Chapter 123 -- Standards for Contaminants

SULFUR COMPOUND EMISSIONS

§123.22. Combustion units.

Note: EPA initially approved this rule on May 31, 1972 (37 FR 10842). *After this date, EPA approved new provisions to this rule, cited herein as subsections (a)1, (b)1, (b)2, (c)1, (c)2, and (d)1, as part of the Pennsylvania SIP. These EPA approval dates are inserted after the appropriate subsection citation.*

(a)(1) Clause (2) of this subsection shall apply to all combustion units in all the air basins except those units subject to the provisions of subsections *(a)1,(b)1, (b)2, (c)1, (c)2, and (d)1* of this section.

(2) No person shall cause, suffer, or permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2 , from any combustion unit, at any time, in excess of:

(i) The rate of 3.0 lbs. per million BTU of heat input when the heat input to the combustion unit in millions of BTUs per hour is greater than 2.5 but less than 50.

(ii) The rate determined by the formula:

$A = 5.1E^{-0.14}$, where:
A = Allowable emissions in lbs. per million BTU of heat input, and
E = Heat input to the combustion unit in millions of BTUs per hour,
when E is equal to or greater than 50 but less than 2,000.

(iii) The rate of 1.8 lbs. per million BTU of heat input when the heat input to the combustion unit in millions of BTUs per hour is equal to or greater than 2,000.

(a)1 ***[Revised 8/18/81 (46 FR 43423)– applies to the Armstrong County SO2 nonattainment area]***

(a) Nonair basin areas. Combustion units in nonair basin areas shall conform with the following:

(1) General provision. No person may permit the emission into the outdoor atmosphere of sulfur oxides, expressed asSO_2, from a combustion unit in excess of the rate of 4 pounds per million Btu of heat input over any 1-hour period except as provided for in paragraph (4).

(2) Commercial fuel oil. No person may offer for sale, deliver for use, exchange in trade or permit the use of commercial fuel oil in nonair basin areas which contains sulfur in excess of the applicable percentage by weight set forth in the following table:

Grades Commercial Fuel Oil	% Sulfur
No. 2 and Lighter (viscosity less than or equal to 5.820cSt)	0.5
No. 4, No. 5, No. 6, and heavier (viscosity greater than 5.82cSt)	2.8

(3) Equivalency provision. Paragraph (2) may not apply to those persons or installations where equipment or processes are used to reduce the emissions from the burning of fuels with a higher sulfur content than that specified in paragraph (2). The emissions may not exceed those which would result from the use of the fuels specified in paragraph (2).

(4) Solid fossil fuel fired combustion units. Solid fossil fuel fired combustion units shall conform with the following:

(i) This paragraph applies to solid fossil fuel fired combustion units with a rated capacity greater than or equal to 250 million Btus of heat input per hour.

(ii) The owner of a solid fossil fuel fired combustion unit with a rated capacity of less than 250 million Btu heat input per hour may petition the Department for application of the limitations in this paragraph in lieu of the limitations in paragraph (1). Upon demonstration of installation of continuous monitoring equipment which complies with Chapter 139 (relating to sampling and testing) the Department will grant the petition.

(iii) No person subject to this paragraph may permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2 from a combustion unit in excess of the rates set forth in the following table:

	Allowable Pounds SO_2 Per 10^6 Btu Heat Input
Thirty-day running average not to be exceeded at any time	3.7
Daily average not to be exceeded more than 2 days in any running 30-day period	4.0
Daily average maximum not to be exceeded at any time	4.8

(iv) A combustion unit which does not meet the requirements of § 123.25

(relating to monitoring requirements) for installation and operation of continuous SO_2 emission monitoring equipment shall be subject to the provisions of paragraph (1).

(b)1 ***[Revised 12/16/81(46 FR 61267)]*** (1) Clause (2) of this subsection shall apply to all combustion units in the Allegheny County and Monongahela Valley air basins.

(2) No person shall cause, suffer, or permit the emission into the outdoor atmosphere of sulfur oxides, expressed asSO_2, from any combustion unit, at any time, in excess of:

(i) The rate of 1.0 lb. per million BTU of heat input, when the heat input to the mbustion unit in millions of BTUs per hour is greater than 2.5 but less than 50.

(ii) The rate determined by the formula:

$A = 1.7E^{-0.14}$, where:
A = Allowable emissions in lbs. per million BTU of heat input, and
E = Heat input to the combustion unit in millions of BTUs per hour, when E is equal to or greater then 50 but less than 2,000.

(iii) The rate of 0.6 lbs. per million BTU of heat input when the heat input to the combustion unit in millions of BTUs per hour is equal to or greater than 2,000.

(b)2 ***[Approved 8/8/79 (44 FR 46465)]*** Erie air basin. Combustion units in these subject air basins shall conform with the following:

(1) General provision. No person may permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2, from a combustion unit in excess of the rate of 4 pounds per million Btu of heat input over a 1-hour period except as provided for in paragraph (4).

(2) Commercial fuel oil. No person may offer for sale, deliver for use, exchange in trade or permit the use of commercial fuel oil in the subject air basins which contain sulfur in excess of the applicable percentage by weight set forth in the following table:

Grades Commercial Fuel Oil	**Effective August 1, 1979 % Sulfur**
No. 2 and Lighter (viscosity less than or equal to 5.820cSt)	0.3
No. 4, No. 5, No. 6, and heavier (viscosity greater than 5.82cSt)	2.8

(3) Equivalency provision. Paragraph (2) does not apply to those persons or

installations where equipment or processes are used to reduce the emissions from the burning of fuels with a higher sulfur content than that specified in paragraph (2). The emissions may not exceed those which would result from the use of the fuels specified in paragraph (2).

(4) Solid fossil fuel fired combustion units. Solid fossil fuel fired combustion units shall conform with the following:

(i) This paragraph applies to solid fossil fuel fired combustion units with a rated capacity greater than or equal to 250 million Btus of heat input per hour and to a solid fossil fuel fired combustion unit upon petition to and acceptance by the Department.

(ii) The owner of any solid fossil fuel fired combustion unit with a rated capacity of less than 250 million Btu heat input per hour may petition the Department for application of the limitations in this paragraph in lieu of the limitations in paragraph (1). Upon demonstration of installation of continuous monitoring equipment which complies with Chapter 139, the Department will grant such petition.

(iii) No person may permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2, from a combustion unit, at any time, in excess of the rates set forth in the following table:

	Allowable Pounds SO_2 Per 10^6 Btu Heat Input
Thirty-day running average not to be exceeded at any time	3.7
Daily average not to be exceeded more than 2 days in any running 30-day period	4.0
Daily average maximum not to be exceeded at any time	4.8

(iv) A combustion unit which does not meet the requirements of § 123.25 for installation and operation of continuous SO_2 emission monitoring equipment is subject to the provisions of paragraph (1).

(c)1 ***[Approved 6/4/79 (44 FR 31980)]*** Southeast Pennsylvania air basin. Combustion units in the Southeast Pennsylvania air basin shall conform with the following:

(1) General provision. No person may permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2, from any combustion unit, at any time, in excess of the applicable rate in pounds per million Btu of heat input specified in the following table:

Rated Capacity of Units in 10^6 Btus per hour	**Inner Zone**	**Outer Zone**
less than 250	1.0	1.2
greater than or equal to 250	0.6	1.2

(2) Commercial fuel oil. No person may, at any time, offer for sale, deliver for use, exchange in trade or permit the use of commercial fuel oil for use in combustion units in the Southeast Pennsylvania air basin which contains sulfur in excess of the applicable percentages by weight set forth in the following table:

Grades of Commercial Fuel Oil	**Inner Zone**	**Outer Zone**
No. 2 and lighter (SSU viscosity less than or equal to 45)	0.2%	0.3%
No. 4, No. 5, No. 6 and Heavier (SSU viscosity greater than 45)	0.5%	1.0%

(3) Noncommercial fuels. No person shall cause, suffer, or permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2, from any combustion unit using noncommercial fuel at any time in excess of the rate of 0.6 pounds per million Btu of heat input in the inner zone or 1.2 pounds per million Btu of heat input in the outer zone. Any person using a mixture of noncommercial and commercial fuel in a combustion unit shall comply with the provisions of this paragraph and shall comply with the provisions of paragraph (2) of this subsection.

(4) Equivalency provisions. For those installations where equipment or processes where equipment or processes are used to reduce the emissions from the burning of fuel oils with a higher sulfur content than that specified in paragraph (2) of this subsection, the emissions may not exceed those which would result from the use of the fuels specified in paragraph (2) of this subsection.

(d) Other units. This subsection shall apply to all combustion units not subject to the provisions of subsections (a), (b) and (c) of this section. No person shall cause, suffer or permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2, at any time, inexcess of the rate of four pounds per million BTU of heat input.

(e) Allowable emissions. Allowable emissions under this section are graphically indicated in Appendix D of this Chapter.

(c)2 ***[Approved 12/16/81(46 FR 61267)]*** Upper Beaver Valley air basin. Combustion units in these subject air basins shall conform with the following:

(1) General provision. No person may permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2, from any combustion unit, at any time, in excess of the rate of 3 pounds per million Btu of heat input over any 1-hour period except as provided for in paragraph (4).

(2) Commercial fuel oil. No person may, at any time, offer for sale, deliver for use, exchange in trade or permit the use of commercial fuel oil in the subject air basins on or after the effective dates listed in this paragraph which contains sulfur in excess of the applicable percentage by weight set forth in the following table:

Grades Commercial Fuel Oil	**Effective August 1, 1979 % Sulfur**
No. 2 and Lighter (viscosity less than or equal to 5.82cSt)	0.3
No. 4, No. 5, No. 6 and heavier (viscosity greater than 5.82cSt)	2.0

(3) Equivalency provision. Paragraph (2) does not apply to those persons or installations where equipment or processes are used to reduce the emissions from the burning of fuels with a higher sulfur content than that specified in paragraph (2); however, the emissions may not exceed those which would result from the use of the fuels specified in paragraph (2).

(4) Solid fossil fuel fired combustion units. Solid fuel fired combustion units shall conform with the following:

(i) This paragraph applies to all solid fossil fuel fired combustion units with a rated capacity greater than or equal to 250 million Btus of heat input per hour and to any solid fossil fuel fired combustion unit upon petition to and acceptance by the Department.

(ii) The owner of a solid fossil fuel fired combustion unit with a rated capacity of less than 250 million Btu heat input per hour may petition the Department for application of the limitations in this paragraph in lieu of the limitations in paragraph (1). Upon demonstration of installation of continuous monitoring equipment which complies with Chapter 139 the Department will grant such petition.

(iii) No person may permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2, from any combustion unit in excess of the rates set forth in the following table:

Allowable Pounds SO_2 Per 10^6 Btu Heat Input

Thirty-day running average not to be exceeded at any time	2.8
Daily average not to be exceeded more than 2 days in any running 30-day period	3.0
Daily average maximum not to be exceeded at any time	3.6

(iv) A combustion unit not meeting the requirements of § 123.25 (relating to monitoring requirements) for installation and operation of continuous SO_2 emission monitoring equipment is subject to the provisions of paragraph (1).

(d)1 ***[Approved 12/16/81(46 FR 61267)]*** Lower Beaver Valley air basin. No person may permit the emission into the outdoor atmosphere of sulfur oxides, expressed as SO_2, from any combustion unit in excess of any of the following:

(1) The rate of one pound per million Btu of heat input, when the heat input to the combustion unit in millions of Btus per hour is greater than 2.5 but less than 50.

(2) The rate determined by the following formula: $A = 1.7E^{-0.14}$, where: A = allowable emissions in pounds per million Btu of heat input, and E = Heat input to the combustion unit in millions of Btus per hours when E is equal to or greater than 50 but less than 2,000.

(3) The rate of 0.6 pounds per million Btu of heat input when the heat input to the combustion unit in millions of Btus per hour is equal to or greater than 2,000.

(d)2 (1) Clause (2) of this subsection shall apply to all combustion units not subject to the provisions of subsections *(a), (b)1, (b)2, (c)1, (c)2, and (d)1* of this section.

(2) No person shall cause, suffer, or permit the emission into the outdoor atmosphere of sulfur oxides, expressed asSO_2 from any combustion unit, at any time, in excess of the rate of 4.0 1bs. per million BT U of heat input.

(e) Allowable emissions. Allowable emissions under this section are graphically indicated in Figure 4 appended to this chapter.

SULFUR OXIDES—COMBUSTION UNITS

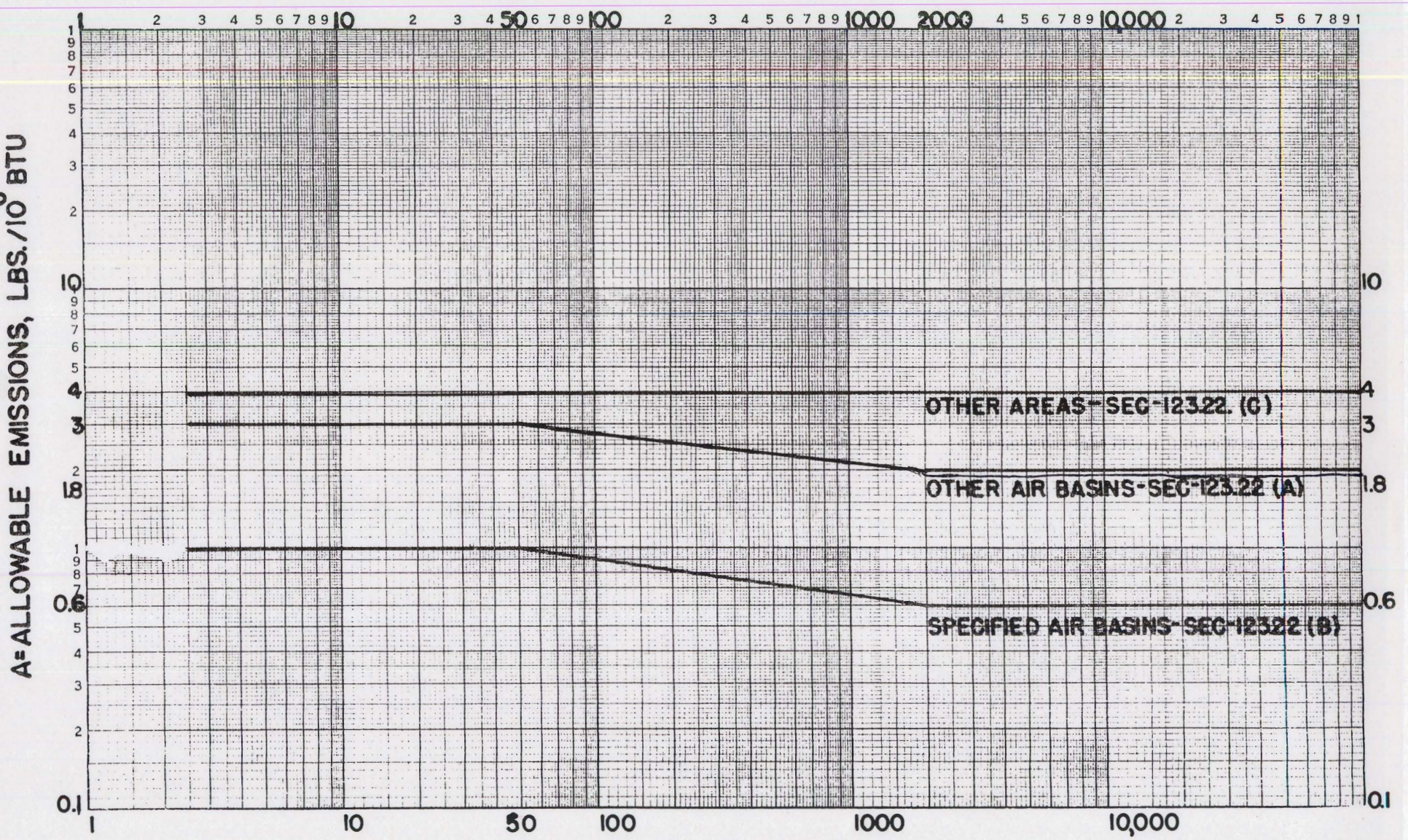

FIGURE 4