

## 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 in 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 Pollution Control 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. Violation 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 revisions of the permit made in accordance with the approved operating permit program) and any such permits which do not conform 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 Emissions

- A. On or after the effective date of th regulations, no person all cause, suffer, allow, or permit discharge of process particulate emissions from any new source into the atmosphere in excess of those levels shown in Table II.
- B. On or after October 1, 1972, no person shall cause, suffer, allow, or permit discharge of process particulate emissions from any existing source into the atmosphere in excess of

those levels shown in Table II.

- C. On or before June 1, 1975, all sources shall meet the process particulate emission rates as set forth in Table II.

### **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.

TABLE II

NEW PROCESS EMISSION SOURCES  
ALLOWABLE RATE OF EMISSION BASED ON  
TOTAL PROCESS WEIGHT RATE<sup>a</sup>

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	9.0	14.0
200	0.10	0.86	20,000	10.0	15.0
400	0.20	1.32			
600	0.30	1.70	30,000	15.0	19.2
800	0.40	2.03	40,000	20.0	23.0
1,000	0.50	2.34	50,000	25.0	26.4
1,500	0.75	3.00	60,000	30.0	29.6
2,000	1.00	3.59	70,000	35.0	30.6
2,500	1.25	4.12	80,000	40.0	31.2
3,000	1.50	4.62	90,000	45.0	31.8
3,500	1.75	5.08	100,000	50.0	32.4
4,000	2.00	5.52	120,000	60.0	33.3
5,000	2.50	6.34	140,000	70.0	34.2
6,000	3.00	7.09	160,000	80.0	34.9
7,000	3.50	7.81	200,000	100.0	36.1
8,000	4.00	8.5	1,000,000	500.	46.7
9,000	4.50	9.1			
10,000	5.00	9.7			
12,000	6.00	10.9			

<sup>a</sup>Interpolation of the data in Table II for the process weight rates up to 60,000 Lbs/Hr shall be accomplished by the use of the equation:

$$E = 3.59 p^{0.62} \quad p \leq 30 \text{ Tons/Hr.}$$

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

$$E = 17.31 p^{0.16} \quad p > 30 \text{ Tons/Hr}$$

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

TABLE III

EXISTING PROCESS EMISSION SOURCES  
ALLOWABLE RATE OF EMISSION BASED ON  
TOTAL PROCESS WEIGHT RATE<sup>a</sup>

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	9.0	17.9
400	0.20	1.40	20,000	10.0	19.2
600	0.30	1.83	30,000	15.0	25.2
800	0.40	2.22	40,000	20.0	30.5
1,000	0.50	2.58	50,000	25.0	35.4
1,500	0.75	3.38	60,000	30.0	40.0
2,000	1.00	4.10	70,000	35.0	41.3
2,500	1.25	4.76	80,000	40.0	42.5
3,000	1.50	5.38	90,000	45.0	43.6
3,500	1.75	5.96	100,000	50.0	44.6
4,000	2.00	6.52	120,000	60.0	46.3
5,000	2.50	7.58	140,000	70.0	47.8
6,000	3.00	8.56	160,000	80.0	49.0
7,000	3.50	9.49	200,000	100.0	51.2
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	5,000,000	2,000	92.7
12,000	6.00	13.6			

<sup>a</sup>Interpolation of the data in this table for process weight rates up to 60,000 Lb/Hr shall be accomplished by use of 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:

$$E = 55.0 p^{0.11} - 40, \text{ where } E = \text{rate of emission in Lb/Hr and}$$

$p = \text{process weight rate in Tons/Hr.}$

**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. Regardless of the allowable particulate emissions as determined by Table II equations, the maximum allowable emission rate shall not exceed 0.25 grains/DSCF of stack gases.
- B. Where allowable particulate emissions as determined by Table II equations indicate a lesser concentration, the Director, with the advice and consent of the Board may set a maximum allowable particulate emission rate of 0.02 grains/DSCF of stack gases.
- 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.

THIS IS THE FEDERALLY APPROVED REGULATION AS OF JUNE 08, 1998

LAST UPDATED MARCH 11, 2005

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	AUG 17, 1972	OCT 28, 1972	37FR23085
1st Revision	JUL 07, 1986	AUG 03, 1989	54FR31953
2nd Revision	JAN 04, 1991	SEP 03, 1992	57FR40336
3rd Revision	NOV 12, 1993	NOV 01, 1994	59FR54523
4th Revision	DEC 24, 1996	JUN 08, 1998	63FR31121