

PART D - POLLUTANT EMISSION STANDARDS

§2104.02 PARTICULATE MASS EMISSIONS {effective February 1, 1994, as §2104.6; renumbered and amended effective October 20, 1995, amended effective August 15, 1997}

a. **Fuel-Burning or Combustion Equipment.** No person shall operate, or allow to be operated, any fuel-burning or combustion equipment, where the actual heat input to such equipment is greater than 0.50 million BTUs per hour, in such manner that emissions of particulate matter exceed the following rates at any time:

1. Where natural gas, grade number 2 fuel oil, coke oven gas, or blast furnace gas is used:

MAXIMUM ALLOWABLE POUNDS PER MILLION BTUs OF ACTUAL HEAT INPUT

<u>Type Of Fuel Being Burned Or Combusted</u>	<u>Type of Fuel-Burning or Combustion Equipment</u>		
	<u>Combustion Turbines</u>	<u>Reciprocating Combustion Engines</u>	<u>All Other Equipment</u>
	<u>Turbines</u>		
A. Natural Gas	0.015	0.012	0.008
B. Grade Number 2 Fuel Oil 0.04		0.28	0.015
C. Coke Oven Gas	*	*	0.02
D. Blast Furnace Gas	*	*	0.05

(* see Paragraph a.2. below)

2. Where a single fuel is used other than as provided for in Paragraph a.1. above:

A. Where the actual heat input to such equipment is greater than 0.50 million BTUs per hour but less than 50 million BTUs per hour, the rate of 0.40 pounds per million BTUs of actual heat input;

B. Where the actual heat input to such equipment is equal to or greater than 50 million BTUs per hour, but less than 850 million BTUs per hour, the rate determined by the formula:

$$A = 3.5E^{-0.56} \quad \text{where } A = \text{allowable emissions in pounds per million BTU of actual heat input, and}$$

$$E = \text{actual heat input to such equipment in millions of BTU's per hour; or,}$$

C. Where the actual heat input to such equipment is equal to or greater than 850 million BTUs per hour, the rate of 0.080 pounds per million BTUs of actual heat input;

3. Where the equipment is fired with two (2) or more types of fuel, the rate determined by the formula:

$A = \sum x_i a_i$ where A = allowable emissions in pounds per million BTUs of actual heat input,
 i = fuel type (i.e. natural gas, Grade Number 2 fuel oil, Grade Number 6 fuel oil, coke oven gas, blast furnace gas, or other),
 x_i = fraction of total actual heat input in BTUs provided by fuel type i, and
 a_i = allowable emissions in pounds per million BTUs of actual heat input for fuel type i from Paragraphs a.1. or a.2. above; or

4. Notwithstanding the provisions of Paragraphs a.1, a.2, and a.3 of this Section, and except as provided for in Paragraph a.5 of this Section, and except for fuel emergencies of limited duration with prior Department approval, no person shall operate, or allow to be operated, any of the following specific fuel-burning or combustion equipment in such manner that emissions of particulate matter exceed the following rates at any time, regardless of the type of fuel used:

SPECIFIC FUEL-BURNING OR COMBUSTION EQUIPMENT		MAXIMUM ALLOWABLE POUNDS PER MILLION BTUs OF ACTUAL HEAT INPUT
<u>Source Name</u>	<u>Location</u>	
A. Coke Works Boiler #1	USX Corp. Clairton, PA	0.02
B. #13 Benzene Boiler	USX Corp. Clairton, PA	0.02
C. #14 Benzene Boiler	USX Corp. Clairton, PA	0.02
D. R-1 (Benzene) Steam Boiler	USX Corp. Clairton, PA	0.02
E. R-2 (Benzene) Steam Boiler	USX Corp. Clairton, PA	0.02
F. T1 (Benzene) Boiler	USX Corp. Clairton, PA	0.02
G. T2 (Benzene) Boiler	USX Corp. Clairton, PA	0.02
H. Riley Boilers (each)	LTV Steel Co., Pgh, PA	0.02
I. Keeler Boilers (each)	LTV Steel Co., Pgh, PA	0.02

5. Notwithstanding the provisions of Paragraphs a.1, a.2, and a.3, and as an alternative to Paragraph a.4, of this Section, and except as provided for in Paragraph a.5 of this Section, and except for fuel emergencies of limited duration with prior Department approval, no person shall operate, or allow to be operated, any of the following specific fuel-burning or combustion equipment in such manner, or at any time, that emissions from such equipment, or any other of the following equipment, exceed the following rates at any time for the pollutant indicated, regardless of the type of fuel used:

SPECIFIC FUEL-BURNING OR COMBUSTION EQUIPMENT		MAXIMUM ALLOWABLE POUNDS PER MILLION BTUs OF ACTUAL HEAT INPUT
<u>Source Name</u>	<u>Location</u>	
A. #13 Benzene Boiler	USX Corp. Clairton, PA	0.00 * particulate matter
B. #14 Benzene Boiler	USX Corp. Clairton, PA	0.00 * particulate matter
C. T1 (Benzene) Boiler	USX Corp. Clairton, PA	0.120 PM-10
D. T2 (Benzene) Boiler	USX Corp. Clairton, PA	0.120 PM-10

E. Coke Works Boiler #2	USX Corp. Clairton, PA		0.02 particulate
		matter	
F. Coke Works Boiler #1	USX Corp. Clairton, PA		0.02 particulate
		matter	

* 0.00 maximum indicates that these boilers shall not be operating

Aggregation. For purpose of this Subsection a only, if one or more fuel-burning or combustion emissions units are vented into a common flue, such emissions units shall be considered one emissions unit and allowable emissions shall be determined on the basis of total heat input to all emissions units vented to such common flue.

For any emissions unit that burns or combusts coal, that is subject to Paragraph a.3. of this Section, that is not located in a nonattainment area of the County for PM-10, that has a rated heat input greater than 50 million BTUs per hour, and that would comply with the emission standards under Paragraph a.2. of this Section notwithstanding the firing of the emissions unit with other fuel in addition to the coal, the Department may, upon written application from the person responsible for such emissions unit, determine compliance with this Subsection on the basis of the emission standards under Paragraph a.2. of this Section, notwithstanding the firing of the emissions unit with other fuel in addition to the coal, provided that the applicant demonstrates to the Department's satisfaction that such allowed emissions will not cause a significant air quality impact on any nonattainment area of the County for PM-10. Such determination of the Department shall not be effective until it is either approved by the EPA or included in a federally enforceable permit or order, whichever is first.

- b. **Processes - General.** No person shall operate, or allow to be operated, any process except those processes listed in Subsection c d, e, f, g, or h below and those processes for which a source standard is established under Part E of this Article in such manner that emissions of particulate matter from such process exceed seven (7) pounds in any 60 minute period or 100 pounds in any 24-hour period, except that no person subject to the requirements of this Subsection b shall be required to reduce emissions to a greater degree than 99 percent.

This Subsection shall apply to the sum of all stack emissions from such process including all emissions from any air pollution control device outlet(s) associated with such process. All fugitive emissions from such process shall be included in the sum of all stack emissions for purposes of this Subsection unless the stack emissions can be accurately measured and all fugitive emissions do not exceed the standards established by §2104.01 of this Article or any alternative standard(s) established for such source pursuant to §2104.01 of this Article.

- c. **Specific Processes.** No person shall operate, or allow to be operated, any process listed below, other than those subject to Subsection d, e, f, g, or h of this Section, in such manner that emissions of particulate matter from such process exceed at any time the rate determined by the formula set forth below.

This Subsection shall apply to the sum of all stack emissions from such process including all emissions from any air pollution control device outlet(s) associated with such process. All fugitive emissions from such process shall be included in the sum of all stack emissions for purposes of this Subsection unless the stack emissions can be accurately measured and all fugitive emissions do not exceed the standards established by §2104.01 of this Article or any alternative standard(s) established for such source pursuant to §2104.01 of this Article.

$$A = 0.76E^{+0.42} \quad \text{where } A = \text{allowable emissions in pounds per hour, and}$$

$$E = \text{emission index of (F) x (W) pounds per hour,}$$

$$\text{where } F = \text{process factor in pounds per unit as listed}$$

below, and
W = production or charging rate in units per hour,
and
The units for F and W shall be compatible.

1. Carbon black manufacturing: $F = 500$ pounds per ton of product.
2. Charcoal manufacturing: $F = 400$ pounds per ton of product.
3. Crushing, grinding or screening: $F = 20$ pounds per ton of feed.

4. Paint manufacturing: $F = 0.050$ pounds per ton of pigment handled.
5. Phosphoric acid manufacturing: $F = 6$ pounds per ton of phosphorous burned.
6. Detergent drying: $F = 30$ pounds per ton of product.

7. Ammonium nitrate manufacturing prilling tower or other granulator: $F = 0.10$ pounds per ton of product.
8. Ferroalloy production furnace: $F = 0.30$ pounds per ton of product.
9. Primary iron and/or steel making
 - A. Iron production: $F = 100$ pounds per ton of product.
 - B. Steel production: $F = 40$ pounds per ton of product.
 - C. Scarfing: $F = 20$ pounds per ton of product.

10. Primary lead production
 - A. Roasting: $F = 0.0040$ pounds per ton of ore feed.
 - B. Lead reduction: $F = 0.50$ pounds per ton of product.
11. Primary zinc production
 - A. Roasting: $F = 3$ pounds per ton of ore feed.
 - B. Zinc reduction: $F = 10$ pounds per ton of product.
12. Secondary aluminum production
 - A. Sweating: $F = 50$ pounds per ton of aluminum product.
 - B. Melting and refining: $F = 10$ pounds per ton of aluminum feed.

13. Brass and bronze production melting and refining: $F = 20$ pounds per ton of product.
14. Iron foundry
 - A. Melting
 - i. Cupola: $F = 50$ pounds per ton of iron.
 - ii. Reverberatory furnace: $F = 2$ pounds per ton of iron.
 - iii. Electric Induction furnace: $F = 1.50$ pounds per ton of iron.
 - B. Shake-out: $F = 20$ pounds per ton of sand.
 - C. Sand Handling: $F = 20$ pounds per ton of sand.
15. Secondary lead melting: $F = 0.50$ pounds per ton of product.
16. Secondary magnesium melting: $F = 0.20$ pounds per ton of product.
17. Secondary zinc melting
 - A. Sweating: $F = 0.010$ pounds per ton of product.
 - B. Refining: $F = 0.30$ pounds per ton of product.
18. Asphaltic concrete production: $F = 6$ pounds per ton of aggregate feed.

19. Asphalt roofing manufacturing felt saturation: $F = 0.60$ pounds per ton of asphalt used.
20. Portland cement manufacturing
 - A. Clinker production: $F = 150$ pounds per ton of dry solids feed.
 - B. Clinker cooling: $F = 50$ pounds per ton of product.
21. Coal drying: $F = 2$ pounds per ton of product.

- 22. Coal dry cleaning: F= 2 pounds per ton of product.
- 23. Lime calcining: F= 200 pounds per ton of product.
- 24. Glass Production Furnace: F= 50 pounds per ton of fill.

- d. **Specific Process Sources.** No person shall operate, or allow to be operated, any process listed below in such manner that emissions of PM-10 from such process exceed at any time the applicable rate set forth below.

This Subsection shall apply to the sum of all stack emissions from such process including all emissions from any air pollution control device outlet(s) associated with such process. All fugitive emissions from such process shall be included in the sum of all stack emissions for purposes of this Subsection unless the stack emissions can be accurately measured and all fugitive emissions do not exceed the standards established by §2104.01 of this Article or any alternative standard(s) established for such source pursuant to §2104.01 of this Article.

ALLOWABLE	SPECIFIC PROCESS SOURCE			MAXIMUM
	<u>Source Name</u>	<u>Location</u>	<u>Permit Number</u>	<u>EMISSION RATE</u>
1. Anneal. Fce Bases 801-856 each	USX Co. W. Mifflin PA	{to be assigned}		0.011 lbs /ton of steel
2. Primary Flash Reboiler	Aristech, Clairton, PA	7035775-001-25703		0.07 lbs /hour
3. Secondary Flash Reboiler	Aristech, Clairton, PA	7035775-001-25703		0.07 lbs /hour
4. 2T3 Heater Reboiler	Aristech, Clairton, PA	7035775-001-25703		0.04 lbs /hour
5. 2T4 Heater Reboiler	Aristech, Clairton, PA	7035775-001-25703		0.03 lbs /hour
6. 1T2 Heater Reboiler	Aristech, Clairton, PA	7035775-001-25703		0.05 lbs /hour
7. 1T4 Heater	Aristech, Clairton, PA	7035775-001-25703		0.01 lbs /hour
8. Hot Oil Heater	Aristech, Clairton, PA	7035775-001-25703		0.02 lbs /hour
9. 2T1 Heater Reboiler	Aristech, Clairton, PA	7035775-001-25703		0.02 lbs /hour
10. #1 Primary Reboiler	Aristech, Clairton, PA	7035775-001-25703		0.07 lbs /hour
11. Naphthalene Hot Oil Heater	Aristech, Clairton, PA	7035775-001-25703		0.27 lbs /hour
12. Naphthalene Reactor Heater	Aristech, Clairton, PA	7035775-001-25703		0.05 lbs /hour

- e. **Specific Controlled Process Sources.** On and after December, 1, 1994, no person shall operate, or allow to be operated, any process listed below unless there is installed on such process an emission control device, nor shall any person operate, or allow to be operated, any process listed below in such manner that emissions of PM-10 from such process exceed at any time the applicable rate set forth below for a volume source for ambient air quality impact dispersion modeling purposes, or if the required emission control device results in the process becoming a point source for ambient air quality impact dispersion modeling purposes, a rate which results in no more adverse ambient air quality impact than the applicable rate set forth below for a volume source.

This Subsection shall apply to the sum of all stack emissions from such process including all emissions from any air pollution control device outlet(s) associated with such process. All fugitive emissions from such process shall be included in the sum of all stack emissions for purposes of this Subsection unless the stack emissions can be accurately measured and all fugitive emissions do not exceed the standards established by §2104.01 of this Article or any alternative standard(s) established for such source pursuant to §2104.01 of this Article.

ALLOWABLE	SPECIFIC PROCESS SOURCE		VOLUME SOURCE
	Source Name	Location	MAXIMUM EMISSION RATE
1.	#1 Primary Coal Pulverizer	USX Corp. Clairton, PA	5.17 grains/ton of coal
2.	#1 Second. Coal Pulverizer	USX Corp. Clairton, PA	11.86 grains/ton of coal
3.	#2 Primary Coal Pulverizer	USX Corp. Clairton, PA	8.26 grains/ton of coal
4.	#2 Second. Coal Pulverizer	USX Corp. Clairton, PA	11.02 grains/ton of coal

No later than December 31, 1996, USX shall install a direct feed chute and distribution plough at the #2 secondary pulverizer, enclose all coal feed chutes, and install on 1A to 1B belts deflector plates, hoppers, and chutes. On and after December 31, 1996, USX shall use dust suppressant (e.g. chemical, oil, or water suppressant to minimize emissions) on coal prior to entry into any pulverizer.

- f. No person shall operate, or allow to be operated, the Coke Screening #3 process at the USX Corporation facility in Clairton, PA, {permit number to be assigned}, unless there is installed on such process an emission control device, nor shall any person operate, or allow to be operated such process in such manner that emissions of PM-10 from such process exceed 2.8 grains/ton of coke at any time.

This Subsection shall apply to the sum of all stack emissions from such process including all emissions from any air pollution control device outlet(s) associated with such process. All fugitive emissions from such process shall be included in the sum of all stack emissions for purposes of this Subsection unless the stack emissions can be accurately measured and all fugitive emissions do not exceed the standards established by §2104.01 of this Article or any alternative standard(s) established for such source pursuant to §2104.01 of this Article.

- g. No person shall operate, or allow to be operated, either the Coke Screening #1, or Coke Screening #2, process at the USX Corporation facility in Clairton, PA, unless such process, at a minimum, is located and maintained within the enclosure in existence as of February 1, 1994.
- h. No person shall operate, or allow to be operated, any of the Water Cooling Tower processes at the USX Corporation facility in Clairton, PA, unless the water used for such cooling is equivalent to, or better than, the water quality standards established for the Monongahela River by regulations promulgated by the DEP under the Pennsylvania Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. 691.1 et seq., except that water from the Monongahela River may be used for such cooling.

No person shall operate, or allow to be operated, the Keystone cooling tower at the USX Corporation facility at Clairton, PA unless there is installed a mist eliminator.

- i. **Measurements.** Measurements of particulate mass emissions shall be performed according to the applicable procedures established by §2107.02 of this Article.