

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Air Division

**Chapter 335-3-4
Control of Particulate Emissions**

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335-3-4-.01 Visible Emissions

- (1) Visible Emissions Restrictions for Stationary Sources.
- (a) Except as provide in subparagraphs (b),(c),(d), or (e) of this paragraph, no person shall discharge into the atmosphere from any source of emission, particulate of an opacity greater than that designated as 20 percent opacity, as determined by a six (6) minute average.
 - (b) During one six (6) minute period in any sixty (60) minute period, a person may discharge into the atmosphere from any source of emission, particulate of an opacity not greater than that designated as forty (40) percent opacity.
 - (c) The Director may approve exceptions to this Rule for specific sources which hold permits under Chapter 335-3-14; provided however, such exceptions may be made for startup, shutdown, load change, and rate change or other short, intermittent periods of time upon terms approved by the Director and made a part of such permit.
 - (d) The director may also approve exceptions to this Rule in accordance with the following provisions:
 - 1. The owner or operator of the affected source shall request in writing for the Director to provide an opportunity for the determination of the opacity of emissions during sampling and testing required pursuant to Rule 335-3-1-.08.
 - 2. Upon receipt from such owner or operator of the written report of the results of the

sampling and testing conducted pursuant to Rule 335-3-1-.08, the Director will make a finding concerning compliance with opacity and other applicable standards.

3. If the Director determines that an affected source is in compliance with all applicable standards for which the sampling and testing are being conducted in accordance with Rule 335-3-1-.08 but during such sampling and testing the affected source fails to meet any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Director within ten (10) days of receipt of notification to make appropriate adjustment to the opacity standard for the affected source.
4. The Director may grant such a petition upon a demonstration by the owner or operator that the affected source and associated air pollution control equipment were operated and maintained in a manner to minimize the opacity of emissions during the sampling and testing; that such sampling and testing were performed under the conditions established by the Director; and that the affected source and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.
5. Upon the conclusion of sampling and testing as required above, the Director may establish an opacity standard for the affected source at a level at which the source will be able, as indicated by the sampling and testing, to meet the opacity standard at all times during which the source is meeting the mass emissions standards. If sufficient data is not available to the Director to establish such opacity standards, the Director may require additional sampling and testing as necessary to make such a determination of opacity.

(e) The provisions of this Paragraph shall not apply to combustion source in single-family and duplex dwellings where such sources are used for heating or other domestic purposes.

- (2) Compliance with opacity standards in this Rule shall be determined by conducting observations in accordance with Reference Method 9 in Appendix A, 40 CFR Part 60, as the same may be amended requiring a six (6) minute average as determined by twenty-four (24) consecutive readings, at intervals of fifteen (15) seconds each.

Author: James W. Cooper and John E. Daniel

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: January 18, 1972.

Amended: June 5, 1979

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	JAN 25, 1972	MAY 31, 1972	37 FR 10842
1st Revision	JUN 11, 1979	APR 27, 1993	58 FR 25566
2nd Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
3rd Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991

335-3-4-.02 Fugitive Dust and Fugitive Emissions

- (1) No Person shall cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:
 - (a) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading or reads, or the clearing of land;
 - (b) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stock piles, and other surfaces which create airborne dust problems;
 - (c) Installation and use of hoods, fans, and fabric filters (or other suitable control devices) to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.
- (2) **Visible Emissions Restrictions Beyond Lot Line.** No person shall cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate.
- (3) When dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any rule or regulation, the Director may order that the building or equipment in which processing, handling, and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air.
- (4) The owner or operator of any source or combination of sources on contiguous property which has the potential to emit 100 T/yr of particulates and which is located in the nonattainment areas of Etowah, Jefferson or Mobile must submit a plan for control of fugitive dust and fugitive emissions to the Director for approval. (*Adopted April 3, 1979*) Such plan: (*Revised September 18, 1985*)
[Note: The September 18, 1985, revision has not been acted on yet.]
 - (a) Shall address both fugitive dust and fugitive emissions.
 - (b) Shall demonstrate that control measures will produce reduction in particulates from the major sources equivalent to the application of reasonable available control measures (RACM, control technology that is reasonably available considering technological and economic feasibility). RACM shall be as stringent as those measures identified as reasonably available in Appendix E of the "Support document, SIP Revision, Mobile TSP Nonattainment Area" (November 14, 1978); and Table 3.4.1 of the "Support Document, Nonattainment SIP Revision, Jefferson County, TSP Nonattainment Area" November 14, 1978). RACM shall be determined on a case-by-case basis for sources not covered by the above references.
 - (c) Shall contain a compliance schedule for each source with a final compliance date of no later than December 31, 1979 for control of emissions from storage piles, October 31, 1980 for control of emissions from sources other than storage piles by use of wet suppression, or December 31, 1983 for all other sources.
 - (1) Such schedules for storage piles shall specify increments of progress to be achieved no later than the dates in the following schedule:
 - (i) Final plans for control of emissions shall be submitted by August 1, 1979.

- (ii) Contracts for the necessary emission control system shall be issued by September 30, 1979.
 - (iii) Initiation of any necessary on-site construction shall begin by October 31, 1979.
 - (iv) On-site construction or installation of emission control equipment shall be completed and final compliance achieved by December 31, 1979.
- (2) Such schedules for use of wet suppression systems on sources other than storage piles shall specify increments of progress to be achieved no later than the dates in the following schedule:
- (i) Final plans for control of emissions shall be submitted by October 1, 1979.
 - (ii) Contracts for the necessary emission control system shall be issued by January 01, 1980.
 - (iii) Initiation of any necessary on-site construction shall begin by March 31, 1980.
 - (iv) On-site construction or installation of emission control equipment shall be completed and final compliance achieved by October 31, 1980.
- (3) Such schedules for all other sources shall specify increments of progress to be achieved no later than the dates in the following schedule:
- (i) Final plans for control of emissions shall be submitted by October 1, 1979.
 - (ii) Contracts for the necessary emission control system shall be issued by October 1, 1980.
 - (iii) Initiation of any necessary on-site construction shall begin by January 31, 1981.
 - (iv) On-site construction or installation of emission control equipment shall be completed by October 31, 1982.
 - (v) Final compliance shall be achieved by December 31, 1982.
- (d) May propose an alternative compliance schedule for approval by the Director provided:
- (1) That demonstration is submitted to support that the application of the compliance schedule in Paragraph 4.2.4(c) would be infeasible;
 - (2) The proposed alternative compliance schedule contains the same increments of progress as the schedule for which it is proposed; and
 - (3) That final compliance is achieved as expeditiously as practicable, but not later than December 31, 1982.

Author: James W. Cooper and John E. Daniel

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: January 18, 1972.

Amended: April 3, 1979; September 18, 1985.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	JAN 25, 1972	MAY 31, 1972	37 FR 10842
1st Revision	APR 19, 1979	NOV 26, 1979	44 FR 67375
2nd Revision	AUG 10, 1979	NOV 26, 1979	44 FR 67375
3rd Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
4th Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991

335-3-4-.03 Fuel Burning Equipment

- (1) **Class 1 Counties:** No person shall cause or permit the emission of particulate matter from fuel-burning equipment in a Class 1 County in excess of the amount shown in Table 4-1 for the heat input allocated to such source. For sources in Class 1 Counties, interpolation of the data in Table 4-1 for heat input values between 10 million BTU/hr and 250 BTU/hr shall be accomplished by the use of the equation:

$$E = 1.38 H^{-0.44}$$

where: E = Emissions in lb/million BTU

H = Heat input in millions of BTU/hr

- (2) **Class 2 Counties:** No person shall cause or permit the emission of particulate matter from fuel-burning equipment in a Class 2 County in excess of the amount shown in Table 4-1 for the heat input allocated to such source. For sources in Class 2 Counties, interpolation of the data in Table 4-1 for heat input values between 10 million BTU/hr and 250 BTU/hr shall be accomplished by the use of the equation:

$$E = 3.109 H^{-0.589}$$

where: E = Emissions in lb/million BTU

H = Heat input in millions of BTU/hr

- (3) For purpose of this Part, the total heat input from all similar fuel combustion units which discharge particulate matter through a common stack at a plant or premises shall be used for determining the maximum allowable emission of particulate matter.
- (4) New fuel-burning sources emitting particulate matter shall be subject to the rules and regulations for Class 1 Counties, Section 4.3.1, regardless of their location.

TABLE 4-1 ALLOWABLE PARTICULATE MATTER EMISSION BASED ON HEAT INPUT

Heat Input (Millions of BTU/hr)	Allowable Emission (lb/million BTU)	
	Class 1 County	Class 2 County
1	.5	.8
10	.5	.8

20	.5	.53
40	.27	.35
60	.23	.28
80	.20	.24
100	.18	.21
150	.15	.16
200	.13	.14
250	.12	.12
1,000,000	.12	.12

- (5) In lieu of the particulate emission limitations contained in paragraph (1) of this Rule for existing coal fired boilers at pulp mills in Talladega County having a rated capacity of up to 300 million BTU per hour, the allowable particulate emission limit shall be 0.1 lb/mmBTU.

Author: James W. Cooper and John E. Daniel

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: January 18, 1972.

Amended: October 10, 1984

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	JAN 25, 1972	MAY 31, 1972	37 FR 10842
1st Revision (4.3.5)	MAY 17, 1985	JUL 11, 1986	51 FR 25198
2nd Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
3rd Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991

335-3-4-.04 Process Industries - General

- (1) **Class 1 Counties:** No person shall cause or permit the emission of particulate matter in any one hour from any source in a Class 1 County in excess of the amount shown in Table 4-2 for the process weight allocated to such source. For sources in Class 1 Counties, interpolation of the data in Table 4-1 for process weight per hour up to 60,000 lbs/hr shall be accomplished by the use of the equation:

$$E = 3.59 P^{0.62} \quad P < 30 \text{ tons /hr}$$

and interpolation and extrapolation of the data for process weight per hour values equal to or in excess of 60,000 lbs/hr shall be accomplished by use of the equation:

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

where E = Emissions in pounds per hour

 P = Process weight per hour in tons per hour

- (2) **Class 2 Counties:** No person shall cause or permit the emission of particulate matter in any one hour from any source in a Class 2 County in excess of the amount shown in Table 4-2 for the process weight allocated to such source. For sources in Class 2 Counties, interpolation of the data in Table 4-1 for process weight per hour up to 60,000 lbs/hr shall be accomplished by the use of the equation:

$$E = 4.10 P^{0.67} \quad P < 30 \text{ tons /hr}$$

and interpolation and extrapolation of the data for process weight per hour values equal to or in excess of 60,000 lbs/hr shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} \quad P \geq 30 \text{ tons/hr}$$

where E = Emissions in pounds per hour

 P = Process weight per hour in tons per hour

- (3) Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this Part, the interpretation that results in the minimum value for allowable emission shall apply.
- (4) For purpose of this Part, the total process weight from all similar process units at a plant or premises shall be used for determining the maximum allowable emission of particulate matter that passes through a stack or stacks.
- (5) New sources subject to this part emitting particulate matter shall be subject to the rules and regulations for Class 1 Counties, contained in paragraph (1) of this Rule, regardless of their location.

TABLE 4-2 ALLOWABLE PARTICULATE MATTER EMISSION BASED ON PROCESS WEIGHT RATE

Process Weight Rate (lb/hr)	Allowable Emission (lb/hr)	
	Class 1 County	Class 2 County
100	0.56	0.55
500	1.52	1.62
1,000	2.34	2.57
5,000	6.33	7.57
10,000	9.76	12.05
20,000	14.97	19.18
60,000	29.83	39.96
80,000	31.23	42.53
120,000	33.33	46.30
160,000	34.90	49.06
200,000	36.17	51.28
1,000,000	46.79	68.96

Author: James W. Cooper and John E. Daniel

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: January 18, 1972

Amended: April 6, 1983

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	JAN 25, 1972	MAY 31, 1972	37 FR 10842
1st Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
2nd Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991

335-3-4-.05 Small Foundry Cupola

- (1) No Person shall cause or permit the emission of particulate matter in any one (1) hour from any small foundry cupola source in excess of the amount shown in Table 4-3 for the process weight per hour allocated to such source.
- (2) Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this Part, the interpretation (sic) that results in the minimum value for allowable emission shall apply.
- (3) For purposes of this Part, the total process weight from all similar process units at a plant or premises shall be used for determining the maximum allowable emission of particulate matter that passes through a stack or stacks.
- (4) Foundry cupolas with a process weight rate greater than 50,000 pounds per hour shall be subject to the rules and regulations of Part 4.4.

TABLE 4-3 ALLOWABLE PARTICULATE MATTER EMISSION BASED ON PROCESS

WEIGHT RATE FOR SMALL FOUNDRY CUPOLAS

Process Weight (lb/hr)	Allowable Emission Rate (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
30,000	31.30
40,000	37.00
50,000	42.40

Author: James W. Cooper and John E. Daniel

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: January 18, 1972.

Amended: April 6, 1983.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	JAN 25, 1972	MAY 31, 1972	37 FR 10842
1st Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062

335-3-4-.06 Cotton Gins

- (1) No person shall cause or permit the emission of particulate matter in any one (1) hour from any cotton gin operation in excess of the amount shown in Table 4-4 for the process weight per hour allocated to such operation. Particulate matter emissions subject to this Part include process emissions and incinerator emissions if any; provided, however, that this shall in no way relieve or affect the application of Chapter 3 to open burning and incinerator at cotton gin operations.

- (2) Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this Part, the interpretation that results in the minimum value for allowable emission shall apply.

- (3) For purposes of this part, the total process weight from all similar process units at a plant or premises shall be used for determining the maximum allowable emission of particulate matter that passes through a stack or stacks.

TABLE 4-4 ALLOWABLE PARTICULATE MATTER EMISSION BASED ON PROCESS WEIGHT RATE FOR COTTON GINS *(Amended July 26, 1972)*

Process Weight Rate (lb/hr)	Allowable Emission Rate (lb/hr)	Process Weight Rate (lb/hr)	Allowable Emission Rate (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

Author: James W. Cooper and John E. Daniel

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: January 18, 1972.

Amended:

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	JAN 25, 1972	MAY 31, 1972	37 FR 10842
1st Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062

335-3-4-.07 Kraft Pulp Mills *(Adopted July 26, 1972)*

- (1) **Applicability.** This Part applies to manufacturing facilities for the pulping of wood and the preparation and recovery of associated chemicals by the kraft process, including combined recovery systems serving other processes such as neutral sulfite pulping.
- (2) No person shall cause or permit the emission of particulate matter from any kraft pulp mill in excess of the amounts provided as follows:
 - (a) From all recovery furnaces, not more than 4.0 pounds per ton of pulp.
 - (b) From all smelt dissolver vents, not more than 0.5 pounds per ton.
 - (c) From all lime kilns, not more than 1.0 pounds per ton of pulp.
- (3) The pulp production rates for kraft mills referred to in this Part shall be tons of unbleached air-dried kraft pulp.
- (4) Notwithstanding the specific limits set forth in this Part, in order to maintain the lowest possible emission of

air contaminants, the highest and best practicable treatment and control for particulate matter currently available shall be provided for new kraft pulp mills.

- (5) For chemical recovery boilers constructed before 1972 at kraft pulp mills in Autauga County, the allowable particulate emissions shall be 1.11 pounds per air-dried ton of pulp. *(Adopted March 7, 1984)*
- (6) In lieu of the particulate emission limitations contained in subparagraph (2)(a) of this Rule, for chemical recovery boilers constructed before 1973 at pulp mills in Talladega County, the allowable particulate emission limits shall be 2.5 pounds per air-dried ton of unbleached kraft pulp. *(Adopted October 10, 1984)*
- (7) In lieu of the particulate emission limitations contained in subparagraph (2)(b) of this Rule, for smelt dissolver tanks constructed before 1973 at pulp mills in Talladega county, the allowable particulate emission limit shall be 0.3 pounds per air- dried ton of unbleached kraft pulp. *(Adopted October 10, 1984)*

Author: James W. Cooper and John E. Daniel

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: July 26, 1972.

Amended: March 7, 1984; October 10, 1984.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	FEB 15, 1973	APR 23, 1974	39 FR 14338
1st Revision	JUN 22, 1983	DEC 24, 1986	51 FR 46655
2nd Revision	JAN 20, 1984	DEC 24, 1986	51 FR 46655
3rd Revision	MAR 09, 1984	FEB 11, 1987	52 FR 4292
4th Revision	OCT 23, 1984	JUL 11, 1986	51 FR 25198
5th Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
6th Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991

335-3-4-.08 **Wood Waste Boilers** *(Adopted July 26, 1972)*

- (1) Applicability. This Part applies to boilers and other indirect heat exchangers using not less than thirty percent (30%) wood wastes or wood by-products as fuel measured by heat input.
- (2) Except as provided in paragraph (3) of this Rule, no person shall cause or permit the emission of particulate matter from any existing wood wastes boilers in excess of 0.30 grains per standard dry cubic foot adjusted to fifty percent (50%) excess air. Provided that: for any existing wood wastes boiler which must be modified in order to meet the emission limitations of this Part, no person shall cause or permit the emission of particulates in excess of: *(Revised January 27, 1981)*
 - (a) 0.17 grains per standard dry cubic foot, adjusted to fifty percent (50%) excess air for combination gas and wood wastes boilers.
 - (b) 0.20 grains per standard dry cubic foot, adjusted to fifty percent excess air for combination oil and wood wastes boilers.
 - (c) 0.23 grains per standard dry cubic foot, adjusted to fifty percent (50%) excess air for combination

coal and wood wastes boilers.

- (d) 0.20 grains per standard dry cubic foot, adjusted to fifty percent (50%) excess air for boilers using wood wastes only.
- (3) In lieu of the particulate emission limitations contained in paragraph (2) of this Rule for existing wood waste boilers at pulp mills in Talladega County having a rated capacity greater than 300 million BTU per hour: *(Adopted January 27, 1981, Revised October 10, 1984)*
- (a) The allowable particulate emission limit shall be 0.60 grains per standard dry cubic foot adjusted to 50% excess air, with the additional requirement that total mass particulate emissions shall not exceed 347 pounds per hour.
 - (b) In lieu of the opacity limits contained in Rule 335-3-4-.01, such units shall not discharge into the atmosphere any air contaminant of an equivalent opacity greater than that designated as seventy-six percent (76%) opacity, as determined by fixed one- hour averages (the average of each ten six-minute averages per discrete clock hour).
 - (c) The transmissometer system for continuous measurement of the opacity of stack emissions shall be the technique for determining compliance with opacity limits. The transmissometer shall comply with the requirements of the Code of Federal Regulations, Title 40, Part 60, Appendix B, Performance specification 1. If the opacity monitoring system is not operating properly, the EPA Reference Method 9 (40 CFR 60, Appendix A), utilizing one-hour averages, shall serve as the compliance technique.

Author: James W. Cooper and John E. Daniel

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: July 26, 1972.

Amended: January 27, 1981; December 9, 1983; October 10, 1984.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	FEB 15, 1973	APR 23, 1974	39 FR 14338
1 st Revision	FEB 04, 1981	NOV 24, 1981	46 FR 57484
2 nd Revision	AUG 31, 1981	NOV 24, 1981	46 FR 57484
3 rd Revision	JUN 22, 1983	DEC 24, 1986	51 FR 46655
4 th Revision	JAN 20, 1984	DEC 24, 1986	51 FR 46655
5 th Revision	MAR 09, 1984	FEB 11, 1987	52 FR 4292
6 th Revision	OCT 23, 1984	JUL 11, 1986	51 FR 25198
7 th Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
8 th Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991
9 th Revision	AUG 16, 2000	DEC 08, 2000	65 FR 76938

335-3-4-.09 **Coke Ovens** *(Adopted July 26, 1972. Amended May 28, 1974)*

- (1) **Applicability.** The provisions of this Part shall apply to the production of coke in existing conventional slot- oven coke batteries with the exception of Section 4.9.10 which applies to new batteries.
- (2) **Unloading and Transfer of Coal and Coke.** Every person operating coke ovens shall apply all reasonable measures to prevent emissions from coal unloading, transfer, and coke transfer.
- (3) **Charging.** There shall be no visible emissions during the charging cycle from the charging holes or the larry car of any battery with an opacity which is greater than twenty percent (20%) except for an average period or periods not to exceed three (3) minutes of any consecutive sixty (60) minutes on batteries with less than seventy (70) ovens nor more than four (4) minutes of any consecutive sixty (60) minutes on batteries with seventy (70) ovens or more.
- (4) **Pushing.**
 - (a) There shall be no visible emissions during the pushing cycle, other than water mist or vapor, with an opacity which is greater than forty percent (40%) for more than one (1) push per hour per battery. *(Amended July 11, 1978)*
 - (b) This paragraph specifically exempts existing conventual slot-oven coke batteries with forty (40) ovens located in Tuscaloosa County from subparagraph (a) above and imposes the following requirements:
 1. There shall be no visible emissions during the pushing cycle, other than water mist or vapor, with an opacity which is greater than forty percent (40%) for more than two (2) pushes per hour per battery.
 - (c) Compliance with subparagraphs (a) and (b) of this paragraph shall be determined by dividing by four (4) the total number of pushes greater than forty percent (40%) opacity, observed during a four (4) hour period.
 - (d) Should the observation period include intervals of non-activity, (e.g., when the common coke car is servicing another battery) such intervals shall be included for purposes of determining compliance, provided that the average number of pushes per hour coincides with the average number of pushes per hour required by the normal production cycle of the battery. Intervals such as meal breaks, scheduled breaks when not on a twenty-four (24) hour pushing schedule, or intervals greater than fifteen (15) minutes due to malfunction of equipment cannot be included in the observation period.
 - (e) For purposes of this Paragraph, "**normal production cycle**" shall mean the average number of pushes per hour determined by taking an arithmetic average of the pushing schedules of the previous ten (10) days. (The denominator to be based on the actual number of hours the pushing machine was scheduled to operate.)
 - (f) **Observation Procedures.**

The inspector shall evaluate the criteria listed below and select the most appropriate point at which to observe the visible emissions during the pushing cycle.

 - (i) The inspector should position himself as close to the source of pushing emissions as practical.
 - (ii) The inspector should observe pushing emissions against the sky.

- (iii) The inspector should stand with the sun behind him, if possible, and with the emissions moving in any direction except directly toward or away from the inspector.

(5) **Topside Emissions.**

- (a) Any leak discovered on the topside of a battery shall be wet sealed or the oven shall not be recharged until the necessary repairs are made.
- (b) At no time shall there be leaks in more than ten percent (10%) of the offtake piping and no more than five percent (5%) of the charging hole lids on any one battery.

(6) **Coke Oven Doors.**

- (a) There shall be no visible emissions, except non-smoking flame, from any opening on the coke oven doors from more than fifteen percent (15%) of the coke oven doors on any battery at any time.
- (b) If a self-sealing door fails to seal during the coking cycle, it shall be adjusted, repaired, or replaced prior to a subsequent charge of oven.
- (c) Luted doors which fail to seal after the oven is charged shall be reluted promptly.
- (d) Every person operating coke ovens shall have a facility to maintain and repair coke oven doors, and shall maintain an inventory of one (1) coke oven door per twelve (12) oven operated.

(7) **Oven Maintenance**

- (a) All ovens shall be maintained in good condition to promote complete coking of coal.
- (b) All coke oven cracks are to be sealed as soon as practicable after they are detected.
- (c) As directed by the Director, reasonable records of the maintenance of oven doors, oven burners, and oven interiors are to be made and retained for a reasonable time.

- (8) **Combustion Stacks.** There shall be no visible emissions, other than water mist or vapor, of a shade or density darker than that designated as No. 1 on the Ringelmann chart or twenty percent (20%) opacity from any stack except for a period or periods aggregating not more than three (3) minutes in any consecutive sixty (60) minutes.

(9) **Quenching.**

- (a) No person shall operate a coke oven plant without baffles installed and properly operating in the quench towers.
- (b) Water introduced to the quenching station must be of a quality approved by the Director.

- (10) Notwithstanding the specific limits set forth in this Part in order to maintain the lowest possible emission of air contaminants, the highest and best practicable treatment and control for particulate matter currently available shall be provided for any new coke producing facilities.

(11) **Charging Emission.** *(Adopted July 11, 1978)*

- (a) **Applicability.**

- (1) The provisions of this Section apply to charging wet coal by use of a larry car in existing, conventional slot- oven coke batteries. Such coke batteries shall be in compliance with these provisions within one year after the date the Administrator of the U.S. Environmental Protection Agency approves this Section. On that date, the provisions of this Section will supersede the requirements of Section 335-3-4-.09(3).
 - (2) For the purpose of this Section, charging emissions shall include any air contaminant emitted from one or more charging ports, spaces between charging ports, spaces between charging port rings and oven refractories, open chuck doors, drop sleeves, larry car hoppers, jumper pipes, standpipe caps (lids), or any device for the capture and cleaning of air contaminants beginning when the coal is introduced into the oven and continuing until the oven is closed to the atmosphere.
- (b) **Charging** - At no time shall the aggregated times of visible emissions, other than water mist or vapor, exceed more than ninety-four (94) seconds for any five (5) consecutive charges.
- (c) **Observation Procedures** - The following techniques shall be used for measuring and recording visible emissions from any coke oven battery:
- (1) Observations of open charging emissions shall be made from any point or points on the topside of a coke oven battery from which an observer can obtain an unobstructed view of the charging operation.
 - (2) The observer will determine and record the total number of seconds that charging emissions are visible during the charging of coal to the coke oven. The observer shall time the visible charging emissions with a stopwatch while observing the charging operation. Simultaneous emissions from more than one emission point shall be timed and recorded as one emission and shall not be added individually to the total time.
 - (3) Open charging emissions shall not include any emissions observed after all the charging port covers have been firmly seated following the removal of the larry, such as emissions occurring when one (1) cover is temporarily removed to permit the sweep-in of spilled coal.
 - (4) The total number of seconds of visible emissions observed, clock time for the initiation and completion of the charging operation, battery identification and oven number for each charge shall be recorded by the observer. In the event that observations of emissions from a charge are interrupted due to events beyond the control of the observer, the data from that charge shall be invalidated and the observer shall note on his observation sheet the reason for invalidating the data. The observer shall then resume observation of the next consecutive charge or charges and continue until he has obtained a set of five (5) charges for comparison with the emission standard.
 - (5) Compliance with Paragraph 335-3-4-.09(11)(b) of this Section shall be determined by summing the seconds of charging emissions observed during each of the five (5) charges.
- (12) **Pushing Emissions from Existing Coke Oven Batteries.** *(Adopted July 11, 1978)*
- (a) **Applicability.**
- (1) The provisions of this Section are applicable only to coke oven batteries located in

Jefferson and Etowah Counties which do not satisfy the criteria specified in Paragraph 335-3-4-.09(13)(a) of this Section. Such batteries shall be in compliance with these provisions within three (3) years after the date the Administrator of the U. S. Environmental Protection Agency approves this Section. On that date, the provision of the Part will supersede Section 335-3-4-.09(4). Coke oven batteries outside Jefferson and Etowah Counties, and those covered by Paragraph 335-3-4-.09(13)(a) of this Section, will remain subject to the provisions of Section 335-3-4-.09(4).

- (2) For the purpose of this Section, pushing emissions are defined as any air contaminant emitted during pushing, the process by which coke is removed from a coke oven, including the period marked by the time when the doors are first removed from a coke oven until the quenching operation is commenced.
 - (b) All coke oven batteries shall be equipped with a device that will capture and collect coke side emissions resulting directly from the pushing operation. The collection device shall be such that the outlet gas shall contain no more than .03 pounds of non-condensable particulate matter per ton of coal charged for each oven, averaged over five (5) consecutive pushes.
 - (c) No person shall discharge into the atmosphere from the hot car, capture or collection device, at any time any visible emission which is greater than twenty percent (20%) opacity.
 - (d) **Observation Procedures.** The inspector shall evaluate criteria listed below and select the most appropriate point to observe the visible emissions during the pushing cycle.
 - (1) The inspector should observe pushing emissions as closely as he deems practical.
 - (2) The inspector should observe pushing emissions against the sky.
 - (3) The inspector should stand with the sun behind him and with the emissions moving in any direction except directly at or away from the inspector.
- (13) **Interim Schedule of Compliance.** (*Adopted July 11, 1978*)
- (a) Coke oven batteries retired from service prior to December 31, 1982, will not be subject to the requirements contained in Paragraphs 335-3-4-.09(12)(a) through (d) upon the posting of a surety bond in the amount of \$3,000,000, such surety bond contingent on shutting down the battery and, with no provision for extension whatsoever. Notification of intention to retire any battery from service and posting of the bond must be done within ninety (90) days after the date the Administrator of the U. S. Environmental Protection Agency approves this Section.
 - (b) Except for coke oven batteries retired from service in accordance with Rule 335-3-4-.09(13)(a) above, interim schedules of compliance with the charging and pushing regulations herein must be submitted within said ninety (90) days after the date the Administrator of the U.S. Environmental Protection Agency approves this Section.

Author: James W. Cooper and John E. Daniel

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: July 26, 1972.

Amended: May 28, 1974; July 11, 1978; September 18, 1985.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	FEB 15, 1973	APR 23, 1974	39 FR 14338
1 st Revision	JUN 20, 1974	AUG 28, 1975	40 FR 39503
2 nd Revision	JUL 14, 1978	APR 04, 1979	44 FR 20879
3 rd Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
4 th Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991
5 th Revision	AUG 16, 2000	DEC 08, 2000	65 FR 76938

335-3-4-.10 Primary Aluminum Plants (Adopted January 30, 1973)

- (1) **Applicability.** This Part applies to existing primary aluminum plants which will or do operate for the purpose of or related to producing aluminum metal from aluminum oxide (alumina)
- (2) **Emission Limits.** The emission of particulate matter to the atmosphere from the baking of carbon anodes and from the reduction process (potlines) of any primary aluminum reduction plant shall not exceed twenty-two (22) pounds per ton of aluminum produced on a daily basis.
(Amended November 27, 1973)
- (3) **Compliance.** Each primary aluminum plant shall be in compliance with the provisions of this Part at the earliest possible date, but not later than May 31, 1975. Nothing in this Part shall negate the requirement for obtaining permits or submitting compliance schedules as required by these rules and regulations.

Author: Sue R. Robertson

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: January 30, 1973.

Amended: November 27, 1973.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	MAY 27, 1974	MAY 8, 1975	40 FR 20083
1st Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062

335-3-4-.11 Cement Plants (Adopted March 25, 1975; Revised April 3, 1979)

- (1) **Applicability.** This Part applies to:
 - (a) Existing cement plants that have a process weight that is greater than 88.7 tons per hour.
 - (b) All existing cement plants in the primary nonattainment area for suspended particulates in Mobile County (Appendix D).
 - (c) New cement plants.
- (2) This Rule specifically exempts new cement plants from Rule 335-3-4-.04(5).

- (3) **Emission Limits.**
- (a) No owner or operator shall cause, permit, or allow the emission of particulate matter from the kiln which is in excess of 0.30 pounds per ton of feed to the kiln, maximum two (2) hour average.
 - (b) No owner or operator shall cause, permit, or allow the emission of particulate matter from the clinker cooler which is in excess of 0.10 pounds per ton of feed to the kiln, maximum two (2) hour average.
- (4) **Compliance.** Those cement plants located in the primary nonattainment area for suspended particulates in Mobile County (Appendix D) shall be in compliance with these provisions by January 1, 1982 and shall adhere to the increments of progress contained in the following schedule:
- (1) Final plans for the emission control system must be submitted before December 31, 1979.
 - (2) Contracts for the emission control system must be awarded or orders must be issued for purchase of component parts to accomplish emission control before July 1, 1980.
 - (3) Initiation of on-site construction of installation of the emission control equipment must begin before December 31, 1980.
 - (4) On-site construction or installation on the emission control equipment must be complete before August 31, 1981.
 - (5) Final compliance shall be demonstrated before January 1, 1982.
- (5) **Exception.** Cement plants located in the primary nonattainment area for suspended particulates in Mobile County (Appendix D) which shut down prior to December 31 1982 will not be subject to the requirements contained in this Part upon the posting of a surety bond in the amount of \$100,000, such surety bond contingent on shutting down the facility and with no provision for extension.

Author: Jack Bryant

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: March 25, 1975.

Amended: April 3, 1979.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	JUN 04, 1975	MAY 11, 1976	41 FR 19220
1st Revision	APR 19, 1979	NOV 26, 1979	44 FR 67375
2nd Revision	AUG 10, 1979	NOV 26, 1979	44 FR 67375
3rd Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
4th Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991

335-3-4-.12 **Xylene Oxidation Process** (Adopted September 12, 1978)

- (1) **Applicability.** The provisions of this Part shall apply to all xylene oxidation processes. Each process

system shall be considered as a separate process unit.

- (2) No person shall cause or permit the emissions of particulate matter in any one hour from any xylene oxidation process in excess of the amount calculated by use of the equations:

$$E = 2.75 P^{0.62} \quad P < 30 \text{ tons/hr}$$

$$E = 13.15 P^{0.16} \quad P \geq 30 \text{ tons/hr}$$

Where: E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

- (3) Where a thermal oxidizer is used for the reduction of process waste from a xylene oxidation process and no other waste streams are added, this thermal oxidizer shall be considered a part of the process system.

Author: Richard E. Grusnick

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: September 12, 1978.

Amended:

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	SEP 13, 1978	MAR 07, 1979	44 FR 12420
1st Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062

335-3-4-.13 **Sintering Plants** (*Adopted April 3, 1979*)

- (1) **Applicability.** This part applies to sintering plants in the iron and steel industry that have a process weight greater than 150 tons per hour.

- (2) **Sinter Strand (Windbox exhaust).** No owner or operator shall cause, permit, or allow the emissions of total particulate matter in excess of .26 pounds per ton of total strand burden (including the hearth layer) from all sources exhausting through the windbox.

- (3) **Sinter Processing Equipment (Discharge, Hood, Sinter Breaker, Screens, Cooler, Conveyors, Conveyor Transfer Points).**
 - (a) Controlled Emissions.
 - (i) Particulate emissions from the control device shall not exceed .02 grains per dry standard cubic foot.
 - (ii) Visible emissions from the control device shall not exceed one percent (1%) opacity.
 - (iii) Sources whose gases are directed through the windbox exhaust are not subject to this requirement.
 - (b) There shall be no visible fugitive emissions from discharge hoods and breakers.
 - (c) Visible fugitive emissions from the screens, conveyors, and conveyor transfer points shall not exceed ten percent (10%) opacity.
 - (d) Fugitive and visible emissions from the sinter cooler shall not exceed one percent (1%) opacity.
 - (e) Emission standards which are more restrictive for the above sources which have been previously established by applicable consent decree shall remain in effect for the operational life of those sources.

Author: Sue R. Robertson

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: April 3, 1979.

Amended:

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	APR 19, 1979	NOV 26, 1979	44 FR 67375
1st Revision	AUG 10, 1979	NOV 26, 1979	44 FR 67375
2nd Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062

335-3-4-.14 **Grain Elevators** *(Adopted April 3, 1979)*

- (1) **Applicability.** This Part applies to existing grain elevators which have a permanent storage capacity of more than 88,000 m³ located in Mobile County, provided, however, that it does not apply to grain elevators located at animal food manufacturers, pet food manufacturers, cereal manufacturers, breweries, and livestock feedlots.

- (2) **Emission Limit.** No owner or operator subject to this Part shall cause, suffer, or allow the discharge into the atmosphere of any fugitive emission from:
 - (a) Any barge or ship loading station which exhibits greater than twenty percent (20%) opacity. Said emission limit shall be achieved by:
 1. A telescoping loading spout which is kept extended to the grain surface and a ventilation applied at the end of the spout to a fabric filter.
 2. A system demonstrated to have control efficiency equivalent to or greater than provided under Subparagraph (a)(1) of this paragraph and approved by the Director.

 - (b) Any barge or ship unloading station unless operated as follows:
 1. The unloading leg shall be enclosed from the top (including the receiving hopper) and ventilation to a control device shall be maintained on both sides of the leg and the grain receiving hopper.
 2. The total rate of air ventilation shall be at least 32.1 actual cubic meters per cubic meter of grain handling capacity.
 3. The owner or operator may use other methods of emission control demonstrated to have control efficiency equivalent to or greater than provided under Subparagraphs (2)(b)1. and 2. above and approved by the Director.

- (3) **Compliance.** Affected facilities shall be in compliance with the provisions of this Part at the earliest possible date, but no later than September 30, 1982 and shall adhere to the increments of progress contained in the following schedule:
 - (a) Final plans for the emission control system must be submitted before January 1, 1981.
 - (b) Contracts for the emission control system must be awarded or orders must be issued for purchase of component parts to accomplish emission control before June 30, 1981.
 - (c) Initiation of on-site construction of installation of the emission control equipment must begin before August 31, 1981.
 - (d) On-site construction or installation on the emission control equipment must be complete before September 30, 1982.
 - (e) Final compliance shall be demonstrated before December 31, 1982.

Author: Marilyn G. Elliot

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: April 3, 1979.

Amended:

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	APR 19, 1979	NOV 26, 1979	44 FR 67375
1st Revision	AUG 10, 1979	NOV 26, 1979	44 FR 67375
2nd Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
3rd Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991

335-3-4-.15 Secondary Lead Smelters (Adopted March 23, 1982)

- (1) All blast (cupola) or reverberatory furnaces at a secondary lead smelter must be equipped with a capture system for fugitive emissions from the tapping and charging operations with the exception of a reverberatory furnace lead tap. Such capture systems, including hoods, ducts, and fans, shall be designed, operated and maintained to achieve maximum reasonable capture and shall be vented to a control device with at least 99.5 percent collection efficiency.
- (2) All alloying kettles or pots at a secondary lead smelter must be equipped with a vented cover that will be in place at all times the kettle contains molten lead except when access is necessary for casting or refining operations. The capture system, including covers, ducts, and fans, shall be designed, operated and maintained to achieve maximum reasonable capture and shall be vented to a control system with at least 90 percent collection efficiency.
- (3) No owner or operator of a secondary lead smelter shall discharge or cause the discharge into the atmosphere from a blast (cupola) or reverberatory furnace primary exhaust stack any gases which contain particulate matter in excess of 50.0 mg/dscm (0.022 gr/dscf).
- (4) Owners and operators of a secondary lead plant shall minimize fugitive dust at the plant by good housekeeping practices that will include: frequent sweeping of the plant and grounds; shielding the handling of flue dust from the wind; and enclosing, sheltering or otherwise treating all flue dust storage piles to prevent wind erosion.
- (5) Compliance. Affected facilities shall be in compliance with the provisions of paragraphs (1) through (4) of this Rule at the earliest possible date, but no later than October 31, 1982.
- (6) This paragraph applies to existing secondary lead smelters located in Pike County. (Adopted March 13, 1985)
 - (a) Visible emissions escaping the capture system for the charging door shall not exceed 10% opacity when charging the blast furnace as determined by 40 CFR 60, Appendix A, Method 9 excluding Section 2.5. Visible emissions escaping the capture system for the closed charging door on the blast furnace shall not exceed 5% opacity during furnace operation as determined by 40 CFR 60, Appendix A, Method 9 excluding Section 2.5.
 - (b) Visible emissions escaping the capture system for the slag tap and lead tap on blast furnaces shall not exceed 1% opacity as determined by 40 C FR 60, Appendix A, Method 9.
 - (c) All lead bearing material (excluding the material from the battery breaking operation, material stored in closed containers, and other material which has been excluded in writing by the Director) will be unloaded and stored in enclosed buildings. These buildings shall have no openings directly to the atmosphere except doors which may be opened only during egress or ingress or while

material is being added or removed from the buildings. The buildings will be constructed such that stored material is transported to the smelter building without leaving an enclosed area.

- (d) All paved areas external to buildings on which raw materials are handled will be clearly marked and kept wet by watering devices so that no visible emissions are observed emanating from the paved areas. All vehicles leaving the areas so designated by this paragraph shall have their wheels and undercarriages washed immediately prior to leaving the area. Records must be kept of all vehicles leaving the area. Said records shall be maintained for a minimum of two years following date of recorded information.
- (e) Paved areas not designated as necessitating wetting by subparagraph (d) of this paragraph above shall be vacuum swept twice daily except under specific conditions as approved by the Director. Records must be kept documenting when sweeping is done and any reason for not sweeping (such as equipment breakdown, inclement weather conditions). Said records shall be maintained for a minimum of two years following date of recorded information.
- (f) Unpaved areas will be planted with grass or other ground cover or treated with lignosulfonate or equivalent surfactant on a schedule approved in writing by the Director. An evergreen vegetation boundary approved by the Director shall be planted and maintained on the northwest and north side of the plant.
- (g) **Compliance.**
 - (1) Except as provided under Subparagraph (g)2. of this paragraph, affected facilities shall be in compliance with this paragraph within twelve (12) months of adoption.
 - (2) Nothing in this Subpart shall prevent the owner or operator of an affected facility from submitting to the Director a proposed alternative compliance schedule provided:
 - (i) the proposed alternative schedule is submitted within two (2) months of adoption; and
 - (ii) the proposed alternative schedule contains increments of progress; and
 - (iii) sufficient documentation and certification from appropriate suppliers, contractors, manufacturers, or fabricators are submitted by the owner or operator of the affected source to justify the dates proposed for the increments of progress; and
 - (iv) all alternative compliance schedules proposed or promulgated under this Subparagraph shall provide for compliance of the source with this Paragraph as expeditiously as practicable, but no later than December 31, 1987.

Author: Ronald W. Gore

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: March 23, 1982.

Amended: March 1, 1985

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	MAR 28, 1985	JUL 14, 1986	51 FR 25198
1st Revision	OCT 31, 1989	MAR 19, 1990	55 FR 10062
2nd Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991

335-3-4-.16 Reserved

335-3-4-.17 Steel Mills located in Etowah County

- (1) Visible Emissions from the roof monitor or other openings in the BOF shop building, other than water mist or vapor, shall not exceed a shade or density greater than twenty percent (20%) opacity as determined on a three (3) minute rolling average. compliance shall be determined using the procedures specified at 40 C.F.R., Part 60, Appendix A, Method 9, excluding Section 2.5.
- (2) All paved roads shall be vacuum swept or flushed of surface material every third consecutive day. The vacuum sweeper shall have a minimum blower capacity of 12,000 cfm and the flushing machine shall dispense water at the rate of .32 gal/yd².
- (3) Paved parking areas shall be vacuum swept or flushed of surface material every calendar quarter. The vacuum sweeper shall have a minimum blower capacity of 12,000 cfm and the flushing machine shall dispense water at the rate of .32 gal/yd².
- (4) Paved road or area flushing specified in paragraphs (2) and (3) of this Rule is not required when the temperature is below 32°F. Paved road or area cleaning is not required when precipitation during the previous 24-hour period has exceeded .01 inches.
- (5) Unpaved roads, traffic areas in the slab storage area, and traffic areas in other material storage areas shall be treated with petroleum resin, asphalt emulsion, or equivalent dust suppressant on a quarterly or more frequent basis as determined by the Director.
- (6) Unpaved parking lots shall be treated with petroleum resin, asphalt emulsion, or equivalent dust suppressant on a semi-annual basis.
- (7) The petroleum resin or asphalt emulsion dust suppressant required in (5) and (6) of this Rule shall be applied at a dilution ratio of 20% for the initial three applications and 12% for subsequent applications. The suppressant shall be applied at the rate of 0.75 gal/yd² of diluted solution for the initial 3 applications. Subsequent applications shall be applied at 0.25 gal/yd² of diluted solution. The dust suppressants must be applied at an equivalent dilution ratio and application rate approved by the Director.
- (8) The source shall maintain at its plant premises, and make available for inspection, records documenting for each occasion on which paved areas are cleaned in accordance with paragraphs (2) and (3) of this Rule, and

any occasion on which such paved areas are not cleaned according to the required schedule, including any justification for failure to meet the required schedule, such as equipment breakdown or inclement weather conditions. The company shall also maintain and make available for inspection records documenting the frequency and amount of applications required by paragraphs (5) and (6) of this Rule. said records shall be maintained for a minimum of two years following the date of recorded information.

- (9) The source shall, within 30 days of approval of this Rule, notify the Department of a designated reclaim area on plant property and a designated paved road at its premises to be used to transport molten slag from the basic oxygen furnace shop to the reclaim area. These designations shall not be changed without the written approval of the Director.

Author: Sue R. Robertson

Statutory Authority: Code of Alabama 1975, Secs. 22-28-14, 22-22A-5, 22-22A-5, 22-22A-6, and 22-22A-8.

History: Effective date: March 23, 1982.

Amended: September 18, 1985.

	Date Submitted to EPA	Date Approved by EPA	Federal Register
Original Reg	OCT 31, 1989	MAR 19, 1990	55 FR 10062
1st Revision	SEP 25, 1985	FEB 04, 1994	59 FR 5330
2nd Revision	OCT 30, 1996	JUN 06, 1997	62 FR 30991