

19.0 REGULATION OF PROCESS EMISSIONS

19.1 Process Emission Standards

- A. On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit process emissions into the atmosphere in excess of the standards of this section.
- B. Upon mutual agreement of any air contaminant source and the Director, an emission limit more restrictive than that otherwise specified in the Knox County Air Quality Management Regulations may be established. Also, upon mutual agreement of any air contaminant source and the Director, operating hours, process flow rates, or any other operating parameter may be established as a binding limit which the source must adhere to. Any items mutually agreed to shall be stated as a special condition for any permit or order concerning the source. Violations of this mutual agreement shall result in revocation of the issued permit. In addition to these provisions the following criteria must be met by any such agreements and the associated permits:
 - 1. Operating permit holders must adhere to the terms and limitations of such permits (or subsequent revision of the permit made in accordance with the approved operating permit program), and any such permits which do not confirm to the operating permit program requirements and the requirements of EPA's underlying regulations may be deemed not "federally enforceable" by EPA.
 - 2. All emission limitations, controls, and other requirements imposed by such permits will be at least as stringent as any other applicable limitations and requirements contained in the State Implementation Plan (SIP) or enforceable under the SIP, the Department may not issue permits that waive, or make less stringent, any limitations or requirements contained in or issued pursuant to the SIP, or that are otherwise "federally enforceable" (e.g. standards established under Sections 111 and 112 of the Clean Air Act).
 - 3. The limitations, controls, and requirements in the operating permits are permanent, quantifiable, and otherwise enforceable as a practical matter.
 - 4. The permits are issued subject to public participation. This means that the Department will provide EPA and the public with a timely notice of the proposal and issuance of such permits, and to provide EPA, on a timely basis, with a copy of each proposed (or draft) and final permit intended to be federally enforceable. This process must also provide for an opportunity for public comment on the permit applications prior to issuance of the final permit. Timely notice will be at least 30 days.

19.2 Process Particulate Matter Emissions

- A. On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit discharge of particulate matter emissions from any process emission

source that is a new source (as defined in Section 13.0) in excess of the allowable rate of emission set forth in Table 19.1.

TABLE 19.1
NEW PROCESS EMISSION SOURCES
 ALLOWABLE RATE OF EMISSION BASED ON TOTAL PROCESS WEIGHT RATE^a

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

^aInterpolation of the data in this table for process weight rates up to 60,000 lbs/hr shall be accomplished by using the equation:

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

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

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

Where: E = emissions in pounds per hour
 P = process weight rate in tons per hour

- B. On or after October 1, 1972, no person shall cause, suffer, allow, or permit discharge of particulate matter emissions from any process emission source that is an existing source (as defined in Section 13.0) in excess of the allowable rate of emission set forth in Table 19.2.

TABLE 19.2
EXISTING PROCESS EMISSION SOURCES
ALLOWABLE RATE OF EMISSION BASED ON TOTAL PROCESS WEIGHT RATE^a

Process Weight Rate		Allowable Rate of Emission	Process Weight Rate		Allowable 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	1.39	20,000	10	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	5.97	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	49.1
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	12.1	6,000,000	3,000	92.7
12,000	6.00	13.6			

^aInterpolation of the data in this table for process weight rates up to 60,000 lbs/hr shall be accomplished by using the equation:

$$E = 4.10 P^{0.67} \text{ for } P \text{ less than or equal to } 30 \text{ tons/hr}$$

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

$$E = 55.0 P^{0.11} - 40 \text{ for } P \text{ greater than } 30 \text{ tons/hr}$$

Where: E = emissions in pounds per hour
P = process weight rate in tons per hour

- C. On or after June 1, 1975, no person shall cause, suffer, allow, or permit discharge of particulate matter emissions from any process emission source in excess of the allowable rate of emission set forth in Table 19.1.

19.3 Gaseous Process Emissions

- A. On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit gaseous emissions in excess of the standards in this section.
- B. Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after the effective date of these regulations, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

19.4 Sulfur Oxide Emission Standards

- A. On or after July 1, 1975, the owner or operator of an air contaminant source shall not cause, suffer, allow, or permit the emission from that source of sulfur dioxide in excess of 2,000 parts per million, 0.20 percent by volume, dry basis (one hour average).
- B. Regardless of the specific emission standard, new or modified sources shall utilize the best available control technology deemed appropriate by the Director.

19.5 Total Emissions

- A. The total process emissions from all sources at any one location shall be used for determining the maximum allowable emissions to the atmosphere.

19.6 Limiting Allowable Emissions

- A. Irrespective of the allowable particulate matter emissions as determined by any of the equations or Process Weight Tables in Section 19.2, the maximum allowable concentration of particulate matter emissions from a process emission source shall not exceed 0.25 grains/DSCF of stack gases.
- B. Irrespective of the allowable particulate matter emissions as determined by any of the equations or Process Weight Tables in Section 19.2, the concentration of particulate matter emissions from a process emission source shall not be required to be less than 0.02 grains/DSCF of stack gases unless a lesser concentration is found by the Board to be necessary.
- C. In no case may the provisions of this section be used to violate Section 15.2, "Circumvention", of these regulations.

19.7 The provisions of this section do not apply to potentially hazardous or toxic air pollutants which will be handled on a case by case basis as determined by the Director with the advice and consent of the Board.

19.8 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.