate source operation;

W_s is the operating process weight rate for the source operation(s) vented through the separate stack; and

W_t is the total operating process weight rate for the duplicate source operation.

4.9. The provisions of subsections 4.1, 4.4 and 4.8 shall not apply to the coking of coal.

4.10. The provisions of subsection 4.1 shall not apply to sinter processes, basic oxygen processes, blast furnace cast house operations, machine scarfing operations and hot metal transfer operations employed in the manufacturing of steel. The following provisions shall apply:

4.10.a. Particulate matter emissions shall not exceed a concentration of 0.030 grains per dry standard cubic foot from a sinter strand windbox.

4.10.b. Particulate matter emissions shall not exceed a concentration of 0.020 grains per dry standard cubic foot from a sinter strand discharge.

4.10.c. Particulate matter emissions shall not exceed a concentration of 0.020 grains per dry standard cubic foot from the entry and exit ends of a sinter cooler.

4.10.d. Particulate matter emissions from the stack of the main (primary) air pollution control equipment of a basic oxygen process, including emissions from fuel firing in an integral waste heat boiler, shall not exceed 0.11 lbs/ton of steel produced.

4.10.e. Particulate matter emissions from basic oxygen process secondary air pollution control equipment shall not exceed a concentration of 0.020 grains per dry standard cubic foot. The air pollution control device shall capture and control emissions from hot metal and scrap charging, tapping, turndown, slagging and as required to control slopping emissions.

4.10.f. Particulate matter emissions from any blast furnace cast house air pollution control equipment shall not exceed a concentration of 0.020 grains per dry standard cubic foot.

4.10.g. Particulate matter emissions shall not exceed a concentration of 0.040 grains per dry standard cubic foot from hot metal transfer from torpedo car to BOF charging ladle during periods when hot metal transfer is actually performed.

4.10.h. Particulate matter emissions shall not exceed a concentration of 0.030 grains per dry standard cubic foot from a machine scarfing operation during periods in which scarfing is actually being performed.

4.11. The provisions of subsections 4.1, 4.4 and 4.8 shall not apply to petroleum coke calcining kilns in existence on April 1, 1982, provided that particulate matter vented into the open air from

each kiln, measured in pounds per hour, shall not exceed the amounts as determined by the following formulas:

4.11.a. When manufacturing regular (amorphous) coke:

$$E = 3.64P^{0.67}$$

Where E = allowable emission rate and P = the process weight rate in tons per hour, provided, however, that no kiln manufacturing regular (amorphous) coke shall exceed a maximum emission rate of fifty (50) pounds per hour.

4.11.b. When manufacturing graphite (crystalline) coke:

$$E = 16.89P^{0.67}$$

Where E = allowable emission rate in pounds per hour, and P = process weight rate in tons per hour, provided, however, that no kiln manufacturing graphite (crystalline) coke shall exceed a maximum emissions rate of two hundred (200) pounds per hour.

4.11.c. Provided further that each such kiln is equipped with an incinerator that will be operated at a temperature of not less than 1600 degrees F and have a residence time of twelve (12) seconds or longer when calcining regular coke and twenty-four (24) seconds or longer when calcining graphite coke, and provided further that, in the event a plant has more than one kiln, such plant shall be operated so that only one (1) of such kilns shall calcine graphite coke at any one time.

4.12. Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.

4.13. Potential Hazardous Material Emissions--Persons responsible for manufacturing process source operations from which hazardous particulate matter material may be emitted such as, but not limited to, lead, arsenic, beryllium and other such materials shall give the utmost care and consideration to the potential harmful effects of the emissions resulting from such activities. Evaluations of these facilities as to adequacy, efficiency and emission potential will be made on an individual basis by the Director working in conjunction with other appropriate governmental agencies.

4.14. Flame Attenuation Fiberglass Process

4.14.a. No person shall cause, suffer, allow or permit the discharge of particulate matter in excess of 48.63 actual pounds per hour from all collection stacks in existence at any plant on June 1, 1993 which produces fiberglass insulation or other fiberglass products using the flame attenuation method.

4.14.b. The owner or operator of any facility subject to this subsection shall meet the following specific allowable emission rates for the designated collection stacks through which particulate matter is discharged; provided, however, the stacks may not exceed the total allowable emission rate set forth in subsection 4.14.a. The particulate matter concentration discharged from any collection stack may not exceed .018 gr/dscf; the source may, however, vary the emission rates among the stacks by filing written notice thereof with the Director at least seven (7) business days in advance of any such alteration. The written notice shall contain the following: 1) the altered emission rates for each affected stack; 2) the rationale and supporting data, information or calculations used to derive the altered emissions rates; 3) an indication of whether any new product not previously produced by the plant will be made on the affected lines; 4) whether any new binder or resins not previously used by the plant will be used in the altered operating scenario subject to the notice; and 5) whether any other parameters and/or related recordkeeping forms are impacted by the alteration. Such changes must comply with the total allowable emission rate from all such stacks and may not exceed the per stack concentration limit set forth herein.

Stack ID	Proposed Emission Rate (lbs/hr)

41N	3.25 (total)
41S	
42N	4.64 (total)
42S	
43N	4.88 (total)
43S	
44N	2.68 (total)
44S	
45N	9.25 (total)
45S	
46N	10.00 (total)
46S	
47	6.49
48	4.38
49	3.06

4.14.c. Source operations subject to this subsection shall not be subject to the other provisions of section 4 except for subsections 4.2, 4.3, and 4.13.

§45-7-5. Control of Fugitive Particulate Matter.

5.1. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.

5.2. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.

5.3. The provisions of subsections 3.1, 3.2, and 5.1 shall not apply to particulate matter emitted from the operation of a ferroalloy electric submerged arc furnace in existence prior to June 1, 1993 during blowing taphole events, poling and oxygen lancing operations. Poling emissions shall not exceed five (5) minutes in duration during any poling operation.

§45-7-6. Registration.

After July 1, 1970 all persons owning and/or operating an existing manufacturing process source operation not previously registered shall register such source operation with the Director. The information required for registration shall be determined by the Director, and shall be provided in the manner specified by the Director.

§45-7-7. Permits.

7.1. No person shall construct, modify or relocate any manufacturing process source operation without first obtaining a permit in accordance with the provisions of W. Va. Code §22-5-1 et seq., and series 13, 14, 19 and 30 of Title 45.

§45-7-8. Reporting and Testing.

8.1. At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. 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 stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the 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.

8.2. The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions.

§45-7-9. Variance.

9.1. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in this rule 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 malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.

§45-7-10. Exemptions.

10.1. Provisions of this rule shall not apply to particulate matter emissions regulated by Title 45, Series 2, 3, and 5 or to mobile internal combustion engines and aircraft.

10.2. Fugitive particulate matter emissions from any manufacturing processes and associated operations which are subject to this rule shall be exempt from the provisions of 45CSR17, provided that such sources shall not be exempt from the provisions of W.Va. Code §§22-5-1 et seq., including the provisions of §22-5-3 relating to statutory air pollution.

10.3. Maintenance operations shall be exempt from the provisions of section 4 provided that at all times the owner or operator shall conduct maintenance operations in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source.

10.4. An owner or operator may apply for an alternative visible emission standard for start-up and shutdown periods, on a case-by-case basis, by filing a written petition with the Director. The Director may approve an alternative visible emission standard for start-ups and shutdowns to the visible emission standard required under section 3. The petition shall include a demonstration satisfactory to the Director:

10.4.a. That it is technologically or economically infeasible to comply with section 3;

10.4.b. That establishes the need for approval of a start-up or shutdown plan based upon information including, but not limited to, monitoring results, opacity observations, operating procedures and source inspections.

10.4.c. That the particulate matter weight emission standards under section 4 are being met, as determined in accordance with 45CSR7A - "Compliance Test Procedures For 45CSR7 - ' To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations'"; and

10.4.d. That during periods of start-ups and shutdowns the owner or operator shall, to the extent practicable, maintain and operate any manufacturing process including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source.

10.5. The owner or operator of a manufacturing process shall be exempt from subsection 4.1 for source(s) of emissions that have a potential to emit less than one (1) pound per hour of particulate matter and an aggregate of less than

one thousand (1000) pounds per year for all such sources of particulate matter located at the stationary source. Particulate matter, for the purposes of this subsection, will not include particulate matter classified as hazardous air pollutants pursuant to 42 U.S.C. §7412(b).

10.6. The owner or operator of a manufacturing process shall be exempt from subsection 4.2 for source(s) of emissions that have a potential to emit less than one tenth of a pound (0.1) per hour of mineral acids and an aggregate of less than one hundred (100) pounds per year for all sources of mineral acids located at the stationary source. The Director may approve in a permit or consent order an alternative exemption from subsection 4.2 for source(s) of emissions that can demonstrate on a case-by-case basis that their emissions are insignificant.

10.7. Notwithstanding any other provisions in this rule, the Director may revoke any and all exemptions, except for subsections 10.1 and 10.2. The Director shall notify the affected source(s) in writing that an exemption will be revoked, effective date thereof, and the reasons therefore.

§45-4-11. Alternative Emission Limits for Duplicate Source Operations.

11.1. The owner or operator of a duplicate source operation subject to section 4 which has individual source operations discharging through separate stacks, may petition the Director to approve individual stack allowable emission rates differing from the proration calculated under subsection 4.8. The Director may approve such request in accordance with subsections 11.2 and 11.3 provided that there shall be no increase in the total allowable emissions from the duplicate source operation as previously provided under section 4. The Director shall not approve a relaxation of a technology-based emission limitation for a specific unit or stack within a duplicate source operation that has been established pursuant to any other rule nor shall the Director approve a relaxation in emission limits previously established for the purpose of avoiding the permitting requirements of 45CSR14 or 45CSR19.

11.2. A request for approval of alternative individual stack allowable emission rates made to the Director pursuant to subsection 11.1 shall be filed as an application for an existing stationary source operating permit as provided under 45CSR13 and shall contain such information as the Director deems necessary for acting upon the request. Such information shall include, but not be limited to, an air quality impact analysis demonstrating that the alternative emission rates would not cause or contribute to a violation of any federal or state ambient air quality standard or any applicable maximum allowable increase over the baseline concentration of particulate matter in the area affected by the duplicate source operation.

11.3. Any approval of alternative allowable emission rates by the Director pursuant to subsections 11.1 and 11.2 shall be embodied in a permit issued as an existing stationary source operating permit in accordance with 45CSR13.

§45-4-12. Inconsistency Between Rules.

12.1. In the event of any inconsistency between this rule and any other existing rule of the West Virginia Division of Environmental Protection, such inconsistency shall be resolved by the determination of the Director and such determination shall be based upon the application of the more stringent provision, term, condition, method or rule.

TABLE 45-7A

Operating Source Operation or Total Duplicate Source Operation Process Weight Rate in Pounds Per Hour[1]	Maximum Allowable Total Stack Emission Rate in Pounds Per Hour for the Appropriate Process Weight and Source Operation Type[1]			
	Type 'a'	Type 'b'	Type 'c'	Type 'd'[2]
0	0	0	0	0
2,500	3	3	9	0.2
5,000	5	5	13	0.8
10,000	10	10	19	1.8
20,000	16	16	26	4.0
30,000	22	22	32	6.2
40,000	28	28	36	8.3
50,000	31	31	40	10.5
100,000	33	33	54	21.2
200,000	37	37	70	21.2
300,000	40	40	80	21.2
400,000	43	46	88	21.2
500,000	47	53	94	21.2
600,000	50	62	99	21.2
700,000	50	71	99	21.2
800,000	50	79	99	21.2
900,000	50	88	99	21.2
1,800,000 and above	50	176	99	21.2

1. For a process weight between any two consecutive process weights stated in this table, the emission limitation shall be determined by linear interpolation.

2. Type 'd' source operation stack emission rates do not apply to MINERAL ACIDS. See subsection 4.2.

TABLE 45-7B

Mineral Acid	Allowable Stack Gas Concentration in Milligrams Per Dry Cubic Meter at Standard Conditions from Source Operations or Duplicate source Operations in Existence on July 1, 1970	Allowable Stack Gas Concentration in Milligrams per Dry Cubic Meter at Standard Conditions from Source Operations or Duplicate Source Operations Installed After July 1, 1970
Sulfuric Acid Mist	70	35
Nitric Acid Mist and/or Vapor	140	70
Hydrochloric Acid Mist and/or Vapor	420	210
Phosphoric Acid Mist and/or Vapor	6	3