

DIRECTOR OF THE DEPARTMENT OF HEALTH SERVICES

Order of Adoption

Pursuant to A.R.S. § 36-1706, 36-1707, 36-1707.01, 36-1707.02 and 36-1719, as amended Laws 1980, the Director of the Department of Health Services proposes to adopt rules similar in substance, terms and conditions to the wording of the following:

Part 1. Section R9-3-101, Definitions, is amended to read as follows:

R9-3-101. Definitions

In these Rules and Regulations the following definitions in this Section shall govern, unless the context otherwise requires, and unless in conflict with a definition given in Article 8, New Source Performance Standards, or in Article 9, Hazardous Air Pollutant Standards. In such case, the definitions given in Article 8 or 9 shall apply only to sources covered by those Articles, and the definitions given in this Section shall govern elsewhere.

~~1 - 2. No change.~~

~~3. "Actual emissions" means the actual rate of emissions of a pollutant from an emissions unit, as determined in accordance with Subparagraphs a. through c. below.~~

~~a. In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation. The Director may allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored or combusted during the selected time period.~~

~~b. Lacking specific information to the contrary, the Director may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.~~

~~c. For any emissions unit which has not begun normal operations on the~~

1 or other equivalent measures have been established if:

2 (1) The area in which the proposed source or modification would construct  
 3 is designated as attainment or unclassifiable on the date of its complete  
 4 application under Subparagraph a. or b., above, as applicable; and,

5 (2) In the case of a major stationary source, the pollutant would be  
 6 emitted in significant amounts, or in the case of a major modification, there  
 7 would be a significant net emissions increase of the pollutant.

8 20. "Begin actual construction" means, in general, initiation of physical  
 9 on-site construction activities on an emissions unit which are of a permanent  
 10 nature. Such activities include, but are not limited to, installation of  
 11 building supports and foundations, laying of underground pipework, and con-  
 12 struction of permanent storage structures. With respect to a change in  
 13 method of operation this term refers to those on-site activities, other than  
 14 preparatory activities, which mark the initiation of the change.

15 ~~16. Renumber as 21. "Best available control technology" (BACT) means an~~  
 16 ~~emission limitation (including a visible emissions standard) based on the~~  
 17 ~~maximum degree of reduction of a for each pollutant subject to these Rules and~~  
 18 ~~Regulations regulation under the Act which would be emitted from any proposed~~  
 19 ~~major stationary source or major modification which the Director, on a case-by-~~  
 20 ~~case basis, taking into account energy, environmental and economic impact and~~  
 21 ~~other costs, determines is achievable for a major such source or facility~~  
 22 ~~modification through application of production processes or available methods,~~  
 23 ~~systems, and techniques, including fuel cleaning or treatment or innovative fuel~~  
 24 ~~combustion techniques, for control of such pollutant. if, due to technological~~  
 25 ~~or economic limitations on the application of measurement methodology, no emission~~  
 26 ~~limit is feasible, the application of BACT can require compliance with design.~~

ARIZONA STATE DEPARTMENT OF HEALTH  
PHOENIX, ARIZONA

SECTION 1. GENERAL

(15.0) REG. 7-1-1.1 POLICY AND LEGAL AUTHORITY

- A. The intent of these regulations is to control, reduce, remove or prevent air pollution in all its forms, including all air contaminants defined in this section, originating within the State of Arizona.
- B. These regulations are adopted pursuant to the authority granted by 36-1707 and 36-1717, Arizona Revised Statutes.

(1.0) ~~REG. 7-1-1.2 DEFINITIONS~~

- A. In these regulations, unless the context otherwise requires:
  1. "Air contaminants" includes smoke, vapors, charred paper, dust, soot, grime, carbon, fumes, gases, sulfuric acid mist aerosols, aerosol droplets, odors, particulate matter, windborne matter, radioactive materials, or noxious chemicals, or any other material in the outdoor atmosphere.
  2. "Air pollution" means the presence in the outdoor atmosphere of one or more air contaminants or combinations thereof in sufficient quantities, which either alone or in connection with other substances by reason of their concentration and duration, are or tend to be injurious to human, plant or animal life, or cause damage to property, or unreasonably interferes with the comfortable enjoyment of life or property of a substantial part of a community, or obscures visibility, or which in any way degrades the quality of the ambient air below the standards established by the board of health.
  3. "Air pollution control equipment" means equipment used to eliminate, reduce, or control the discharge of air contaminants into the ambient air.

~~49. "Source operation" means the last operation or process which produces an air contaminant resulting from (a) the separation of the air contaminant from the process material or (b) the conversion of constituents of the process materials into air contaminants and which is not an air pollution abatement operation.~~

50. "Standard conditions" means a gas temperature of 60°F and a gas pressure of 14.7 pounds per square inch absolute.

51. "Vapor" means the gaseous form of a substance normally occurring in a liquid or solid state.

52. "Vapor pressure" means the pressure exerted by the gaseous form of a substance in equilibrium with its liquid or solid form.

~~53. "Volatility" means the capability of a substance to vaporize or change to the vapor form.~~

(2.0) REG. 7-1-1.3 AIR POLLUTION PROHIBITED

- A. No person shall cause, suffer, allow or permit to be discharged either directly or indirectly, into the ambient air, air contaminants from any source whatsoever in violation of the regulations in this part.
- B. Nothing in these regulations shall be interpreted to prevent the discharge or emission of uncontaminated aqueous steam in the open air unless such discharge constitutes a safety hazard.
- C. Nothing in these regulations shall be interpreted to prevent air pollution inside of buildings except as this relates to the ultimate release of contaminants to the ambient air.
- D. Control methods utilized to comply with the requirements of these regulations shall not create air contaminants in concentrations in excess of applicable standards.

~~(13.0) R9-3-104 RECORDKEEPING AND REPORTING~~

- ~~A. The owner or operator of any stationary source shall, upon notification from the director, maintain records of the nature and amounts of emissions from such source or any other information as may be deemed necessary by the director to determine whether such source is in compliance with applicable emission limitations or other control measures.~~
- ~~B. The information recorded shall be summarized and reported to the director and shall be submitted within 45 days after the end of the reporting period. Reporting periods are January 1 - June 30 and July 1 - December 31, except that the initial reporting period shall commence on the date~~

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~~the director issues notification of the recordkeeping requirements.~~

- ~~C. Information recorded by the owner or operator and copies of the summarizing reports submitted to the director shall be retained by the owner or operator for two years after the date on which the pertinent report is submitted.~~
- ~~D. Any records, reports or information obtained under this regulation shall be available for public inspection except as provided in A.R.S. 36-1708. In all cases quantitative and qualitative statistics pertaining to the emission of pollutants from any source or sources shall be available to public inspection and shall be correlated with applicable emission limitations.~~

(2.0) REG. 7-1-1.4 EXCEPTIONS

- ~~B. In instances where start-up or shutdown of equipment is a normal operating condition, the director may grant a continuing, specified period of time in which to attain compliance with these regulations.~~
- ~~C. The department will be furnished a schedule of routine maintenance for air pollution control equipment identifying expected periods when it is necessary to shutdown such equipment. This schedule shall include:
  - ~~1. Identification of the specific facility to be taken out of service as well as its location and permit number.~~
  - ~~2. The expected length of time that the air pollution control equipment will be out of service.~~
  - ~~3. The nature and quantity of emissions of air contaminants likely to occur during the shutdown period.~~
  - ~~4. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.~~
  - ~~5. The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.~~~~
- ~~D. This regulation shall not apply where an exemption may unduly endanger human health or safety either directly or indirectly.~~

(15.0) REG. 7-1-1.5 ENFORCEMENT

These regulations shall be enforced according to the provisions of Title 36, Chapter 14, Arizona Revised Statutes.

(51.13) ~~RS-3-107 UNLAWFUL OPEN BURNING~~

- ~~A. Notwithstanding the provisions of any other regulation in this article, it is unlawful for any person to ignite, cause to be ignited, permit to be ignited, or suffer, allow, or maintain any open outdoor fire.~~

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~~6. This regulation shall not apply to existing sources nor to metallurgical plants or other facilities where conversion to sulfuric acid is utilized as a means of controlling emissions to the atmosphere of sulfur dioxide or other sulfur compounds.~~

(50.7) REG. 7-1-4.5 OTHER INDUSTRIES

No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any other industry not covered in prior regulations of this section reduced sulfur, which includes sulfur equivalent from all sulfur emissions including but not limited to sulfur dioxide, sulfur trioxide, and sulfuric acid, in excess of ten percent of the sulfur entering the process as feed.

~~SECTION 7-1-5 ORGANIC COMPOUND EMISSIONS FROM STATIONARY SOURCES~~

(51.16) REG. 7-1-5.1 STORAGE OF VOLATILE ORGANIC COMPOUNDS

- A. No person shall place, store or hold in any reservoir, stationary tank, or other container having a capacity of 65,000 or more gallons any gasoline or any petroleum distillate having a vapor pressure of 2.0 pounds per square inch absolute or greater under actual storage conditions, unless such tank, reservoir, or other container is a pressure tank maintaining working pressure sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is equipped with one of the following vapor loss control devices, properly installed, in good working order and in operation:
1. A floating roof consisting of a pontoon type of double-deck type roof resting on the surface of the liquid contents and equipped with a closure seal to close the space between the roof eave and tank well, a vapor balloon or vapor dome, designed in accordance with accepted standards of the petroleum industry. The control equipment shall not be used if the gasoline or petroleum distillate has a vapor pressure of 12 pounds per square inch absolute or greater under actual storage conditions. All tank gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.
  2. Other equipment proven to be of equal efficiency for preventing discharge of hydrocarbon gases and vapors to the atmosphere.
- B. Any other petroleum storage tank which is constructed or extensively remodeled on or after the effective date of these regulations shall be equipped with a submerged filling device or acceptable equivalent for the control of hydrocarbon emissions.

(51.16) REG. 7-1-5.2 LOADING OF VOLATILE ORGANIC COMPOUNDS

All facilities for dock loading of petroleum products, having a vapor pressure of 1.5 pounds per square inch absolute or greater at loading pressure, shall provide for submerged filling or acceptable equivalent for control of hydrocarbon emissions.

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R9-3-409. Agricultural practices

No person shall cause, suffer, allow or permit the performance of agricultural practices including but not limited to tilling of land and application of fertilizers without taking reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne.

R9-3-505. Standards of performance for existing portland cement plants

A. The provisions of this section are applicable to the following affected facilities in portland cement plants: kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems.



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B. The provisions of this Section are applicable to all cement plants under State of Arizona jurisdiction which are existing sources.

1. No person shall cause, suffer, allow or permit the discharge of particulate matter from the kilns of any existing cement plant subject to the provisions of this Section and located in ~~The-Phoenix---Tucson-Air~~ Quality-Control-Region Gila, Maricopa, Pima, Pinal, or Santa Cruz counties which is:

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a. In excess of 0.30 pounds per ton of feed to the kilns, ~~maximum-two~~ hour-average-

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b. Greater than 20 percent opacity.

6.3.82

2. No person shall cause, suffer, allow or permit the discharge of particulate matter from the clinker cooler of any existing plant located in ~~The~~ Phoenix---Tucson-Air-Quality-Control-Region Gila, Maricopa, Pima, Pinal, or Santa Cruz counties which is:

7-17-80

a. In excess of 0.10 pounds per ton of feed to the kilns, maximum-two hour-average-

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b. Ten percent opacity or greater.'

6.3.82

3. Other existing cement plant facilities with ~~The-Phoenix---Tucson~~  
~~Air-Quality-Control-Region~~ Gila, Maricopa, Pima, Pinal, or Santa Cruz counties  
shall meet the requirements of Subsection A. of Section R9-3-502., Unclassi-  
fied sources, and shall not exceed 20 percent opacity.

4. Cement plants subject to the provisions of this Section and outside  
~~The-Phoenix---Tucson-Air-Quality-Control-Region~~ Gila, Maricopa, Pima, Pinal,  
or Santa Cruz counties shall not emit from any equipment particulate matter  
which is greater than 40 percent opacity or exceeds the amounts allowable  
under the following:

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a. For process sources having a process weight rate of 60,000 pounds per  
hour (30 tons per hour) or less, the maximum allowable emissions shall be  
determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per  
hour.

P = the process weight rate in tons-mass per hour.

b. For process sources having a process weight rate greater than 60,000  
pounds per hour (30 tons per hour), the maximum allowable emissions shall be  
determined by the following equation:

$$E = 55.0P^{0.11} - 40$$

where "E" and "P" are defined as indicated in subparagraph B.4.a.

5. No person shall cause, suffer, allow or permit discharge into the  
atmosphere of an amount in excess of six pounds of sulfur oxides, calculated as  
sulfur dioxide, per ton cement kiln feed from cement plants subject to the  
provisions of this section.

C. The owner or operator of any portland cement plant subject to the  
provisions of this section shall record the daily production rates and the kiln  
feed rates.

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D. The test methods and procedures required by this section are as follows:

1. The reference methods in the Arizona Testing Manual, except as provided for in section R9-3-312. shall be used to determine compliance with the standards prescribed in subsection B. of this section as follows:

a. Method 5 for the concentration of particulate matter and the associated moisture content;

b. Method 1 for sample and velocity traverses;

c. Method 2 for velocity and volumetric flow rate; and

d. Method 3 for gas analysis.

2. For Method 5, the minimum sampling time and minimum sample volume for each run, except when process variables or other factors justifying otherwise to the satisfaction of the Director, shall be as follows:

a. 60 minutes and 0.85 dscm (30.0 dscf) for the kiln.

b. 60 minutes and 1.15 dscm (40.6 dscf) for the clinker cooler.

3. Total kiln feed rate (except fuels), expressed in metric tons per hour on a dry basis, shall be determined during each testing period by suitable methods; and shall be confirmed by a material balance over the production system.

4. For each run, particulate matter emissions, expressed in g/metric ton of kiln feed, shall be determined by dividing the emission rate in g/hr by the kiln feed rate. The emission rate shall be determined by the equation,  $g/hr = Q_s \times c$ , where  $Q_s$  - volumetric flow rate of the total effluent in dscm/hr as determined in accordance with subparagraph D.1.c. of this section, and  $c$  = particulate concentration in g/dscm as determined in accordance with subparagraph D.1.a. of this section.

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R9-3-508. Standards of performance for existing asphalt concrete plants

A. For the purpose of this section an asphalt concrete plant is comprised only of any combination of the following: Dryer, systems for screening, handling, storing and weighing hot aggregate, systems for loading, transferring and storing mineral filler; systems for mixing asphalt concrete; and the loading, transferring and storage systems associated with emission control systems. Drum dryer plants, wherein the asphalt is introduced into the dryer, are included hereunder.

16.3.82  
B. Fixed asphalt plants or portable asphalt plants which are existing sources shall meet the standards set forth in this Section. The owner or operator shall submit proof of prior use to the Director.

1. No person shall cause, suffer, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any existing asphalt plant located outside of the Phoenix-Tucson Air Quality Control Region Gila, Maricopa, Pima, Pinal, or Santa Cruz counties in total quantities in excess of the amounts calculated by the equations set forth below:

4.1.80  
a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emission rate in pounds-mass per hour,  
P = the process weight rate in tons-mass per hour.

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b. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11} - 40$$

where "E" and "P" are defined as indicated in subparagraph B.1.a. of this Sect

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2. No person shall cause, suffer, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any existing asphalt plant located in ~~The-Phoenix---Tucson-Air-Quality-Control-Region~~ Gila, Maricopa, Pima, Pinal, or Santa Cruz counties in total quantities in excess of the amount calculated by the equations set forth below.

4-1-80

a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 3.59P^{0.62}$$

where "E" and "P" are defined as indicated in subparagraph B.1.a. of this Section.

b. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 17.31P^{0.16}$$

where "E" and "P" are defined as indicated in subparagraph  
this Section.

B.1.a. of

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3. For reference purposes only, the equations given above are plotted in Figure 2, Appendix 11. The emission values obtained from the graph are approximately correct for the process weight rates shown. However, the actual values shall be calculated from the applicable equations and rounded off to two decimal places.

4. For purposes of this regulation, the total process weight, from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

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5. Nothing in this Regulation shall be construed to prohibit the Director from issuing an installation or operating permit for an asphalt plant which will not operate in compliance with B.2. above provided that the plant will operate in compliance with B.1. above and the permit contains a condition prohibiting the operating of the plant in ~~The-Phoenix---Tucson-Air-Quality~~ Central-Region Gila, Maricopa, Pima, Pinal, or Santa Cruz counties.

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5. 6. The standard for sulfur in fuel under this Section is:

a. Liquid fuel containing greater than 0.9 percent sulfur by weight shall not be utilized for asphalt plants subject to this Section.

b. Solid fuel containing greater than 0.5 percent sulfur by weight shall not be utilized for asphalt plants subject to this Section.

1-4-79

C. The test methods and procedures required under this section are:

1. The referenced methods given in the Arizona Testing Manual shall be used to determine compliance with the standards prescribed in subsection B. of this section.

a. Method 5 for the concentration of particulate matter and the associated

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moisture content;

- b. Method 1 for sample and velocity traverses;
- c. Method 2 for velocity and volumetric flow rate; and
- d. Method 3 for gas analysis.

2. For Method 5, the sampling time for each run shall be at least 60 minutes and the sampling rate shall be at least 0.9 dscm/hr (0.53 dscf/min) except that shorter sampling times, when necessitated by process variables or other factors, may be approved by the Director.

3. Percent sulfur in liquid fuel shall be determined by ASTM method D-129-64, and the percent sulfur in solid fuel shall be determined by ASTM method D-3177-73.

6-3.82

Part 19. Section R9-3-516, Standards of performance for existing coal preparation plants, is amended to read as follows:

A. The provisions of this Section are applicable to any of the following affected facilities in coal preparation plants: Thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems. This Section is applicable to all coal preparation plants which are existing sources. For purposes of this Section, the definitions contained in 40 CFR 60.251 are adopted by reference and incorporated herein.

1. No person shall cause, suffer, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any existing coal preparation plant located outside of ~~The-Phoenix---Tucson-Air-Quality-Control~~ Region, Gila, Maricopa, Pima, Pinal, and Santa Cruz counties, in total quantities in excess of the amounts calculated by the equations set forth below:

11-1-80  
a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.



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b. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11} - 40$$

where "E" and "P" are defined as indicated in subparagraph A.1.a. of this Section.

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2. No person shall cause, suffer, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any existing coal preparation plant located in ~~The-Phoenix---Tucson-Air-Quality-Control-Region~~ Gila, Maricopa, Pima, Pinal, and Santa Cruz counties, in total quantities in excess of the amount calculated by the equations set forth below:

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a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 3.59P^{0.62}$$

where:

E = maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

b. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 17.31P^{0.16}$$

where "E" and "P" are defined as indicated in subparagraph A.2.a. of this Section.

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3. For reference purposes only, the equations in paragraphs A.1. and A.2. of this Section are plotted in Figure 2, Appendix 11. The emission values obtained from the graph are approximately correct for the process weight rate shown. However, the actual values shall be calculated from the applicable equations and rounded off to two decimal places.

4. For purposes of this regulation, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

■ 5. The opacity of any emission subject to the provisions of this Section shall not exceed 40 percent.

■ 6. Fugitive emissions from coal preparation plants shall be controlled in accordance with R9-3-404, through R9-3-407.

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B. The test methods and procedures required by this section are as follows:

1. The reference methods in the Arizona Testing Manual are used to determine compliance with standards prescribed in subsection A. of this section as follows:

a. Method 5 for the concentration of particulate matter and associated moisture content.

b. Method 1 for sample and velocity traverses,

c. Method 2 for velocity and volumetric flow rate, and

d. Method 3 for gas analysis.

2. For Method 5, the sampling time for each run is at least 60 minutes and the minimum sample volume is 0.85 dscm (30 dscf) except that short sampling times or smaller volumes, when necessitated by process variables or other factors may be approved by the Director. Sampling is not to be started until 30 minutes

after start-up and is to be terminated before shutdown procedures commence. The owner or operator of the affected facility shall eliminate cyclonic flow during performance tests in a manner acceptable to the Director.

3. The owner or operator shall construct the facility so that particulate emissions from thermal dryers or pneumatic coal cleaning equipment can be accurately determined by applicable test methods and procedures under paragraph B.1. of this section.

6-3-82

Part 23. Section R9-3-521, Standards of performance for existing nonferrous metals industry sources, is amended to read as follows:

A. The provisions of this Section are applicable to the following affected facilities: mines, mills, concentrators, crushers, screens, material handling facilities, fine ore storage, dryers, roasters, and loaders which are existing sources.

1. No person shall cause, suffer, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any process source subject to the provisions of this Section and outside of ~~the-Phoenix-Tucson-Air Quality-Control-Region~~ Gila, Maricopa, Pima, Pinal, and Santa Cruz counties, in total quantities in excess of the amounts calculated by the equations set forth below:

4-1-80

a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

b. For process sources having a process weight greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11} - 40$$

where "E" and "P" are defined as indicated in subparagraph A.1.a. of this Section.

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2. No person shall cause, suffer, allow or permit the discharge of particulate matter into the atmosphere in any one hour from any mining property process source located in the-Phoenix-Tucson-Air-Quality-Control-Region Gila, Maricopa, Pima, Pinal, and Santa Cruz counties, except smelters, in total quantities in excess of the amount calculated by the equations set forth below:

4-1-80

a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 3.59P^{0.62}$$

where "E" and "P" are defined as indicated in subparagraph A.1.a. of this Section.

4-1-80

b. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 17.31P^{0.16}$$

where "E" and "P" are defined as indicated in subparagraph A.1.a. of this Section.

3. For reference purposes only, the equations in paragraphs A.1. and A.2. of this Section are plotted in Appendix 11, Figure 2. The emission values obtained from the graph are approximately correct for the process weight rates shown. However, the actual values shall be calculated from the applicable equations and rounded off to two decimal places.

4. For purposes of this regulation, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

5. No person shall cause, suffer, allow or permit the discharge of any emissions from any mining property process or non-point source subject to the provisions of this Section, dust or smoke that exceeds 40 percent opacity.

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B. No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any dryer or roaster the operating temperature of which exceeds 700° F., reduced sulfur, which includes sulfur equivalent from all sulfur emissions including but not limited to sulfur dioxide, sulfur trioxide and sulfuric acid, in excess of ten percent of the sulfur entering the process as feed.

C. Monitoring of operations required by this section are:

1. The owner or operator of any mining property subject to the provision of this section shall record the daily process rates and hours of operation of all material handling facilities.

2. A continuous monitoring system for measuring sulfur dioxide emissions shall be installed, calibrated, maintained and operated by the owner or operator where dryers or roasters are not expected to achieve compliance with the standard under subsection B. of this section.

D. The test methods and procedures required by this section are as follows:

1. The reference methods in the Arizona Testing Manual shall be used to determine compliance with the standard prescribed in subsections A. and B. of this section as follows:

a. Method 5 for the concentration of particulate matter and the associated moisture content;

b. Method 1 for sample and velocity traverses;

c. Method 2 for velocity and volumetric flow rate; and

d. Method 3 for gas analysis and calculation of excess air, using the integrated sample technique;

e. Method 6 for concentration of SO<sub>2</sub>.

2. For Method 5, Method 1 shall be used to select the sampling site and the number of traverse sampling points. The sampling time for each run shall be at least 60 minutes and the minimum sampling volume shall be 0.85 dscm (30 dscf) except that smaller sampling times or volumes, when necessitated by process variables or other factors, may be approved by the Director. The probe and filter holder heating systems in the sampling train shall be set to provide a gas temperature no greater than 160° C. (320° F.)

3. For Method 6, the sampling site shall be the same as that selected for Method 5. The sampling point in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). For Method 6, the sample shall be extracted at a rate proportional to the gas velocity at the sampling point.

4. For Method 6; the minimum sampling time shall be 20 minutes and the minimum sampling volume 0.02 dscm (0.71 dscf) for each sample. The arithmetic mean of two samples shall constitute one run. Samples shall be taken at approximately 30-minute intervals.



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Part 24. Section R9-3-522, Standards of performance for existing gravel or crushed stone processing plants, is amended to read as follows:

A. The provisions of this Section are applicable to the following affected facilities: Primary rock crushers, secondary rock crushers, tertiary rock crushers, screens, conveyors and conveyor transfer points, stackers, reclaimers, and all gravel or crushed stone processing plants and rock storage piles which are existing sources.

1. No person shall cause, suffer, allow or permit the discharge of particulate matter into the atmosphere except as fugitive emissions in any one hour from any gravel or crushed stone processing plant outside of the ~~Phoenix-Tucson Air-Quality-Control-Region~~, Gila, Maricopa, Pima, Pinal, and Santa Cruz counties, in total quantities in excess of the amounts calculated by the equations set forth below:

1-479

a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

b. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11} - 40$$

where "E" and "P" are defined as indicated in subparagraph A.1.a.

1-382

2. No person shall cause, suffer, allow or permit the discharge of particulate matter into the atmosphere except as fugitive emissions in any one hour from any gravel or crushed stone processing plant located in the ~~Phoenix-Tucson~~ Air-Quality-Control-Region Gila, Maricopa, Pima, Pinal and Santa Cruz counties in total quantities in excess of the amount calculated by the equations set forth below:

1-479

a. For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 3.59P^{0.62}$$

1-479  
where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

b. For process sources having a process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emission shall be determined by the following equation:

$$E = 17.31P^{0.16}$$

where "E" and "P" are defined as indicated in subparagraph A.2.a. of this section.

3. For reference purposes only, the equations in paragraphs A.1. and A.2. of this section are plotted in Appendix 11, Figure 2. The emission values obtained from the graph are approximately correct for the process weight rates shown. However, the actual values shall be calculated from the applicable equations and rounded off to two decimal places.

4. Notwithstanding the provisions of section R9-3-501., no person shall cause, suffer, allow or permit to be emitted into the atmosphere from any gravel or crushed stone processing plant, smoke or dust that exceeds 40 percent opacity.

5. Fugitive emissions from gravel or crushed stone processing plants shall be controlled in accordance with sections R9-3-404. through R9-3-407.

B. Monitoring of operations required by this section is as follows:

1. The owner or operator of any affected facility subject to the provisions of this section shall install, calibrate, maintain, and operate monitoring devices which can be used to determine daily the process weight of gravel or crushed stone produced. The weighing devices shall have an accuracy of  $\pm 5$  percent over their operating range.

2. The owner or operator of any affected facility shall maintain a record of daily production rates of gravel or crushed stone produced.

C. The test methods and procedures required by this section are as follows

1. The reference methods in the Arizona Testing Manual shall be used to determine compliance with the standards prescribed in subsection A. of this section as follows:

- a. Method 5 for concentration of particulate matter and moisture content,
- b. Method 1 for sample and velocity traverses,
- c. Method 2 for velocity and volumetric flow rate, and
- d. Method 3 for gas analysis.

2. For Method 5, the sampling time for each run is at least 60 minutes and the minimum sample volume is 0.85 dscm (30 dscf) except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors may be approved by the Director. Sampling is not to be started until 30 minutes after start-up and is to be terminated before shutdown procedures commence. The owner or operator of this affected facility shall eliminate cyclonic flow during performance tests in a manner acceptable to the Director.