RULES
OF
THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

CHAPTER 1200-03-07
PROCESS EMISSION STANDARDS

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1200-03-07-.01 GENERAL PROCESS PARTICULATE EMISSIONS STANDARDS.

(1) No person shall cause, suffer, allow, or permit particulate emissions in excess of the standards in this Chapter.

(2) In any area where one or more sources are emitting particulates at rates in conformity with applicable maximum allowable emission rates and the ambient air quality standard for particulate matter is being exceeded, the Board shall be responsible for setting an appropriate emission standard for each source contributing to the particulate matter in the ambient air of the area, at such value as the Board may consider necessary to achieve the desired air quality.

Certain areas in the state have been identified as needing additional control beyond that required by this Chapter. These areas and the additional control requirements are stated in Chapter 1200-03-19.

(3) The owner or operator of an existing process emission source proposing to make a modification of this source or to rebuild or to replace it shall only take such action if it will result in the source meeting the maximum allowable particulate emissions standard for a new process emission source.

(4) Limiting the Effect of the Definition of Modification. For the purpose of determining the applicable particulate matter emission standards in this chapter, a change in fuel from natural gas, propane, butane, and/or fuel oil to any of these herein named fuels and any required alternations to existing fuel burning equipment to accommodate these fuels, shall not be considered a modification.

(5) Upon mutual agreement of the owner or operator of any air contaminant source and the Technical Secretary, an emission limit more restrictive than that otherwise specified in this chapter may be established. This emission limit shall be stated as a special condition for any permit or order issued concerning the source. Violation of this agreed to, more stringent emission standard is grounds for revocation of the issued permit and/or other enforcement measures provided for in the Tennessee Air Quality Act

***Authority**: T.C.A. §§ 4-5-201, et seq.; 4-5-202; 53-3412; 68-25-105; 68-201-101, et seq.; 68-201-105; and 68-201-201, et seq. **Administrative History**: Original rule certified June 7, 1974. Amendment filed May 17, 1978; effective June 16, 1978. Amendment filed February 5, 1979; effective March 21, 1979.*

(1200-03-07-.01, continued)
Amendment filed September 21, 1988; effective November 6, 1988. Amendments filed June 6, 2018; effective September 4, 2018.

1200-03-07-.02 CHOICE OF PARTICULATE EMISSION STANDARDS - EXISTING PROCESS.

(1) For any process emission source operating within the State of Tennessee, which was in operation or under construction prior to August 9, 1969, the allowable emission standard shall be obtained from either the diffusion equations presented in 1200-03-07-.02(3) below or the process weight table presented in 1200-03-07-.02(4) below. The owner or operator of such a process emission source shall make known, in writing, to the Technical Secretary by July 1, 1972, his choice of emission standard. If no choice is so indicated, the Technical Secretary shall designate the emission standard of 1200-03-07-.02(4) below as the applicable standard. The emission standard chosen, either by the owner or operator or by the Technical Secretary, must be attained on or before August 9, 1973.

(2) For any process emission source operating within the State of Tennessee, construction of which began on or after August 9, 1969, and before June 7, 1974, the allowable emission standard shall be the diffusion equations presented in 1200-03-07-.02(3) below. This standard must have been attained at the time such process emission source first commenced operation. The owner or operator of such a source shall make known in writing to the Technical Secretary by July 1, 1972, whether he wishes to continue under the diffusion equations standard or to switch to the process weight table standard presented in 1200-03-07-.02(4). If no choice is so indicated, the Technical Secretary shall designate the emission standard of 1200-03-07-.02(4) below as the applicable standard. If the process weight table standard is chosen by such owner or operator or by the Technical Secretary, then such owner or operator shall have until August 9, 1973 to convert fully to the process weight table standard. It is expressly stipulated that in the interim period such a process emission source shall continue to observe the diffusion equations standard originally applicable.

(3) For those owners or operators of process emission sources who elect to have their process emission regulated by diffusion equations, the maximum allowable particulate emissions from such sources shall be determined by the procedures defined in (a), (b), and (c) below.

(a) Stack gas exit temperature less than 100˚F (See Note)

$$Q = 3.02 \times 10^{-4} V_s h_s^2 (d_s/h_s)^{0.71}$$

(b) Stack gas exit temperature of 125˚F or greater (See Note)

1. Stacks less than 500 feet in height

$$Q = 0.2 h_s (Q_T \times 0.02 \times (T_s - 60))^{0.25}$$

2. Stacks 500 feet in height and greater

$$Q = 0.3 h_s (Q_T \times 0.02 \times (T_s - 60))^{0.25}$$

(c) 1. For stack gas exit temperatures from 100˚F to 124˚F calculate allowable emissions as in (a) and either (b)1., or (b)2., depending upon stack height (using T_s of 125˚F), and make linear interpolation based upon actual stack gas exit temperature.

2. The terms of the preceding equation shall have the following meaning and units:

(i) d_s - inside diameter or equivalent diameter of stack tip in feet

(1200-03-07-.02, continued)

(ii) h_s - stack height in feet (Vertical distance above grade directly below tip of stack) equal to the height in existence or approved pursuant to (State) review as of January 31, 1972 except as follows:

(I) In cases where the actual height is less than that stated above, the actual height shall be used.

(II) In cases where the actual height is greater than that stated above, and the stack height increase was constructed (grading and pouring of concrete was done) prior to February 8, 1974, the actual height shall be used up to two and one half times the height of the facility it serves.

(iii) Q - maximum allowable emission rate in pounds per hour

(iv) Q_T - volume rate of stack gas flow in cubic feet per second calculated to 60˚F.

(v) T_s - temperature of stack gases at stack tip in F

(vi) V_s - velocity of stack gases at stack tip in feet per second

(vii) NOTE - In determining applicability of equations in this paragraph based upon the exit gas temperature, the actual exit gas temperature must equal or exceed the stated temperature during ninety (90) percent or more of the operating time.

(4) For those owners or operators of process emissions sources who elect to have their process emissions regulated by the Process Weight Table, the maximum allowable particulate emissions from a process emission source shall be determined by Table 1.

(5) Whichever standard is chosen, all sources at the same facility must be regulated by that standard.

(6) The owner or operator of a facility having elected to be regulated under the diffusion equations in paragraph (3) of this rule may apply to the Technical Secretary for having said facilities regulated under the process weight table specified in paragraph (4) of this rule. Once said application is approved the facility cannot return to being regulated by the diffusion equations.

***Authority**: T.C.A. §§ 4-5-202, 53-3412, and 68-25-105. **Administrative History**: Original rule certified June 7, 1974. Amendment filed March 13, 1978; April 12, 1978.*

1200-03-07-.03 NEW PROCESSES.

(1) The allowable emission level of particulate matter from any process emission source beginning operation on or after April 3, 1972, shall be determined by Table 2.

(2) Regardless of the specific emission standards for particulate matter in other places in these Regulations, the Board may require any new or modified air contaminant source constructing in a nonattainment area to apply best available control technology for control of particulate emissions as determined by the Technical Secretary at the time the application for the construction permit is approved.

(1200-03-07-.03, continued)

(3) Regardless of the specific emission standards contained in this Chapter a new or modified process emission source locating in or significantly impacting upon a nonattainment area shall comply with the provisions of 1200-03-09-.01(5) prior to receiving a construction permit.

(4) Regardless of the specific emission standards contained in this Chapter, all sources identified in 1200-03-09-.01(4) of these regulations shall comply with the standards set pursuant to Chapter 1200-03-09.

***Authority**: T.C.A. §§ 4-5-202, 53-3412, and 68-25-105.* ***Administrative History**: Original Rule certified June 7, 1974. Amendment filed January 10, 1977; effective February 9, 1977. Amendment filed February 5, 1978; effective March 21, 1979. Amendment filed May 7, 1979; effective June 21, 1979.*

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TABLE 1 EXISTING PROCESS EMISSION SOURCES ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE[a]

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/hr	Tons/Hr	Lb/hr	Lb/hr	Tons/hr	Lb/hr
100	0.05	0.551	. 16,000	8.00	16.5
200	0.10	0.877	. 18,000	9.00	17.9
400	0.20	1.40	20,000	10.00	19.2
600	0.30	1.83	30,000	15.	25.2
800	0.40	2.22	40,000	20.	30.5
1,000	0.50	2.58	50,000	25.	35.4
1,500	0.75	3.38	60,000	30.	40.0
2,000	1.00	4.10	70,000	35.	41.3
2,500	1.25	4.76	80,000	40.	42.5
3,000	1.50	5.38	90,000	45.	43.6
3,500	1.75	5.96	100,000	50.	44.6
4,000	2.00	6.52	120,000	60.	46.3
5,000	2.50	7.58	140,000	70.	47.8
6,000	3.00	8.56	160,000	80.	49.0
7,000	3.50	9.49	200,000	100.	51.3
8,000	4.00	10.4	1,000,000	500.	69.0
9,000	4.50	11.2	2,000,000	1,000.	77.6
10,000	5.00	12.0	6,000,000	3,000.	92.7
12,000	6.00	13.6			

[a] Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by using the equation $E = 4.10\ P^{0.67}$ and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$, where E = rate of emission in lb/hr

and P = process weight rate in tons/hr.

TABLE 2 NEW PROCESS EMISSION SOURCES ALLOWABLE RATE OF EMISSION BASED OF PROCESS WEIGHT RATE[a]

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/hr	Lb/hr	Tons/Hr	Lb/Hr
50	0.025	0.36	16,000	8.00	13.0
100	0.05	0.55	18,000	9.00	14.0
200	0.10	0.86	20,000	10.	15.0
400	0.20	1.32			
600	0.30	1.70	30,000	15.	19.2
800	0.40	2.03	40,000	20.	23.0
1,000	0.50	2.34	50,000	25.	26.4
1,500	0.75	3.00	60,000	30.	29.6
2,000	1.00	3.59	70,000	35.	30.6
2,500	1.25	4.12	80,000	40.	31.2
3,000	1.50	4.62	90,000	45.	31.8
3,500	1.75	5.08	100,000	50.	32.4
4,000	2.00	5.52	120,000	60.	33.3
5,000	2.50	6.34	140,000	70.	34.2
6,000	3.00	7.09	160,000	80.	34.9
7,000	3.50	7.81	200,000	100.	36.2
8,000	4.00	8.5	1,000,000	500	46.8
9,000	4.50	9.1			
10,000	5.00	9.7			
12,000	6.00	10.9			

[a] Interpolation of the data in Table 2 for the process weight rates up to 60,000 lbs/hr shall be accomplished by the use of the equation:

$$E = 3.59\ P^{0.62} \quad \text{for P less than or equal to 30 tons/hr}$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs/hr shall be accomplished by use of the equation:

$$E = 17.31\ P^{0.16} \quad \text{for P greater than 30 tons/hr}$$

Where: E = Emissions in pounds per hour
P = Process weight rate in tons per hour

1200-03-07-.04 LIMITING ALLOWABLE EMISSIONS.

(1) Irrespective of the maximum allowable emission as determined by any of the preceding equations or Process Weight Tables in this chapter, the concentration of particulate process emissions shall not be required to be less than 0.02 grain per dry cubic foot of stack gases corrected to 70°F and 1 atmosphere unless a lesser concentration is found by the Board to be necessary.

(2) Irrespective of the maximum allowable emission as determined by any of the preceding equations or Process Weight Tables in this chapter, the maximum allowable concentration of particulate process emissions shall be 0.25 grains per dry cubic foot of stack gases corrected to 70°F and 1 atmosphere. This shall be achieved by all air contaminant sources on or before August 9, 1973. Air contaminant sources constructed after August 9, 1969, shall meet the above emission standard when they commence operation. This paragraph shall not apply to vents from storage tanks for liquids.

(3) Irrespective of the maximum allowable emission as determined by any of the preceding equations or Process Weight Tables in this chapter, the maximum allowable particulate emissions for processes which are relocated more than 1.0 km from the previous position after November 6, 1988, shall not exceed the greater of the actual emissions at its previous location or the allowable emissions for a new process source.

***Authority**: T.C.A. §§ 4-5-202 and 68-25-105. **Administrative History**: Original rule certified June 7, 1974. Amendment filed February 5, 1979; effective March 21, 1979. Amendment filed September 22, 1988; effective November 6, 1988. Amendment filed May 17, 1990; effective July 1, 1990.*

1200-03-07-.05 SPECIFIC PROCESS EMISSION STANDARDS.

The emission limits set forth in rules 1200-03-07-.02, .03, and .04 will apply unless a specific process emission standard for a specifically designated type of process emission source is contained in a subsequent rule of this chapter.

***Authority**: T.C.A. §§ 4-5-202 and 68-25-105. **Administrative History**: Original rule certified June 7, 1974.*

1200-03-07-.06 STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES.

The Board shall from time to time, after public hearing, designate additional standard(s) of performance for new stationary sources as promulgated by the Environmental Protection Agency and published in the *Federal Register*.

***Authority**: T.C.A. §§ 4-5-202 and 68-25-105. **Administrative History**: Original rule certified June 7, 1974.*

1200-03-07-.07 GENERAL PROVISIONS AND APPLICABILITY FOR PROCESS GASEOUS EMISSION STANDARDS.

(1) No person shall cause, suffer, allow, or permit gaseous emissions in excess of the standards in this chapter.

(2) Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after April 3, 1972, or relocating an air contaminant source more than 1.0 km from the previous position after November 6, 1988, shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.

(1200-03-07-.07, continued)

(3) Reserved.

(4) Total Reduced Sulfur Emissions from Kraft Mills. The owner or operator of a kraft mill constructed or modified prior to September 24, 1976, shall meet the emission standards listed in subparagraphs (a), (b), (c) and (d) of this paragraph no later than six years (i.e., January 22, 1988) for recovery furnaces; two years (i.e., January 22, 1984) for digesters, multiple effect evaporators, smelt dissolving tanks and four years (i.e., January 22, 1986) for lime kilns.

(a) Total reduced sulfur emissions from the recovery furnace shall not exceed 20 ppm by volume, expressed as H_2S, on a dry basis, corrected to 8 percent oxygen on a 12-hour averaging basis.

(b) Total reduced sulfur emissions from the lime kiln shall not exceed 20 ppm by volume, expressed as H_2S on a dry basis, corrected to 10 percent oxygen on a 12-hour averaging basis.

(c) Total reduced sulfur emissions from any digester system or multiple effect evaporator system shall not exceed 5 ppm by volume, expressed as H_2S, on a dry basis, corrected to 10 percent oxygen on a 24-hour averaging basis.

(d) Total reduced sulfur emissions from any smelt dissolving tank shall not exceed 0.0168 grams/kilogram black liquor solids on a 24-hour averaging basis. In lieu of meeting the emissions standard the use of fresh water on the particulate control system will be deemed as being in compliance.

(e) The Technical Secretary will not consider periods of excess emissions to be indicative of a violation of the standards in this rule provided that:

1. The percent of total number of possible continguous periods of excess emissions in a quarter (excluding periods of startup, shutdown or malfunction) during which excess emissions occur does not exceed:

(i) One percent for TRS emissions from the recovery furnaces, or

(ii) Two percent for TRS emissions from lime kilns, and

2. The Technical Secretary determines that the sources involved, including air pollution control equipment, are maintained and operated in a manner which is consistent with good air pollution control practice for minimizing emissions during periods of excess emissions.

(5) Reserved.

(6) Reserved.

(7) Reserved. (See Rule 0400-30-39-.03.)

(8) Reserved

(9) Reserved. (See Rule 0400-30-39-.03.)

***Authority**: T.C.A. §§ 4-5-201, et seq.; 4-5-202; 68-201-101, et seq.; and 68-201-105.* ***Administrative History**: Original rule certified June 7, 1974. Amendment filed December 8, 1981; effective January 22, 1982. Amendment filed September 21, 1988; effective November 6, 1988. Amendment filed September 22, 1988; effective November 6, 1988. Amendment filed March 5, 1993; effective April 19, 1993.*

(1200-03-07-.07, continued)
Amendment filed October 15, 1998; effective December 28, 1998. Amendment filed January 15, 2009; effective March 31, 2009. Amendment filed February 3, 2009; effective April 19, 2009. Amendments filed July 10, 2023; effective October 8, 2023.

1200-03-07-.08 SPECIFIC PROCESS EMISSION STANDARDS.

(1) Existing Ferrous Jobbing Cupolas

No later than August 9, 1973, the maximum particulate emission rate from existing ferrous jobbing cupolas shall be as given in Table 3.

TABLE 3 ALLOWABLE RATE OF PARTICULATE EMISSION
BASED ON PROCESS WEIGHT RATE EXISTING FERROUS JOBBING CUPOLAS

Process Weight (lb/hr)	Maximum Weight Discharge (lb/hr)
1,000	3.05
2,000	4.70
3,000	6.35
4,000	8.00
5,000	9.58
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
16,000	21.60
18,000	23.40
20,000	25.10

The emission rate for a process weight intermediate to those shown in the Table shall be determined by linear interpolation.

(2) Emissions From Nitric Acid Plants

(a) Existing Nitric Acid Plants

After July 1, 1975, no person shall cause, suffer, allow, or permit the emission into the air of nitrogen oxides from any nitric acid plant under construction or in operation prior to April 3, 1972, which are:

1. In excess of 5.5 lbs per ton of acid produced, maximum 2 hour average, expressed as NO_2; or

2. 400 ppm (0.04% by volume dry basis) of nitrogen oxides, measured as NO_2, whichever is the more restrictive.

(3) New and Existing Cotton Gins

(a) For the purpose of this paragraph, the following definitions apply:

1. “Cotton Gin” means any facility or plant which removes seed, lint, and trash from raw cotton and bales the lint cotton for further processing. All individual pieces of

(1200-03-07-.08, continued)

equipment located at a cotton gin shall be considered as being a single process emission source.

2. "Cotton Gin Site or Gin Site" means the land upon which a cotton gin is located and all contiguous land having an identical ownership.

3. "High Efficiency Cyclone" means any cyclone type collector of the 2D-2D or 1D-3D configuration. The 2D-2D design for small diameter cyclones is set forth in Agricultural Handbook 503, U.S. Dept. of Agriculture, Cotton Ginners Handbook, 1977 Edition, pages 81-84. The 1D-3D design for small diameter cyclones is the Texas A & M University long-cone cyclone design. Design specifics of this type of cyclone are set forth in Figure 6 of the article titled, "Air Utilization", by E.P. Columbus, which was presented at the Cotton Ginners Shortcourse which was held on July 27-31, 1987 at Stoneville, Mississippi.

4. "Low Pressure Exhausts" means the exhaust air systems at a cotton gin which handles air from the cotton lint handling system and battery condenser.

5. "High Pressure Exhausts" means all other exhaust air systems located at a cotton gin which are not defined as "low pressure exhausts".

6. "Dust House" means a gravity settling chamber utilized for the control of particulate emissions from a cotton gin and meeting the specifications set forth in Agriculture Handbook 260, U.S. Dept. of Agriculture, Handbook for Cotton Ginners, 1964 Edition, page 93.

(b) The following conditions apply to owners and operators of cotton gins subject to the provisions of this paragraph:

1. Reserved.

2. The owner or operator of a cotton gin which was in operation or under construction on or prior to July 16, 1990, shall meet the standards set forth in Table 4 of rule 1200-03-07-.08 no later than July 1, 1991.

3. The owner or operator of a cotton gin for which construction begins after July 16, 1990 shall meet the standards set forth in Table 4 at the time the cotton gin commences operation.

4. In lieu of demonstrating compliance with the applicable emission standard contained in Table 4 of this rule the following control devices may be utilized:

(i) For emission control from low pressure exhausts, the use of screens with a mesh size of 80 by 80 or finer, or the use of perforated condenser drums with holes not exceeding .045 inches in diameter, or the use of a dust house.

(ii) For emission control from high pressure exhausts the use of high efficiency cyclones shall be deemed as demonstrating compliance.

5. If compliance with the emission standard specified in Table 4 is required, then the testing methodology to be utilized shall be that specified in Chapter 2 of the Department of Health and Environment's Source Sampling Manual (dated December 10, 1987).

(1200-03-07-.08, continued)

6. Effective July 1, 1991, the burning of cotton gin waste at the gin site in a wigwam or any other type of enclosed burner shall be prohibited.

(c) The allowable particulate emission standards for new and existing cotton gins shall be determined by Table 4.

TABLE 4 ALLOWABLE RATE OF PARTICULATE EMISSIONS
BASED ON PROCESS WEIGHT RATE FOR NEW AND EXISTING COTTON GINS

Process Weight Rate Lb/Hr	Rate of Emission Lb/Hr	Process Weight Rate Lb/Hr	Rate of Emission Lb/Hr
1,000	1.6	9,000	13.7
1,500	2.4	10,000	15.2
2,000	3.1	12,000	18.2
2,500	3.9	14,000	21.2
3,000	4.7	16,000	24.2
3,500	5.4	18,000	27.2
4,000	6.2	20,000	30.1
5,000	7.7	30,000	44.9
6,000	9.2	40,000	59.7
7,000	10.7	50,000	64.0
8,000	12.2	60,000 or more	67.4

The allowable emission rate for a cotton gin with process weight rates intermediate to those shown in Table 4 shall be determined by linear interpolation.

(NOTE: All publications mentioned in paragraph (3) of this rule are available upon request by writing to:

Tennessee Division of Air Pollution Control

401 Church Street
9th Floor, L & C Annex
Nashville, Tennessee 37243-1531

(A reasonable charge may apply for copying said materials.)

(4) New and existing Kraft Mills.

The owner or operator of a kraft mill on which construction begins after January 1, 1973, shall meet the standards listed in subparagraphs (a), (b), and (c) of this paragraph at the time of operation of such mill commences. After August 9, 1973, no person shall cause, suffer, allow or permit particulate emissions from a kraft mill under construction or operation prior to September 11, 1980, in excess of the standard chosen in 1200-03-07-.02(1) or 1200-03-07-.02(2) provided, however, that after July 1, 1977, said emissions are as follows:

(a) Particulate matter from all recovery stacks shall not exceed three pounds per ton of equivalent air-dried kraft pulp.

(1200-03-07-.08, continued)

(b) Particulate matter from all lime kilns shall not exceed one pound per ton of equivalent air dried kraft pulp.

(c) Particulate matter from all smelt tanks shall not exceed on-half pound per ton of equivalent air dried kraft pulp.

(5) Existing Asphalt Plants.

After August 9, 1973, no person shall cause, suffer, allow or permit the discharge of particulate emissions from any asphalt plant under construction or in operation prior to April 3, 1972, in excess of the standard selected in accordance with the provisions of 1200-03-07-.02(1) or 1200-03-07-.02(2). It is expressly provided that no later than July 1, 1975, these emissions shall not be in excess of the standards set forth in Table 1 of chapter 1200-03-07, entitled "Existing Process Emission Sources: Allowable Rate of Emission Based on Process Weight Rate." It is further stipulated that after that date, the rate of emission for existing asphalt plants with a process weight rate in excess of 200,000 pounds (100 tons) per hour shall not exceed 51.2 pounds per hour. Asphalt plants which are relocated more than 1.0 km from the previous position and did not receive a construction permit prior to November 6, 1988, shall not be allowed to emit more than the greater of the actual emissions at its previous location or the allowable emissions for a new asphalt plant.

***Authority**: T.C.A. §§ 4-5-202 and 68-25-105. **Administrative History**: Original rule certified June 7, 1974; effective June 16, 1974. Amendment filed January 10, 1977; effective June 16, 1974. Amendment filed July 28, 1980; effective September 11, 1980. Amendment filed September 22, 1988; effective November 6, 1988. Amendment filed June 1, 1990; effective July 16, 1990.*

1200-03-07-.09 SULFURIC ACID MIST.

(1) Sulfuric acid plants of any type commenced on or before April 3, 1972, must not emit more than 0.500 pounds of sulfuric acid mist per ton of 100% H_2SO_4 produced, maximum one hour average expressed as H_2SO_4.

(2) Sulfuric acid plants of any type commenced after April 3, 1972, must not emit more than 0.150 pounds of sulfuric acid mist per ton of 100% H_2SO_4 produced, maximum one hour average expressed as H_2SO_4.

***Authority**: T.C.A. §§ 4-5-202 and 68-25-105. **Administrative History**: Original rule effective February 9, 1977.*

1200-03-07-.10 GRAIN LOADING LIMIT FOR CERTAIN EXISTING SOURCES.

(1) A certificate of validation shall be issued by the Technical Secretary to air contaminant sources meeting the conditions of paragraphs (2) and (3) below. The applicable standard for a source with a certificate of validation is 1.0 grains per dry standard cubic foot of stack gases corrected to 70˚F and 1 atmosphere in lieu of paragraph 1200-03-07-.04(2).

(2) The owner or operator of the air contaminant source must demonstrate to the satisfaction of the Technical Secretary that the following conditions exist:

(a) The air contaminant source was commenced before April 3, 1972; and no modification has been made to the source since that date.

(b) The air contaminant source meets all applicable emission standards outside of paragraph 1200-03-07-.04(2). Demonstration of this compliance with other regulations will require as a minimum an acceptable stack test report for particulate matter mass emissions (lbs/hr.) and verification of meeting the requirements of chapter 1200-03-05.

(1200-03-07-.10, continued)

(c) The particulate matter ambient air quality standards are being met in the vicinity of the air contaminant source, and no deterioration in air quality will result from the granting of a certificate of validation. The Technical Secretary may require this achievement of air quality to be demonstrated.

(d) A fee of five hundred dollars ($500) has been paid to the Department of Environment and Conservation to cover the cost of review of the request for the certificate of validation.

(e) The owner or operator shall submit an engineering report demonstrating that the investment cost of attaining 0.25 grains per dry standard cubic foot (gr/dscf) will exceed $50,000 per pound of particulate matter emissions prevented from entering the atmosphere per hour; or demonstrate attainment of 0.25 gr/dscf is technically unfeasible. The investment cost per pound per hour shall be calculated by the following formula:

$$\text{Investment Cost per lb/hr} = \frac{\text{Capital Cost}}{(\text{Present Grain Loading/DSCF} - .25\ \text{gr/DSCF})\ (\frac{\text{DSCF/hr}}{7000\ \text{gr/lb}})}$$

where:

DSCF = dry standard cubic foot

capital cost = expenditures covering the procurement and erection of air pollution control systems or necessary process modifications.

(f) The particulate matter emissions from the process emission source do not exceed 100 lbs/hr.

(3) The owner or operator of the air contaminant source must, in addition:

(a) Post on the operating premises the certificate of validation.

(b) Keep the air pollution control equipment in good operating condition and utilize said equipment at all times.

(4) Upon receipt of information by the Technical Secretary that any of the requirements of Paragraph (2) have been violated and any requirement of Paragraph (3) has been violated three times in any two year period, the Technical Secretary shall call a show cause meeting pursuant to T.C.A. § 68-25-107(8) to inquire into the alleged violations. After hearing sufficient proof and making findings of fact, the Technical Secretary shall revoke the certificate of validation previously granted to the offending air

Contaminant source. After the certificate of validation has been revoked, the offending source shall comply with 1200-03-07-.04(2) as expeditiously as possible in a compliance schedule contained in an administrative order.

(5) After granting of a construction permit for the modification of an air contaminant source for which a certificate of validation has been issued, the certificate of validation shall become void on the date of expiration of the construction permit and Paragraph 1200-03-07-.04(2) shall apply.

***Authority**: T.C.A. §§ 4-5-202 and 68-25-105. **Administrative History**: Original rule effective March 21, 1979.*

1200-03-07-.11 CARBON MONOXIDE, ELECTRIC ARC FURNACES.

Electric arc furnaces used in producing iron or steel and located in Knox County shall emit no more than 18.0 pounds of carbon monoxide per ton of metal produced, one hour average.

***Authority**: T.C.A. §§ 4-5-202 and 68-25-105. **Administrative History**: Original rule filed September 10, 1977; effective October 25, 1979.*

1200-03-07-.12 CARBON MONOXIDE, CATALYTIC CRACKING UNITS.

After July 1, 1980, all catalytic cracking units at petroleum refineries located in Shelby County must not discharge to the atmosphere carbon monoxide in excess of 0.050 per cent by volume.

***Authority**: T.C.A. §§ 4-5-202 and 68-25-105. **Administrative History**: Original rule filed November 8, 1981; effective January 22, 1982.*