

III. PARTICULATE MATTER

A. Fuel Burning Equipment

1. No owner or operator shall cause or permit to be emitted into the atmosphere from any fuel-burning equipment, particulate matter in the flue gases which exceeds the following:

a. 0.5 lbs. per 10^6 BTU heat input for fuel burning equipment of less than or equal to 1×10^6 BTU/hr. total heat input design capacity.

b. For fuel burning equipment with designed heat inputs greater than 1×10^6 BTU per hour, but less than or equal to 500×10^6 BTU per hour, the following equation will be used to determine the allowable particulate emission limitation.

$$PE = 0.5 (FI)^{-0.26}$$

Where:

PE = Particulate Emission in Pounds per million BTU heat input.

FI = Fuel Input in Million BTU per hour.

c. 0.1 lbs. per 10^6 BTU heat input for fuel burning equipment of greater than 500×10^6 BTU per hour or more.

d. If two or more fuel burning units connect to any opening, the maximum allowable emission rate shall be calculated by summing the allowable emissions from the units being operated.

2. Exceptions

Sources and emissions subject to the emission limitation of Section V. of this regulation.

3. Performance Tests

Prior to granting of a final approval permit or amending a permit, when an emission source or control equipment is altered, or at any time when there is reason to believe that emission standards are being violated, the Division may require the owner or operator of any fuel burning equipment to conduct performance tests, as measured by EPA Methods 1-4 and the front half of EPA Method 5 (40 CFR 60.275, Appendix A. Part 60) to determine compliance with this subsection of this regulation.

B. Incinerators

1. No owner or operator of an incinerator shall operate any incinerator without a permit from the Division.

2. Standard of Performance for all incinerators other than biomedical waste incinerators and air curtain destructors subject to 40 CFR 60.

a. In areas designated as nonattainment for particulate matter, no owner or operator of an incinerator shall cause or permit emissions of more than 0.10 grain of particulate matter per standard cubic foot. (Dry flue gas corrected to 12 percent carbon dioxide.)

b. In areas designated as attainment for particulate matter, no owner or operator of an incinerator shall cause or permit emissions of more than 0.15 grain of particulate matter per standard cubic foot. (Dry Flue gas corrected to 12 percent carbon dioxide.)

3. Performance Tests

Prior to granting a final approval permit or amending a permit, when an emission source or control equipment is altered, or at any time when there is reason to believe that emission standards are being violated, the Division may require the owner or operator of an incinerator to conduct performance tests(s) in accordance with Appendix A of Air Quality Control Commission Regulation Number 6.

4. Standard of Performance for Biomedical Waste Incinerators.

The owner or operator of an existing incinerator used for the disposal of biomedical waste shall comply with Regulation No. 6. Part B. V. Standard of Performance For New Biomedical Waste Incinerators as follows:

a. All incinerators, existing as of the effective date of Regulation 6 Part B, V., with a design capacity of 400 pounds per hour and greater must comply with the requirements of this regulation by January 1, 1990.

b. All incinerators, existing as of the effective date of Regulation 6, Part B, V., with a design capacity of less than 400 pounds per hour must comply with the requirements of this

regulation as applicable by December 31, 1994; except incinerators with a design capacity of less than 200 pounds per hour shall be permitted and allowed to operate only so long as the units continue to meet the particulate and visible emission standards existing prior to the effective date of Regulation 6, Part B.V., the manufacturer's design specifications and any other applicable safety standards. (The standards existing prior to the effective date of this regulation are: a) For sources existing prior to January 30, 1979: 20% opacity and 0.10 grams of particulate matter (PM) for particulate matter non-attainment areas and 0.15 grams of PM for PM attainment areas; b) 20% opacity and 0.10 grains of PM for sources constructed after January 30, 1979.)

C. Manufacturing Processes

1. Except as provided in paragraphs 2 and 3 of this subsection C., no owner or operator of a manufacturing process unit shall cause or permit emission of any particulate matter into the atmosphere during any consecutive sixty (60) minute period which is in excess of the following.

a. For process equipment having process weight rates of 30 tons per hour or less, the allowable emission rate shall be determined by the use of the equation:

$$PE = 3.59(P)^{0.62}$$

Where:

PE = Particulate Emission in lbs. per hour

P = Process weight rate in tons per hour

b. For process equipment having process weight rates of greater than 30 tons per hour, the allowable emission rate shall be determined by use of the equation:

$$PE = 17.31(P)^{0.16}$$

Where:

PE = Particulate Emission rate in lbs. per hour

P = Process weight rate in tons per hour

c. If two or more process units are connected to the same opening, the maximum allowable emission rate shall be computed by summing the allowable emissions for the units being operated.

2. Alfalfa Dehydration Plant Drum Dryers

New alfalfa dehydration plants shall be subject to the provisions of III.C. of this regulation for process weight rates.

3. Exceptions

a. Sources and emissions subject to the emission limitations of Section V. of this regulation.

b. Fugitive dust and fugitive particulate emissions as defined in Section II.A.8 of this Regulation.

4. Performance Tests: prior to granting of a final approval permit or amending a permit, when an emission source or control equipment is altered, or at any time when there is reason to believe that emission standards are being violated, the Division may require the owner or operator of any manufacturing process to conduct performance tests, as measured by EPA Methods 1-4 and the front half of EPA Method 5 (40 CFR 60.275, Appendix A, Part 60) to determine compliance with this subsection of this regulation.

D. Fugitive Particulate Emissions

1. General Requirements

a. Existing Sources

(i) Every owner or operator of a source or activity which is subject to this Section III.D. shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere through the use of all available practical methods which are technologically feasible and economically reasonable and which reduce, prevent and control emissions so as to facilitate the achievement of the maximum practical degree of air purity in every portion of the State.

(ii) In determining what control methods are available, practical, economically reasonable and technologically feasible, the following factors shall be considered: effects on the

health, welfare (as defined in Section I.G. of the Common Provisions regulation), convenience, and comfort of the inhabitants of the State of Colorado; effects on the enjoyment and use of the scenic and natural resources of the State; the impact on normal operating procedures; altitude, topography, climate, and anticipated meteorological conditions (including wind and precipitation): soil conditions; the degree to which a type of emission to be controlled is significant; the continuous, intermittent, or seasonal nature of the emission, the economic, environmental, and energy impacts and other costs of compliance; the proximity of the source or activity to populated areas; and the nature, scope and duration of the source or activity.

(iii) This Section III.D. shall be enforceable only through the procedures specified below in Sections III.D.1.b. through III.D.1.e.

b. New Sources

Every owner or operator of a new source or activity which is subject to this Section III.D. and which is required to obtain an emission permit under Regulation No. 3 shall submit a fugitive particulate emission control plan meeting the requirements of this Section III.D. at such time as, and as part of, the required permit application. Such plan shall be approved or disapproved by the Division in the course of acting to approve or disapprove the permit application and no emission permit shall be issued until a fugitive particulate emission control plan has been approved.

c. Emission Limitation Guidelines for Submission of Control Plan.

If the Division determines that a source of activity which is subject to this Section III.D. (whether new or existing) is operating with emissions in excess of 20% opacity and such source is subject to the 20% emission limitation guideline; or if it determines that the source or activity which is subject to this Section III.D. is operating with visible emissions that are being transported off the property on which the source is located and such source is subject to the no off property transport emission limitation guideline; or if it determines that any source or activity which is subject to this Section III.D. is operating with emissions that create a nuisance; it shall require the owner or operator of that source or activity to submit a written plan to the Division for the control of

fugitive particulate emissions within the time period specified in Section III.D. Provided, however, that in the case of a source or activity which already has a control plan, the Division shall review said control plan and if it determines the plan does not meet the requirements of this Section III.D., it shall require the submission of a revised control plan. (As used herein, "nuisance" shall mean the emission of fugitive particulates which constitutes a private or public nuisance as defined in common law, the essence of which is that such emissions are unreasonable interfering with another person's use and enjoyment of his property. Such interference must be "substantial" in its nature as measured by a standard that it would be of definite offensiveness, inconvenience, or annoyance to a normal person in the community.)

[Cross Reference: Appendices A and B]

d. Control Plans

(i) With respect to operations or activities which have more than one source of fugitive particulate emissions, submission of control plans or plan revisions pursuant to Section III.D. shall be required only with respect to those individual sources for which there does not exist a currently approvable control plan and which are not being operated in accordance with the requirements of this Section III.D., provided, however, that control plans required by Section III.D.1.b for new sources and activities shall contain provisions for control of fugitive particulate emissions from all significant sources of such emissions.

(ii) Sources required to submit control plans for revisions to the Division shall do so within sixty (60) days of the date such plan or revision is requested; provided, however, that the Division, in its discretion, may where appropriate establish a different time period for submittal, taking into consideration such factors as the duration of the operation of the source or activity, the significance and nature of the emissions, and the relative complexity of the operation and applicable control methods.

(iii) Each control plan shall include all available practical methods which are technologically feasible and economically reasonable and which reduce, prevent and control fugitive particulate emissions from the source or activity into the atmosphere. For those materials, equipment, services or other resources (such as water for abatement and control purposes)

which are likely to be scarce at any given time, an alternative control method must be included in the control plan. Any source required to submit a control plan may ask for a "control plan conference" with the Division, and if so requested the Division shall hold such a conference for the purpose of advising what types of control measures and/or operating procedures will meet the requirements of this section.

[Cross Reference: Sections III.D.2.a. through III.D.2.k.]

(iv) The Division shall approve any plan submitted under this Section III-D., unless the Division determines that the plan does not meet the requirements of Section III.D. If a control plan is not approvable in its entirety, the Division shall approve those portions which meet the requirements of this section and disapprove those portions which fail to meet the requirements of this section.

e. Enforcement

(i) It shall be a violation of this regulation and the Division may take enforcement action pursuant to C.R.S. 1973, 25-7-115, as amended, if the owner or operator:

(A) Fails to submit a control plan (or revision of an existing plan) within sixty (60) days (or other time period specified by the Division) after being notified by the Division that such submittal is required unless operation of such source is discontinued so as to permanently eliminate the cause of fugitive particulate emissions therefrom; or

(B) Owns or operates a source or activity for which the Division has disapproved a control plan or a revised control plan unless operation of such source is discontinued so as to permanently eliminate the cause of fugitive particulate emissions therefrom; or

(C) Fails to comply with the provisions of an approved control plan.

(ii) The 20% opacity, no off-property transport, and nuisance emission limitation guidelines of this Section III.D. are not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 1973, 25-7-115 as amended.

2. Sources Subject to Section III. D.

The control measures and operating procedures listed in Sections III.D.2.a. through III.D.2.k. are generally considered appropriate for the specific types of sources under which they are listed - at least as applied individually. Whether they remain appropriate when used in combination with other measures and procedures, must be determined on a case by case basis.

a. Roadways

(i) Unpaved

(A) Applicability - Attainment and Nonattainment Areas

(B) General Requirement

Any owner or operator responsible for construction or maintenance of any (existing or new) unpaved roadway which has vehicle traffic exceeding 200 vehicles per day in attainment areas or 150 vehicles per day in nonattainment areas (averaged over any consecutive 3-day period) from which fugitive particulate emissions will be emitted shall be required to use all available, practical methods which are technologically feasible and economically reasonable in order to minimize emissions resulting from the use of such roadway in accordance with the requirements of Section III.D. of this regulation.

(C) Applicable Emission Limitation Guideline

The nuisance emission limitation guideline shall apply to unpaved roadways. Abatement and control plans submitted for unpaved roadways shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(D) Control Measures and Operating Procedures

Control measures or operations procedures to be employed may include but are not necessarily limited to, watering, chemical stabilization, road carpeting, paving, suggested speed restrictions and other methods or techniques approved by the Division.

(E) If the Division receives a complaint that any new or existing unpaved roadway is creating a nuisance, it may require persons owning or operating or maintaining such roadways to supply vehicle traffic count information by any reasonable available means for the purpose of determining if they have

sufficient traffic to subject them to the requirements of this Section III.D.

(ii) Paved

(A) Applicability - Attainment and Nonattainment Areas

(B) General Requirement

Any person who through operations or activities repeatedly deposits materials which may create fugitive particulate emissions on a public or private paved roadway is required to submit a control and abatement plan upon request by the Division which provides for the removal of such deposits and appropriate measures to prevent future deposits such that fugitive particulate emissions which may result are minimized except that sand, salt or other materials may be dropped on snow or ice covered roadways for the purpose of safety and such deposits shall not be required to be removed on a more frequent basis than the community's normal street cleaning schedule except as otherwise provided in an applicable SIP provision.

(C) Applicable Emission Limitation Guideline

The nuisance emission limitation guideline shall apply to paved roadways. Abatement and control plans submitted for paved roadways shall be evaluated for compliance with the requirements of section III.D. of this regulation.

(D) Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include but are not necessarily limited to, covering the loaded haul truck, washing or otherwise treating the exterior of the vehicle, limiting the size of the load and the vehicle speed, watering or treating the load with chemical suppressants, keeping the roadway access point free of materials that may be carried onto the roadway, removal of materials from the roadway and other methods or techniques approved by the Division.

b. Construction Activities

(i) Applicability - Attainment and Nonattainment Areas

(ii) General Requirement

Any owner or operator engaged in clearing or leveling of land or owner or operator of land that has been cleared of greater than

five (5) acres in attainment areas or one (1) acre in nonattainment areas from which fugitive particulate emissions will be emitted shall be required to use all available and practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(iii) Applicable Emission Limitation Guideline

Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to construction activities; except that with respect to sources or activities associated with construction for which there are separate requirements set forth in this regulation, the emission limitation guidelines there specified as applicable to such sources and activities shall apply. Abatement and control plans submitted for construction activities shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

[Cross Reference: Subsections e. and f. of Section III.D.2. of this regulation.]

(iv) Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include, but are not necessarily limited to, planting vegetation cover, providing synthetic cover, watering, chemical stabilization, furrows, compacting, minimizing disturbed area in the winter, wind breaks and other methods or techniques approved by the Division.

c. Storage and Handling of Materials

(i) Applicability - Attainment and Nonattainment Areas

(ii) General Requirement

Any owner or operator or any new or existing materials storage and handling operation from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible, and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(iii) Applicable Emission Limitation Guideline

Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to storage and handling operations. Abatement and control plans submitted for storage and handling operations shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(iv) Control Measures And Operating Procedures

Control measures or operational procedures to be employed may include, but are not necessarily limited to, the use of enclosures, covers, stabilization, compacting, watering, limitation of fines and other methods or techniques approved by the Division.

d. Mining Activities

(i) Applicability - Attainment and Nonattainment Areas

(ii) General Requirements

Any owner or operator of any new or existing mining operation from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(iii) Applicable Emission Limitation Guideline

Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to mining activities' except that with respect to sources or activities associated with mining for which there are separate requirements set forth in this regulation, the emission limitation guidelines there specified as applicable to such sources and activities shall apply. Abatement and control plans submitted for mining activities shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(iv) Control Measures and Operating Procedures

Control measures or operating procedures to be employed may include, but are not necessarily limited to:

(A) watering or chemical stabilization of unpaved roads as often as necessary to minimize reintrainment of fugitive particulate matter from the road surface, or paving of roads;

(B) prompt removal of coal, rock minerals, soil, and other dust-forming debris from paved roads and scraping and compaction of unpaved roads to stabilize the road surface as often as necessary to minimize reintrainment of fugitive particulate matter from the road surface;

(C) restricting the speed of vehicles in and around the mining operation;

(D) revegetating, mulching, or otherwise stabilizing the surface of all areas adjoining roads that are a source of fugitive particulate emissions;

(E) to the extent practicable restricting vehicular travel vehicles to established roads;

(F) enclosing, covering, watering, or otherwise treating loaded haul trucks and railroad cars, or limiting size of load, to minimize loss of material to wind and spillage;

(G) substitution of conveyor systems for haul trucks;

(H) minimizing the area of disturbed land;

(I) prompt revegetation of disturbed surface areas;

(J) planting of special wind break vegetation at critical points;

(K) restricting the areas to be blasted at any one time;

(L) reducing the period of time between initially disturbing the soil and revegetating or other surface stabilization;

(M) control of fugitive particulate emissions from storage piles through use of enclosures, covers, or stabilization, minimizing the slope of the upwind face of the pile, confining as much pile activity as possible to the downwind side of the pile and other methods or techniques as approved by the Division.

[Cross Reference: Subsections a., b., c., e., f., g., and i. of Section III.D.2. of this regulation.]

e. Haul Roads

(i) Applicability - Attainment and Nonattainment Areas

(ii) General Requirement

Any owner or operator of any new or existing haul road which has vehicle traffic exceeding 40 haul vehicles or 200 total vehicles per day (averaged over any consecutive 3-day period) from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(iii) Applicable Emission Limitation Guideline

The no off-property transport emission limitation guideline shall apply to on-site haul roads (i.e., those located on and abutted by the property owned or under control of the owner or operator of the haul road) and the nuisance guideline shall apply to off-site haul roads (i.e., those abutted on both sides by property not owned or under the control of the owner or operator of the haul road). Abatement and control plans submitted for haul roads shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(iv) Control Measures and Operating Procedures

Control measures and operational procedures to be employed may include, but are not necessarily limited to, the use of vehicular speed reduction, watering, chemical stabilization, road carpeting and other methods of techniques approved by the Division.

(v) The Division may require persons owning or operating or maintaining any new or existing haul roads to supply vehicle traffic count information by any reasonable available means for the purpose of determining if they have sufficient traffic to subject them to the requirements of this Section III.D.

f. Haul Trucks

(i) Applicability - Attainment and Nonattainment Areas

(ii) General Requirement

Any owner or operator of any new or existing haul trucks from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to

minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(iii) Applicable Emission Limitation Guideline

The no off-property transport emission limitation guideline shall apply to haul trucks; except that when operating off the property of the owner or operator, the applicable guideline shall be no off-vehicle transport of visible emissions. Abatement and control plans submitted for haul trucks shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(iv) Control Measures and Operating Procedures

Control measures or operation procedures to be employed may include but are not necessarily limited to, covering the materials, washing or otherwise treating loaded haul trucks to remove materials from the exterior of the vehicle prior to transporting materials, limiting load size, wetting the load and other methods or techniques approved by the Division.

[Cross Reference: C.R.S. 1973. Section 42-4-1208]

g. Tailings Piles and Ponds

(i) Applicability - Attainment and Nonattainment Areas

(ii) General Requirement

Any owner or operator of any new or existing tailings piles and ponds from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(iii) Applicable Emission Limitation Guideline

Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to tailings piles and ponds. Abatement and control plans submitted for tailings piles and ponds shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(iv) Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include, but are not necessarily limited to:

- (A) watering and/or chemical stabilization,
- (B) synthetic and/or revegetative covers,
- (C) wind breaks,
- (D) minimizing the area of disturbed tailings,
- (E) restricting the speed of vehicles in and around the tailings operation, and/or,
- (F) other equivalent methods or techniques approved by the Division.

h. Demolition Activities

- (i) Applicability - Nonattainment Areas
- (ii) General Requirements

Any owner or operator of any new demolition activities from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

- (iii) Applicable Emission Limitation Guideline

Only the no off-property transport emission limitation guideline shall apply to demolition activities. Abatement and control plans submitted for demolition activities shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

- (iv) Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include, but are not limited to:

- (A) wetting down, including pre-watering of work surface,
- (B) removal of dirt and mud deposited on improved streets and roads,
- (C) wetting down, washing. or covering haulage

equipment when necessary to minimize fugitive dust emissions during loading and transit.

(v) Any demolition or renovation activity that has materials insulated or fireproofed with friable asbestos will also be subject to the provisions of the Air Quality Control Commission's Regulations No. 8, Section II.B.4.

i. Blasting Activities

(i) Applicability - Attainment and Nonattainment Areas

(ii) General Requirement

Any owner or operator of any new or existing blasting activities from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(iii) Applicable Emission Limitation Guideline

Only the no off-property transport emission limitation guideline shall apply to blasting activities. Abatement and control plans submitted for blasting activities shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(iv) Control Measures and Operating Procedures

Control measures or operational procedures to be employed may include, but are not limited to, the use of:

(A) the removal of overburden prior to blasting,

(B) watering down the blasted area as soon as practicable after blasting,

(C) other equivalent methods or techniques approved by the Division.

j. Sandblasting Operations

(i) Applicability - Attainment and Nonattainment Areas

(ii) General Requirement

Any owner or operator of any new or existing sandblasting activities from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(iii) Applicable Emission Limitation Guideline

Only the 20% opacity emission limitation guideline shall apply to sandblasting operations. Abatement and control plans submitted for sandblasting operations shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(iv) Control Measures and Operating Procedures

Control measures and operating procedures to be employed may include, but are not limited to, the use of enclosures with necessary dust collecting equipment, using wet sandblasting methods, and other methods or techniques approved by the Division.

k. Livestock Confinement Operations

(i) Applicability - Attainment and Nonattainment Areas

(ii) General Requirement

Any owner or operator of any new or existing livestock confinement operations from which fugitive particulate emissions will be emitted shall be required to use all available practical methods which are technologically feasible and economically reasonable in order to minimize such emissions in accordance with the requirements of Section III.D. of this regulation.

(iii) Applicable Emission Limitation Guideline

Only the no off-property transport guideline shall apply to livestock confinement operations. Abatement and control plans submitted for livestock confinement operations shall be evaluated for compliance with the requirements of Section III.D. of this regulation.

(iv) Control Measures and Operating Procedures

Control measures or operating procedures to be employed may include, but are not limited to the use of sprinkler systems and/or other equivalent methods or techniques as approved by the Division.