

Regulation No. 1

EPA test methods 1, 2, 3, 4, 5, 6, 6a, 6b, 6c, 8 and method 9 (40 CFR 60.275, Appendix A, Part 60) are hereby incorporated by reference by the Air Quality Control Commission and made a part of the Colorado Air Quality Control Commission Regulations. Materials incorporated by reference are those in existence as of the date of this regulation and do not include later amendments. The material incorporated by reference is available for public inspection during regular business hours at the Office of the Commission, located at 4300 Cherry Creek Drive South, Denver, Colorado 80246, or may be examined at any state publications depository library. Parties wishing to inspect these materials should contact the Technical Secretary of the Commission, located at the Office of the commission.

Definitions

ASTM

American Society for Testing and Materials

EPA

United States Environmental Protection Agency

Fugitive Emissions

Emissions that cannot be reasonably collected and passed through a stack, chimney, vent or other equivalent opening.

gr/dscf

Grains per dry standard cubic foot

Haul Roads

Roads which are used for commercial, industrial or governmental hauling of materials and which the general public does not have a right to use.

Intermittent Sources

Those stationary sources of air pollution which do not operate on a continuous basis for a period of time sufficient to allow for opacity observations in accordance with EPA Method 9.

PM

Particulate Matter

Roadways

Roads, other than haul roads, used for motorized vehicular traffic.

Welfare

As used in these regulations, effects on public welfare include, but are not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.

I. APPLICABILITY: REFERENCED FEDERAL REGULATIONS

I.A. The provisions of this Regulation No. 1 are applicable to both new and existing sources and without regard to whether a source has been issued an emission permit. Except where specifically made applicable to attainment, attainment/maintenance or non-attainment areas, the requirements set forth herein apply statewide. (Areas designated as unclassifiable shall be treated as attainment). The provisions of this regulation apply to a source even though it may also be subject to other regulations of the commission; and in the event the requirements of this regulation conflict or are inconsistent with the requirements of any other regulation of the commission, the more stringent emission limitations shall apply except that a specific emission limitation for a particular source shall take precedence over a general emission limitation which is inconsistent.

I.B. At several places in this regulation various federal regulations, performance standards, and procedures that have been previously published in the Federal Register and/or the Code of Federal Regulations have been incorporated by reference. This regulation provides appropriate citations to such materials and incorporates them as they are published. Amendments to such regulations, standards and procedures made after the effective date of this regulation are not incorporated herein. Copies of said materials may be obtained for a nominal copying fee from the Technical Secretary to the commission at the Air Quality Control Commission office at 4300 Cherry Creek Drive South, B-1, Denver, CO 80246. Copies are also available at the commission office for public inspection at no cost.

II. SMOKE AND OPACITY

II.A. Stationary Sources

II.A.1. Except as provided in paragraphs 2 through 6 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity. This standard is based on 24 consecutive opacity readings taken at 15-second intervals for six minutes. The approved reference test method for visible emissions measurement is EPA Method 9 (40 CFR, Part 60, Appendix A (July, 1992)) in all subsections of Section II. A and B of this regulation.

II.A.2. Intermittent Sources

Except as provided in paragraphs 3 through 6 below, no owner or operator of an intermittent source shall allow or cause the emission into the atmosphere of any pollutant that is in excess of 20% opacity. If EPA Method 9 (40 CFR, Part 60, Appendix A (July, 1992)), a continuous emissions monitor, or other credible method is used and 24 consecutive opacity readings taken at 15-second intervals cannot be taken because such a source does not operate continuously for six minutes, the readings shall be taken at 15-second intervals during periods of operation until 24 readings have been made or for a period of thirty minutes, whichever is sooner, and the source shall be deemed in violation if the average opacity of such readings exceed 20%.

II.A.3. Pilot Plants and Experimental Operations

No owner or operator of a process unit of a pilot plant or experimental operation shall emit or cause to be emitted into the atmosphere from any such process unit particulate matter for a period or periods aggregating more than six minutes in any sixty consecutive minutes which is in excess of 30% opacity.

Except as otherwise provided in this paragraph this emission standard for pilot plants and experimental operations shall be applicable for a period not to exceed 180-operating days cumulative total from the

date operation of such a process unit commences; thereafter the 20% opacity limitation provided in Section II.A.1 or 2 of these regulations shall apply to emissions from such a process unit of a pilot plant or experimental operation. For the purpose of this Section II.A.3 "Operating Days" shall mean any calendar day during which the process unit is operated and air pollutants are emitted (without regard to the length of period of time operated or amount of pollutants emitted). For good cause shown, the division may extend the period of relaxed operation beyond 180 operating days for the operation of a process unit, but in no event to greater than 365 operating days without the concurrence of the commission.

II.A.4. Fire Building, Cleaning of Fire Boxes, Soot Blowing, Start-up, Process Modification or Adjustment of Control Equipment Except as provided in Sections II.A.6, no owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, any process modification, or adjustment or occasional cleaning of control equipment, which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes.

II.A.5. Smokeless Flare or Flares for the Combustion of Waste Gases

No owner or operator of a smokeless flare or other flare for the combustion of waste gases shall allow or cause emissions into the atmosphere of any air pollutant which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes.

II.A.6. Exemptions

The requirements of Section II.A.1 and 2 of this regulation shall not apply to the following sources or types of emissions:

II.A.6.a. Emissions from fireplaces, fireplace inserts and stoves, provided such devices are burning only clean dry wood or wood products and are used for noncommercial or recreational purposes.

II.A.6.b. Fugitive dust: As used in this Regulation No. 1, "fugitive dust" means airborne particulate matter, which is not a direct or proximate result of man's activities.

II.A.6.c. Fugitive particulate emissions: As used in this Regulation No. 1, "fugitive particulate emissions" mean fugitive emissions of particulate matter that are the direct or proximate result of man's activities, (e.g., Materials left by man exposed to the wind or later acted upon by another force as the wind or automobile traffic, or particulate matter being thrown into the atmosphere by the operation of a bulldozer.)

II.B. Diesel Powered Locomotives

II.B.1. Except as provided in paragraph 2 below, no owner or operator shall emit or cause to be emitted into the atmosphere from any diesel-powered locomotive any air pollutant which is in excess of 20% opacity while being operated below 6,000 feet (mean sea level) and 30% opacity while being operated above 6,000 feet (mean sea level).

II.B.2. Exceptions

II.B.2.a. Emissions which exceed the opacity limits of Section II.B.1. as a result of a cold engine start-up, not to exceed thirty consecutive minutes and provided the locomotive is in a stationary position.

II.B.2.b. Emissions for nonconsecutive periods of three minutes with an aggregate of not more than ten minutes in any consecutive sixty minutes when a locomotive engine is being tested, adjusted, rebuilt, or repaired in the maintenance yards.

II.B.2.c. Emissions for periods of up to four minutes when a locomotive is accelerated after standing still.

II.B.3. The owner or operator of any diesel-powered locomotive that has been cited for violation of Section II.B.1. of this regulation, but which is not available for a compliance inspection shall submit to the division an affidavit attesting to those abatement measures which have been completed and shall state in that affidavit that the vehicles cited have achieved compliance with this regulation.

II.C. Open Burning

II.C.1. Except as provided in paragraph 2 below, no person shall burn or allow the burning of rubbish, wastepaper, wood or other flammable material on any open premises, or on any public street, alley, or other land adjacent to such premises, unless an open burning permit is first obtained from the division. In granting or denying such permits the division shall base its decision on the location and proximity of such burning to any building or other structure, the potential contribution of such burning to air pollution in the area, climactic conditions on the day or days of such burning, and compliance by the applicant for the permit with applicable fire protection and safety requirements of the local authority. The division may consider: (A) Whether there is any practical alternative method for the disposal of the material to be burned and (B) Whether burning will be conducted so as to minimize emissions. Methods for minimizing emissions may include, but are not necessarily limited to, the use of permitted incinerators or air curtain destructors, the use of clean auxiliary fuel, drying the material prior to ignition and separating out for alternative disposal: Rubber, tires, plastic, insulated wire, insulation, and other materials which produce more smoke than clean combustible materials. Sources subject to the open burning provisions in this regulation No. 1 may also be subject to state only Regulation No. 9.

II.C.1.A. Whether there is any practical alternative method for the disposal of the material to be burned.

II.C.2. Sources Exempted from obtaining open burning permits

II.C.2.a. The non-commercial burning of private household trash in PM attainment areas unless local ordinances or rules prohibit such burning.

II.C.2.b. Fires used for non-commercial cooking of food for human beings, for instructional purposes, or recreational purposes.

II.C.2.c. Flares used to indicate some danger to the public.

II.C.2.d. Agricultural open burning – The open burning of cover vegetation for the purpose of preparing the soil for crop production, weed control, and other agricultural cultivation purposes. The open burning of animal parts or carcasses is not included in the exemption. Except that, if the State Agricultural commission declares a public health emergency or a contagious or infectious disease outbreak that imperils the livestock of the state that requires the burning of diseased animal carcasses after providing telephone notice to the division and the relevant local health department office by leaving a voice mail message. All necessary safeguards shall be utilized during such non-permitted open burning to minimize any public health or welfare impacts. In addition, the owner or operator shall take steps to ensure that all surrounding and potentially impacted residents, businesses, schools and churches are notified prior to beginning the open burn.

II.C.2.e. Noncommercial burning of trash in the unincorporated areas of counties of less than 25,000 population according to the latest federal census provided such open burning is subject to regulations of the board of county commissioners for such county adopted by resolution and such regulations include, among other things, permit provisions and prohibit any such burning that would result in the exceedance of any NAAQS.

II.C.3. Nothing herein shall be construed as relieving any person conducting open burning from meeting the requirements of any applicable federal, state or local requirements concerning disposal of waste materials.

II.D. Smoke and Obscurants for Military Training Exercises Emissions associated with the generation of smoke or obscurants on Fort Carson and Pinon Canyon maneuver site (hereafter, referred together as Fort Carson) by United States military forces, or allied forces in a combined training exercise with the United States, shall be exempt from the opacity limits specified in Regulation No. 1, sections II. and III. provided that all of the following conditions are met:

II.D.1. All participants in the training shall follow all applicable Department of Defense training manuals and guidance regarding Department of Defense-approved smokes and obscurants.

II.D.2. No off-property transport of visible emissions from any smoke or obscurants used on Fort Carson shall occur.

II.D.3. Smoke or obscurants generation shall cease immediately in the event that any such visible emissions cross or has a reasonable probability of crossing the installation property boundary.

II.D.4. The commander in charge of any training involving smoke or obscurants will ensure the following precautionary measures are implemented.

II.D.4.a. When planning and conducting training, prevailing meteorological conditions will be analyzed, both before and on the day of training, to determine if they meet established training criteria for the use of smoke or obscurants and to allow compliance with the requirements of paragraph 3 above. If the meteorological conditions do not meet those criteria, then smoke or obscurants will not be employed.

II.D.4.b. Prior to using smoke or obscurants, inspect and validate the training site and the training mission.

II.D.4.c. Upon initiation of smoke or obscurant generation, observe the initial smoke or obscurant plume to verify that it conforms to established training criteria and to allow compliance with the requirements of paragraph 3 above. If the wind direction and speed is not favorable for the exercise, then the location will be adjusted or the smoke mission will be postponed or canceled.

II.D.4.d. Post one or more trained smoke observers to provide direct observation of the smoke/obscurant plume at all times while smoke or obscurants are used during the training. Smoke observers will remain alert for visible smoke that has a reasonable probability of drifting across the installation property boundary, in which case the smoke observer shall have the authority to immediately halt smoke generation operations. The smoke observer(s) must maintain capability for immediate communication with the officer commanding the use of smoke or obscurants used in the training exercise.

II.D.4.e. Units conducting training using smoke or obscurants on Fort Carson must perform necessary checks with Fort Carson range division to assure immediate communication capability, including

capability to request or obtain meteorological updates. In the event of failure to maintain such capability, the training exercise will be halted.

II.D.5. In the event visible emissions from smoke or obscurant use drift across the installation property boundary, Fort Carson shall implement necessary response measures to minimize impacts and shall inform the state as soon as possible, but no later than 24 hours or the next business day after the event. A written notice shall follow this notification within 48 hours to the state detailing the circumstances of the occurrence and stating whether additional measures will be adopted to prevent such visible emissions from drifting across the boundary in the future.

II.D.6. Installation commander, Fort Carson, shall be responsible to ensure compliance with this section by all personnel employing smoke or obscurants at Fort Carson.

III. PARTICULATE MATTER

III.A. Fuel Burning Equipment

III.A.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:

III.A.1.a. 0.5 lbs. per 10⁶ BTU heat input for fuel burning equipment of less than or equal to 1x10⁶ BTU/hr total heat input design capacity.

III.A.1.b. For fuel burning equipment with designed heat inputs greater than 1x10⁶ BTU per hour, but less than or equal to 500x10⁶ 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.

III.A.1.c. i

III.A.1.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.

III.A.2. 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), or other credible method approved by the division, to determine

compliance with this subsection of this regulation. The particulate emission standards contained in this subsection do not include condensable particulate matter, or the back half emissions of EPA Method 5.

B. Incinerators

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

III.B.2. Standard of Performance for all incinerators other than biomedical waste incinerators.

III.B.2.a. In areas designated as nonattainment or attainment/maintenance 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.)

III.B.2.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.)

III.B.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 test(s) in accordance with 40 CFR 60 Appendix A.

III.B.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 Part B, Section V of Regulation No. 6. Standard of Performance for New Biomedical Waste Incinerators as follows:

III.B.4.a. All incinerators, existing as of the effective date of Part B, Section V of Regulation No. 6, with a design rate of four hundred pounds per hour and greater must comply with the requirements of this regulation.

III.B.4.b. All incinerators, existing as of the effective date of Part B, Section V of Regulation No. 6, with a design capacity of less than four hundred pounds per hour must comply with the requirements of this regulation as applicable; 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 Part B, Section V of Regulation No.6, 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 grains per dry standard cubic foot (gr/dscf) of PM for PM non-attainment areas and 0.15 gr/dscf of PM for PM attainment areas; b) 20% opacity and 0.10 gr/dscf of PM for sources constructed after January 30, 1979.)

III.C. Manufacturing Processes

III.C.1. Except as provided in paragraphs 2 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 minute period which is in excess of the following.

III.C.1.a. For process equipment having design 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

III.C.1.b. For process equipment having design 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

III.C.1.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.

III.C.2. Exceptions

Fugitive dust and fugitive particulate emissions as defined in Section II.A.6 of this Regulation.

III.C.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 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), or other credible method approved by the division, to determine compliance with this subsection of this regulation. The particulate emission standards contained in this subsection do not include condensable particulate matter, or the back half emissions of EPA Method 5 (40 CFR 60.275, Appendix A, Part 60).

III.D. Fugitive Particulate Emissions

III.D.1. General Requirements

III.D.1.a. Existing Sources

III.D.1.a.(i). Every owner or operator of a source or activity that 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.

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

III.D.1.b. New Sources

Every owner or operator of a new source or activity that 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.

III.D.1.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]

III.D.1.d. Control Plans

III.D.1.d.(i). With respect to operations or activities that 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.

III.D.1.d.(ii). Sources required to submit control plans for revisions to the division shall do so within sixty 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.D.1.d.(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.]

III.D.1.d.(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.

III.D.1.e. Enforcement

III.D.1.e.(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:

III.D.1.e.(ii).(A). Fails to submit a control plan (or revision of an existing plan) within sixty 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 there from; or

III.D.1.e.(ii).(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 there from; or

III.D.1.e.(ii).(C). Fails to comply with the provisions of an approved control plan.

III.D.1.e.(iii). 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.

III.D.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.

III.D.2.a. Roadways

III.D.2.a.(i). Unpaved

III.D.2.a.(i).(A). Applicability – Attainment and Non-attainment Areas

III.D.2.a.(i).(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.

III.D.2.a.(i).(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.

III.D.2.a.(i).(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.

III.D.2.a.(i).(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.

III.D.2.a.(ii). Paved

III.D.2.a.(ii).(A). Applicability - Attainment and Non-attainment Areas

III.D.2.a.(ii).(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.

III.D.2.a.(ii).(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.

III.D.2.a.(ii).(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.

III.D.2.b. Construction Activities

III.D.2.b.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.b.(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 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.D.2.b.(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.]

III.D.2.b.(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.

III.D.2.c. Storage and Handling of Materials

III.D.2.c.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.c.(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.D.2.c.(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.

III.D.2.c.(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.

III.D.2.d. Mining Activities

III.D.2.d.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.d.(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.D.2.d.(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.

III.D.2.(iv). Control Measures and Operating Procedures

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

III.D.2.d.(iv).(A). watering or chemical stabilization of unpaved roads as often as necessary to minimize re-entrainment of fugitive particulate matter from the road surface, or paving of roads;

III.D.2.d.(iv).(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 re-entrainment of fugitive particulate matter from the road surface;

III.D.2.d.(iv).(C). restricting the speed of vehicles in and around the mining operation;

III.D.2.d.(iv).(D). revegetating, mulching, or otherwise stabilizing the surface of all areas adjoining roads that are a source of fugitive particulate emissions;

III.D.2.d.(iv).(E). to the extent practicable restricting vehicular travel vehicles to established roads;

III.D.2.d.(iv).(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;

III.D.2.d.(iv).(G). substitution of conveyor systems for haul trucks;

III.D.2.d.(iv).(H). minimizing the area of disturbed land;

III.D.2.d.(iv).(I). prompt revegetation of disturbed surface areas;

III.D.2.d.(iv).(J). planting of special windbreak vegetation at critical points;

III.D.2.d.(iv).(K). restricting the areas to be blasted at any one time;

III.D.2.d.(iv).(L). reducing the period of time between initially disturbing the soil and revegetating or other surface stabilization;

III.D.2.d.(iv).(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.]

III.D.2.e. Haul Roads

III.D.2.e.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.e.(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.D.2.e.(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.

III.D.2.e.(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 or techniques approved by the division.

III.D.2.e.(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.

III.D.2.f. Haul Trucks

III.D.2.f.(i) Applicability - Attainment and Non-attainment Areas

III.D.2.f.(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.D.2.f.(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.

III.D.2.f.(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]

III.D.2.g. Tailings Piles and Ponds

III.D.2.g.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.g.(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.D.2.g.(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.

III.D.2.g.(iv). Control Measures and Operating Procedures

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

III.D.2.g.(iv).(A). watering and/or chemical stabilization,

III.D.2.g.(iv).(B). synthetic and/or revegetate covers,

III.D.2.g.(iv).(C). wind breaks,

III.D.2.g.(iv).(D) minimizing the area of disturbed tailings,

III.D.2.g.(iv).(E). restricting the speed of vehicles in and around the tailings operation, and/or,

III.D.2.g.(iv).(F). other equivalent methods or techniques approved by the division.

III.D.2.h. Demolition Activities

III.D.2.h.(i). Applicability - Non-attainment Areas

III.D.2.h.(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.D.2.h.(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.

III.D.2.h.(iv). Control Measures and Operating Procedures

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

III.D.2.h.(iv).(A). wetting down, including pre-watering of work surface,

III.D.2.h.(iv).(B). removal of dirt and mud deposited on improved streets and roads,

III.D.2.h.(iv).(C). wetting down, washing, or covering haulage equipment when necessary to minimize fugitive dust emissions during loading and transit.

III.D.2.h.(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 Regulation No. 8, Part B.

III.D.2.i. Blasting Activities

III.D.2.i.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.i.(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.D.2.i.(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.

III.D.2.i.(iv). Control Measures and Operating Procedures

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

III.D.2.i.(iv).(A). the removal of overburden prior to blasting,

III.D.2.i.(iv).(B). watering down the blasted area as soon as practicable after blasting,

III.D.2.j.(iv).(C). other equivalent methods or techniques approved by the division.

III.D.2.j. Sandblasting Operations

III.D.2.j.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.j.(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.D.2.j.(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.

III.D.2.j.(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.

III.D.2.k. Livestock Confinement Operations

III.D.2.k.(i). Applicability - Attainment and Non-attainment Areas

III.D.2.k.(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.D.2.k.(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.

III.D.2.k.(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.

IV. CONTINUOUS EMISSION MONITORING REQUIREMENTS FOR NEW OR EXISTING SOURCES

IV.A. Sources which are required to install, calibrate, certify and maintain continuous emission monitoring (CEM) systems for opacity, and/or sulfur dioxide and/or carbon monoxide (listed in Sections B, C, and D, of this Section IV and in Section VII.) shall have such equipment installed in a location which in accord with sound engineering practice will provide for accurate opacity and/or sulfur dioxide, and/or carbon monoxide emission readings. The averaging times for these monitors shall correspond to the averaging times for the appropriate emission standard.

IV.B. Fossil Fuel-fired Steam Generators

IV.B.1. A continuous emission monitoring system for the measurement of opacity shall be installed, calibrated, maintained and operated by the owner or operator of any steam generator of a total rated capacity of or greater than 250 million BTU per hour heat input except where:

IV.B.1.a. Gaseous fuel is the only fuel burned or,

IV.B.1.b. Oil or a mixture of gas and oil are the only fuels burned and the source is able to comply with the applicable particulate matter and opacity regulation without utilization of particulate matter collection equipment,

IV.B.1.c. The source demonstrates that a continuous monitoring system would not provide accurate determinations of the opacity of emissions (e.g., condensed, uncombined water vapor in the emissions would prevent accurate readings) and an alternative method of determining opacity approved by the division is employed.

IV.B.2. Either a continuous emission monitoring system for the measurement of sulfur dioxide shall be installed, calibrated, maintained and operated or a division approved sampling plan shall be developed and implemented for determining the amount of sulfur in the fuel in order to calculate sulfur oxide emissions on any fossil fuel fired steam generator of a total rated capacity of or greater than 250 million BTU per hour heat input.

IV.B.3. If an owner or operator is required to install a continuous monitoring system for sulfur oxides, a continuous monitoring system for measuring either oxygen or carbon dioxide is also required.

IV.C. Sulfuric Acid Plant

IV.C.1. The owner or operator of each sulfuric acid plant of or greater than 300 tons per day production capacity (the production capacity being expressed as 100 percent acid) shall install, calibrate, maintain and operate a continuous emission monitoring system for the measurement of sulfur dioxide for each sulfuric acid producing unit within such plant.

IV.D. Fluid Bed Catalytic Cracking Unit at Petroleum Refineries

IV.D.1. The owner or operator of each catalyst regenerator for fluid bed catalytic cracking units of or greater than 20,000 barrels per day fresh feed capacity shall install, calibrate, maintain and operate a continuous emission monitoring system for the measurement of opacity.

IV.D.2. The owner or operator of each fluid bed catalytic cracking unit of 5,000 barrels per day or greater fresh feed capacity, located in a carbon monoxide (CO) nonattainment area shall install, calibrate, maintain, and operate a continuous emission monitoring system for the measurement of carbon monoxide.

IV.D.3. Exemptions:

IV.D.3.a. The owner or operator of a fluid bed catalytic cracking unit described in IV.D.2. may apply to the division for an exemption from continuous emission monitoring requirements listed in subsection IV.D.2. In order for an exemption to be granted, the following requirements must be met:

IV.D.3.a.(i). The owner or operator of a source must conduct a flue gas emission test for carbon monoxide concentration. The test protocol must be approved at least 30 days in advance by the division and emissions during the test must not exceed 250 ppm by volume on a one hour average; and

IV.D.3.a.(ii). Source owners or operators must establish a consistent relationship between carbon monoxide flue gas concentration and indicator parameter(s) such as flue gas oxygen content, or flue gas temperature, through a division approved test program; and

IV.D.3.a.(iii). Source owners or operators must maintain records of CO indicator parameter(s), as described above, for a period of at least two years which shall be made available for division review upon request.

IV.E. Performance Specifications

The performance specifications used to determine the acceptability of monitoring equipment installed pursuant to Section IV.D.2. shall conform to those referenced in Appendix B of Part 60, Title 40, Code of Federal Regulations, or other specifications approved by the division.

IV.F. Calibration of Equipment

Owners or operators of all continuous monitoring systems subject to Section IV. of this regulation shall check the zero and span drift of the system at least once per day and at such other times as designated by the division, according to procedures approved by the division. The division may also make such determinations in order to assure proper quality assurance.

IV.G. Notification and Recordkeeping

The owner or operator of a facility required to install, maintain, and calibrate continuous monitoring equipment shall submit to the division within 30 days following the end of each calendar quarter, a report of excess emissions for all pollutants monitored for that quarter. This report shall consist of the following information and/or other reporting requirements as specified by the division.

IV.G.1. The magnitude of excess emissions computed in accordance with division guidelines, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.

IV.G.2. The nature and cause of the excess emissions, if known.

IV.G.3. The date and time identifying each period of equipment malfunction and the nature of the system repairs or adjustments, if any, made to correct the malfunction.

IV.G.4. A schedule of the calibration and maintenance of the continuous monitoring system.

IV.G.5. Compliance with the reporting requirements of this Section IV.G. shall not relieve the owner or operator of the reporting requirements of Section II.E. of the Common Provisions Regulation concerning upset conditions and breakdowns.

IV.H. A file of all data collected relating to the preceding two- year period shall be maintained by the owner or operator of an affected source. The format in which the required information is submitted shall be determined by the division.

IV.I. The owner or operator of a facility utilizing fuel sampling as an alternative to continuous emission monitoring shall report fuel analysis data as specified in the sampling plan to the division within 30 days following the end of each calendar half in a format prescribed by the division. The purpose of such report shall be to disclose emissions that would exceed SO₂ emission standards.

V. EMISSION STANDARDS FOR EXISTING IRON AND STEEL PLANT OPERATIONS

V.A. Electric Arc Furnaces

V.A.1. Visible emissions from the gas-cleaning device or from uncaptured emissions escaping the Electric Arc Furnace shop, shall not exceed twenty percent (20%) opacity at any time. The approved reference test method for visible emissions measurement on which these standards are based is EPA Method 9 (40 CFR, Part 60, Appendix A (July, 1992)).

V.A.2. Emissions from the gas-cleaning device shall not exceed a mass emission rate of 0.00520 gr/dscf of filterable particulates maximum two-hour average, as measured by EPA Methods 1–4 and the front half of Method 5 (40 CFR 60.275, and Appendices A1 - A3, Part 60), ~~or by other credible method approved by the division~~. This particulate emissions standard does not include condensable emissions, or the back-half emissions of Method 5.

V.B. Sources of particulate emissions at iron and steel plants not subject to specific emission limitations set forth in Section V shall comply with applicable emission limitations set forth elsewhere in this regulation.

V.B.1. Smoke Emissions and Opacity Requirements

[Cross-reference: Section II, subsections A.1., A.2 and A.6.i and A.6.iii]

V.B.2. Particulate Emission Requirements

[Cross-reference: Section III, subsection A.1, A.2, C.1 and C.3]

V.C. A statement of the basis and purpose for the revisions to this Section adopted March 11, 1982 is hereby incorporated by reference, and a copy of the statement is available from the Air Quality Control commission office.

VI. SULFUR DIOXIDE EMISSION REGULATIONS

VI.A. Sources constructed or modified prior to August 11, 1977 shall be considered an existing source. All existing sources of sulfur dioxide emissions, except for sources listed in Section VII, shall comply with the following:

VI.A.1. Averaging time - Unless otherwise specified in other sections of this regulation, the averaging time for all sulfur dioxide emissions standards shall be a three hour rolling average.

VI.A.2. If the sum of sulfur dioxide emission rates for all sources located on a contiguous site is less than three tons per day potential uncontrolled SO₂ emissions, and if all federal and state ambient air quality standards are met no process based SO₂ emission standard shall apply.

VI.A.3. Existing sources of sulfur dioxide shall not emit sulfur dioxide in excess of the following process-specific limitations. (Heat input rates shall be the manufacturer's guaranteed maximum heat input rates).

VI.A.3.a. Coal-fired operations including coal-fired steam generation:

(These standards are also applicable to the use of coal-based by-product fuels.)

VI.A.3.a.(i). Units with a heat input from coal or coal-based by-product fuels of less than 300 million BTU per hour:

1.8 pounds of sulfur dioxide per million BTU of heat input.

VI.A.3.a.(ii). Units with a heat input from coal or coal-based by-product fuels equal to or greater than 300 million BTU per hour:

1.2 pounds of sulfur dioxide per million BTU of heat input.

VI.A.3.b. Oil-fired Operations Including Oil-Fired Steam Generation

VI.A.3.b.(i) Units with a heat input from oil of less than 300 million BTU per hour:

1.5 pounds of sulfur dioxide per million BTU of heating input.

VI.A.3.b.(ii). Units with a heat input from oil equal to or greater than 300 million BTU per hour:

0.8 pounds of sulfur dioxide per million BTU of heating input.

VI.A.3.c. Combustion Turbines

VI.A.3.c.(i). Combustion Turbines with a heat input of less than 300 million BTU per hour:

1.2 pounds of sulfur dioxide per million BTU of heating input.

VI.A.3.c.(ii) Combustion Turbines with a heat input equal to or greater than 300 million BTU per hour:

0.8 pounds of sulfur dioxide per million BTU of heating input.

VI.A.3.d. Natural Gas Desulfurization

Desulfurization Plants emitting more than five tons of sulfur dioxide per day:

2 pounds of sulfur dioxide per 1,000 cubic feet of (actual) delivered gas.

VI.A.3.e. Petroleum Refining

0.7 pounds sulfur dioxide for the sum of all SO₂ emissions from a given Refinery, per barrel of oil processed, per day. This emission limit shall be calculated over each 24-hour period that commences at midnight. If the refinery does not operate for the entire 24-hour period, the actual hours of operation shall be used as the averaging time. At no time shall the averaging time be greater than 24 hours. Refineries in operation on or before August 1, 1995, which are covered by this regulation, shall submit a plan for division approval no later than February 1, 1996. Sources constructed after August 1, 1995 shall submit a plan for division approval along with construction permit applications. The plan shall define how compliance with this limitation will be demonstrated. This plan shall address both how the SO₂ value is calculated, i.e. mass balance, monitors, and how the barrels of oil processed value is derived, taking into account intermediate storage. The division shall not limit the determination of barrels processed per day to a 24-hour period.

All data used to show compliance with this emission standard shall be maintained by the owner or operator of the affected source for a period of two years for sources that are not subject to the operating permit program, and five years for sources that are subject to the operating permit program. This data shall be available for inspection by the division upon request.

VI.A.3.f. Cement Manufacture

Seven pounds of sulfur dioxide per ton of material (including fuel) processed. This emission limit shall be calculated over each 24-hour period that commences at midnight. If the source does not operate for the entire 24-hour period, the actual hours of operation shall be used as the averaging time. At no time shall the averaging time be greater than 24 hours.

All data used to show compliance with this emission standard shall be maintained by the owner or operator of the affected source for a period of two years for sources that are not subject to the operating permit program, and five years for sources that are subject to the operating permit program. This data shall be available for inspection by the division upon request.

VI.A.3.g. Sources Not Specifically Listed Above

Application of all available practical methods of control, which are technologically feasible and economically reasonable. This is to be determined by the division.

VI.A.4. Recordkeeping and Reporting - All sources that have record keeping and reporting requirements shall comply with Sections IV.G. and IV.I of this regulation.

VI.A.5. Data Retention - All sources that have recordkeeping and reporting requirements shall retain emission data for the preceding two-year period as referenced in Section IV.H. of this regulation or for a longer period if required under other applicable regulations.

VI.B. All new sources of sulfur dioxide emissions shall comply with emission limitations as specifically provided by this subsection B.

VI.B.1. For purposes of this Section VI.B. a new source is defined as a newly constructed or modified source of sulfur dioxide emissions that has not been issued an Emission Permit (in accord with Regulation No. 3 of this commission) prior to the August 11, 1977 effective date of this amended regulation.

VI.B.2. The averaging time for all new source emissions standards for sulfur dioxide shall be three hours, and any three-hour rolling average of emission rates which exceeds these standards is a violation of this regulation.

VI.B.3. The term "modification" is as defined in the Common Provisions Regulation, Section I.G. except that any source of sulfur dioxide subject to an emission standard which measures the sum of all sulfur dioxide emissions from a given facility shall not be considered "modified" for the purposes of this regulation unless the alteration may cause an increase in the sum of all sulfur dioxide emissions from such facility.

VI.B.4. New sources of sulfur dioxide shall not emit or cause to be emitted sulfur dioxide in excess of the following process-specific limitations (Heat input rates shall be the manufacturer's guaranteed maximum heat input rates.)

VI.B.4.a. All Coal-Fired Operations, Including Coal-Fired Steam Generators

VI.B.4.a.(i). Units converted from other fuels to coal:

1.2 lbs. SO₂/million BTU of coal heat input.

VI.B.4.a.(ii). Units with a coal heat input of less than 250 million BTU per hour:

1.2 lbs. SO₂/million BTU coal heat input.

VI.B.4.a.(iii). Units with a coal heat input of 250 million BTU per hour or greater:

0.4 lbs. SO₂/million BTU coal heat input.

VI.B.4.b. All Oil-fired Operations, Including Oil-Fired Steam Generation.

VI.B.4.b.(i). Units with an oil heat input of less than 250 million BTU per hour:

0.8 pounds of sulfur dioxide per million BTU of oil heat input.

VI.B.4.b.(ii). Units with an oil heat input of 250 million BTU per hour or greater:

0.3 lbs. SO₂/million BTU of oil heat input.

VI.B.4.c. Combustion Turbines

VI.B.4.c.(i). Combustion Turbines with a heat input of less than 250 million BTU per hour:

0.8 pounds of sulfur dioxide per million BTU of heat input.

VI.B.4.c.(ii). Combustion Turbines with heat input of 250 million BTU per hour or greater:

0.35 lbs. SO₂/million BTU of heat input.

IV.B.4.d. Natural Gas Desulfurization

(As employed in this section, the term “delivered” means (a quantity of gas) delivered to the transmission pipeline).

VI.B.4.d.(i). Desulfurization Plants emitting less than three tons per day of SO₂:

2.0 lbs. SO₂/1000 cubic feet of (actual) delivered natural gas.

VI.B.4.d.(ii). Sources emitting three or more tons per day of SO₂:

0.8 lbs. SO₂/1000 cubic feet of (actual) delivered natural gas.

VI.B.4.e. Petroleum Refining

0.3 lbs. sulfur dioxide, for the sum of all SO₂ emissions from a given refinery per barrel of oil processed. (Averaged over a daily 24-hour period, I.E. Midnight through 23:59.)

VI.B.4.f. Production of Oil from Shale

Production of oil from shale shall be subject to the emission limitations provided in Colorado Air Quality Control commission Regulation No. 6, Subpart B (Non-federal New Source Performance Standards (NSPS), Section IV.C.3.)

VI.B.4.g. Refining of Oil Produced from Shale

VI.B.4.g.(i). Refineries processing less than 1,000 barrels per day: No process emission standard.

VI.B.4.g.(ii). Refineries processing 1,000 or more barrels per day:

0.3 lbs. sulfur dioxide, for the sum of all Sulfur dioxide emissions from a given refinery, per barrel of oil processed.

VI.B.4.h. Sulfuric Acid Production

4.0 lbs. sulfur dioxide/ton of acid produced and 0.15 lbs. H₂SO₄ mist/ton of acid produced.

VI.B.5. Any new source of sulfur dioxide not specifically regulated above shall:

VI.B.5.a. Limit emissions to not more than two (2) tons per day of sulfur dioxide, or

VI.B.5.b. Utilize best available control technology as determined by the division subject to review by the commission.

VI.B.6. Recordkeeping and Reporting - All sources that have recordkeeping and reporting requirements shall comply with Sections IV.G. and IV.I of this regulation.

V.I.B.7. Data Retention - All sources that have recordkeeping and reporting requirements shall retain emission data for the preceding two-year period as referenced in Section IV.H. of this regulation or for a longer period if required under other applicable regulations.

V.I.B.8. A written statement of the basis and purpose of this new source emission control regulation, which includes a detailed analytical evaluation of the scientific and technical rationale justifying this regulation has been prepared and adopted by the commission on August 11, 1977. This written statement entitled, "Rationale for the Promulgation of a New Source Emission Control Regulation and Ambient Air Quality Standards for Sulfur Dioxide", is hereby incorporated in this regulation by reference, in accord with C.R.S. 1973, 24-4-103 as amended.

VI.C. Fuel Sampling

All fuel sampling plans must be approved by the division. The appropriate ASTM test methods or other equivalent method approved by the division shall be used for all fuel sampling plans.

VI.D. 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 facility subject to the emission standards under Section VI to conduct performance tests, as measured by EPA Methods 1-4 Methods 6, 6a, 6b, 6c and Method 8 (40 CFR 60.275, Appendix A, Part 60), or any other method which the division finds appropriate to determine compliance with this subsection of this regulation.

VI.D.1. The owner or operator of an existing source of sulfur dioxide shall, upon request of the division, conduct performance test(s) and furnish the division a written report of the results of such performance test(s) to determine compliance with this regulation.

VI.D.2. Performance test(s) shall be conducted and data reduced and recorded in accordance with the test methods and procedures specified above unless the division:

VI.D.2.a. Approves the use of an alternative method the results of which the division has determined to be adequate for indicating whether a specific source is in compliance, or

VI.D.2.b. Waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the division's satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph C. shall be construed to abrogate the commission's or division's authority to require testing under Article 7 of Title 25, Colorado Revised Statute 1973, and regulations of the commission promulgated thereunder.

VI.D.3. The owner or operator of an affected facility shall provide the division thirty days prior notice of the performance test to afford the division the opportunity to have an observer present.

VI.E. Related Compounds Containing Sulfur in Oxidized States:

VI.E.1. For the purposes of this regulation, all oxidized forms of sulfur (including, but not restricted to sulfur trioxide (SO_3), trionyl chloride (SOCl_2), and sulfuric acid mist (H_2SO_4)) shall be considered as sulfur dioxide.

VI.E.2. Quantities of such oxidized sulfur compounds shall be converted on a molar basis to an equivalent quantity of sulfur dioxide. The total of all such quantities, (expressed in parts per million by volume sulfur-dioxide-equivalents of other oxidized forms) shall be interpreted as “parts per million by volume sulfur dioxide” as used in Section B. above.

VI.F. Alternative Compliance Procedures

VI.F.1. Any person may apply to the division Director for approval of an alternative:

VI.F.1.a. Test method,

VI.F.1.b. Method of control,

VI.F.1.c. Compliance period,

VI.F.1.d. Emission limit, or

VI.F.1.e. Monitoring schedule.

VI.F.2. The application shall include a demonstration that the proposed alternative produces:

VI.F.2.a. An equal or greater air quality benefit than that required in this subsection VI, or

VI.F.2.b. The alternative test method is equivalent to that required by these regulations.

VI.F.3. The division Director shall obtain concurrence from EPA prior to approving an alternative.

VII. EMISSION REGULATIONS FOR CERTAIN ELECTRIC GENERATING STATIONS OWNED AND OPERATED BY THE PUBLIC SERVICE COMPANY OF COLORADO

VII.A. The electric generating stations owned and operated by the Public Service Company of Colorado listed below shall not emit or cause to be emitted nitrogen oxides (NO_x) or sulfur dioxide (SO₂) in excess of the following limits. The emission rates for NO_x and SO₂ are measured in terms of pounds of pollutant per million British Thermal Units of fuel fired in the unit (lb/mmBTU).

VII.A.1. Cherokee Electric Generating Station, 6198 North Franklin Street, Denver, CO

VII.A.1.a. NO_x and SO₂ limits:

	NO _x (lb/mmBTU)	SO ₂ (lb/mmBTU)
Unit 1	-	1.1
Unit 2	-	1.1
Unit 3	0.60	1.1

Unit 4	0.45	1.1
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The NO_x limit will be calculated based on a 30-day rolling average, and is effective November 1, 1994.

The SO₂ limit will be calculated as a three-hour rolling average, and is effective November 1, 1994.

Public Service Company of Colorado shall install, certify and operate continuous emission monitoring equipment in accordance with 40 CFR Part 60.13, for measuring opacity, SO₂, NO_x, and either O₂ or CO₂ on Units 1, 2, 3 and 4.

VII.A.b. Effective January 1, 2005, the NO_x limit for Unit 1 shall be 0.60 lb/mm BTU, provided EPA approves the designation of the Denver area as a PM-10 attainment/maintenance area. Such limit shall be calculated based on a 30-day rolling average.

VII.A.c. Upon EPA approval of the designation of the Denver area as a PM-10 attainment/maintenance area, the SO₂ emission rate from units 1 and 4 shall not exceed 0.88 lb/mm BTU, calculated separately for each unit, based on a 30-day rolling average. Such emission limit shall apply seasonally from November 1 through March 1. The additional SO₂ limit set out in this subsection VII.A.1.c. shall not apply unless EPA repeals the incorporation of SO₂ permit limits into the SIP at 40 CFR 52.320(c)(82)(i)(E).

VII.A.2. Arapahoe Electric Generating Station, 2601 South Platte River Drive, Denver, CO

VII.A.2.a. NO_x and SO₂ limits:

	NO _x (lb/mmBTU)	SO ₂ (lb/mmBTU)
Unit 1	-	1.1
Unit 2	-	1.1
Unit 3	-	1.1
Unit 4	0.60	1.1 +20% annual tonnage reduction

- The NO_x limit will be calculated based on a 30-day rolling average, and is effective November 1, 1994.

- The SO₂ limit will be calculated as a three-hour rolling average, and is effective January 1, 1995.

- The 20% SO₂ limit from Unit 4 shall be calculated on a calendar year, total annual tonnage basis. Public Service Company of Colorado shall install, certify and operate continuous emission monitoring equipment in accordance with 40 CFR Part 60.13, for measuring opacity, SO₂, NO_x, and either O₂ or CO₂ on Units 1, 2, 3, and 4.

VII.A.2.b. Upon EPA approval of the designation of the Denver area as a PM-10 attainment/maintenance area, the SO₂ emission rate from unit 4 shall not exceed 0.88 lb/mm BTU, calculated on a 30-day rolling average. Such emission limit shall apply seasonally from November 1 through March 1.

VII.A.2.c. Retirement of units 1 and 2

VII.A.2.c.(i). Units 1 and 2 shall be permanently retired by January 1, 2003. This section VII.A.2.c. shall become effective upon EPA approval of the designation of the Denver area as a PM-10 attainment/maintenance area.

VII.A.2.(ii). This section VII.A.2.c shall not be construed to prevent the construction or operation of a new source on the site of such units, provided any such new source complies with all laws and regulations applicable to new sources.

VII.A.3. Valmont Electric Generating Station, 1800 North 63rd Street, Boulder, CO

	NO _x (lb/mmBTU)	SO ₂ (lb/mmBTU)
Unit 5	0.45	1.1

- The NO_x limit will be calculated based on a 30-day rolling average, and is effective November 1, 1994.
- The SO₂ limit will be calculated as a three-hour rolling average, and is effective November 1, 1994.
- Public Service Company of Colorado shall install, certify and operate continuous emission monitoring equipment in accordance with 40 CFR Part 60.13, for measuring opacity, SO₂, NO_x, and either O₂ or CO₂ on Unit 5.

VIII. RESTRICTIONS ON THE USE OF OIL AS A BACKUP FUEL

VIII.A. Applicability

The provisions of this section are applicable to all points at the following stationary sources in the Denver PM10 Attainment/Maintenance area that use oil as a backup fuel for natural gas, which is the primary process fuel:

VIII.A.1. Public Service Company of Colorado, Zuni Electric Generating Station;

VIII.A.2. Public Service Company of Colorado, Valmont Electric Generating Station;

VIII.A.3. Public Service Company of Colorado, Delgany Steam Generating Station;

VIII.A.4. University of Colorado Health Science Center (Fitzsimmons); and

VIII.A.5. Trigen-Colorado Energy, Golden, CO.

VIII.B. Requirements

Beginning November 1, 1993, natural gas shall be the only fuel used from November 1 to March 1 of each year, except under the following circumstances:

VIII.B.1. The supplier or transporter of natural gas imposes a curtailment or an interruption of service;

VIII.B.2. For necessary testing of equipment used to operate the unit on oil, testing of fuel and training of personnel; or

VIII.B.3. When an equipment malfunction at the facility makes it impossible or unsafe for the unit to operate on natural gas.

VIII.C. Recordkeeping

Each stationary source subject to these provisions shall maintain records for a period of two years, which include the following information:

VIII.C.1. dates and number of hour's fuel oil are burned;

VIII.C.2. percent sulfur analysis of the fuel oil that is burned;

VIII.C.3. number of gallons burned each day; and

VIII.C.4. reason(s) for the use of the fuel oil.

VIII.D. Reporting

Beginning April 1, 1994 and by April 1 of each year thereafter, each stationary source subject to these provisions shall submit to the division a report containing the information listed in Section VIII.C.

VIII.E. Alternate Recordkeeping and Reporting

Where the information required under subsections C and D above is otherwise made available to the division, for example in Air Pollution Emission Notice (APEN) reports submitted by the source or pursuant to operating permit requirements or analogous information is maintained by the source in a credible form approved by the division, the requirements of subsections C and D of this Section VIII are satisfied.

IX. EMISSION REGULATIONS CONCERNING AREAS WHICH ARE NONATTAINMENT OR ATTAINMENT/MAINTENANCE FOR CARBON MONOXIDE – REFINERY FLUID BED CATALYTIC CRACKING UNITS:

No later than nine months after the effective date of this revision (January 30, 1987) no source which has emitted 1,000 or more tons of carbon monoxide during any 12 month period, nor any source which can reasonably be expected to emit 1,000 or more tons of carbon monoxide during any future 12-month period, shall emit any gas in which carbon monoxide constitutes 0.050% (500 ppm) or more of the volume of the gas, based on a one hour average.

APPENDIX A

Method for Measuring Opacity from Fugitive Particulate Emission Sources

a. Principle and Applicability

(i) Principle. The opacity of emissions from fugitive particulate emission sources is determined visually by a qualified observer.

(ii) Applicability. This method is applicable for the determination of the opacity of emissions from fugitive particulate emission sources and for qualifying observers for visually determining opacity of emissions; provided, however, this method shall not be used when wind velocities exceed 30 m.p.h. as determined by records from the nearest official station of the U.S. Weather Service, by interpretation of surface weather maps by a qualified meteorologist, or by use of one or more anemometers at the site. The division shall use anemometers where practicable.

b. Procedures. The observer qualified in accordance with Section c. of this method shall use the following procedures for visually determining the opacity of emissions:

(i) Position. The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction. The observer's line of sight should not include more than one plume at a time. Where the plumes from more than one source have been combined such that it is not possible to observe the emissions from a subject source alone this method shall not be applied to the "combined plume" to determine the opacity of emissions from any of the contributing sources. Emissions from rock or mineral drilling, crushing, conveying, screening, and storing are evaluated in the following manner:

(A) Drilling. Emissions from drilling operations are evaluated at the point at which they are released from the drilling device or from the drill hole.

(B) Crushing. Emissions included at this evaluation point are released as material is discharged from the primary and secondary crushing machines. Observations are performed on the same elevation as the discharge if possible.

(C) Conveying. Visible emissions are evaluated as material is discharged at conveyer belt transfer points and loading points. Evaluation shall occur at the same elevation as the discharge if possible.

(D) Screening. Visible emissions are evaluated as material is discharged from the screen into the chutes. The observer shall obtain an observation point as close to the same elevation of the screens as possible.

(E) Storage. Observations are performed at ground level.

(F) In operations involving rock or mineral drilling, moisture content of the material plays an important part in type and quantity of visible emissions. Therefore, any moisture in the feedstock or addition of moisture to the process should be noted on the field data sheet.

(G) Emissions from all other sources of fugitive particulate emissions subject to this regulation shall be evaluated in a manner consistent with the above procedures.

(ii) Field Records. The observer shall record the name of the plant, emission location, type facility, observer's name and affiliation, and the date on a field data sheet. The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on a field data sheet at the time opacity readings are initiated and completed.

(iii) Observations. Opacity observations shall be made at the point of greatest opacity in the plume and with a background of contrasting color. The observer shall not look continuously at the plume, but instead shall observe the plume momentarily at 15-second intervals. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

(iv) Recording Observations. Opacity observations shall be recorded to the nearest 5 percent at 15-second intervals on an observational record sheet. A minimum of 24 observations shall be recorded. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

(v) Data Reduction. Opacity shall be determined as an average of 24 consecutive observations recorded at 15-second intervals. Divide the observations recorded on the record sheet into sets of 24 consecutive observations. A set is composed of any 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. If an applicable standard specifies an averaging time requiring more or less than 24 observations, calculate the average for all observations made during the specified time period. Record the average opacity on a record sheet.

c. Qualifications and Testing

(i) Certification requirements. To receive certification as a qualified observer, a candidate must be tested and demonstrate the ability to assign opacity readings in 5 percent increments to 25 different black plumes and 25 different white plumes, with an error not to exceed 15 percent opacity on any one reading and an average error not to exceed 7.5 percent opacity in each category. Candidates shall be tested according to the procedures described in paragraph c. (ii). Smoke generators used pursuant to this paragraph shall be equipped with a smoke meter which meets the requirements of paragraph c.(iii).

The certification shall be valid for a period of six months, at which time the qualification procedure must be repeated by the observer in order to retain certification.

(ii) Certification Procedure. The certification test consists of showing the candidate a complete run of 50 plumes - 25 black plumes and 25 white plumes - produced by a smoke generator. Plumes within each set of 25 black and 25 white runs shall be presented in random order. The candidate assigns an opacity value to each plume and records his observation on a suitable form. At the completion of each run of 50 readings, the score of the candidate is determined. If a candidate fails to qualify, the complete run of 50 readings must be repeated in any retest. The smoke test may be administered as part of a smoke school or training program, and may be preceded by training or familiarization runs of the smoke generator during which candidates are shown black and white plumes of known opacity.

(iii) Smoke Generator Specifications. Any smoke generator used for the purposes of paragraph c. (ii) shall be equipped with a smoke meter installed to measure opacity across the diameter of the smoke generator stack. The smoke meter output shall display in stack opacity based upon a path length equal to the stack exit diameter, on a full 0 to 100 percent chart recorder scale. The smoke meter optional design and performance shall meet the specifications shown in Table 1. The smoke meter shall be calibrated as prescribed in paragraph c. (iii)(A) prior to the conduct of each smoke reading test. At the completion of each test, the zero and span drift shall be checked and if the drift exceeds 1 percent opacity, the condition shall be corrected prior to conducting any subsequent test runs. The smoke meter shall be demonstrated, at the time of installation, to meet the specifications listed in Table 1. This demonstration shall be repeated following any subsequent repair or replacement of the photocell or associated electronic circuitry including the chart recorder or output meter, or every 6 months, whichever occurs first.

(A) Calibration. The smoke meter is calibrated after allowing a minimum of 30 minutes warm-up by alternately producing simulated opacity of 0 percent and 100 percent. When stable responses at 0 percent or 100 percent is noted, the smoke meter is adjusted to produce an output of 0 percent or 100 percent, as appropriate. This calibration shall be repeated until stable 0 percent or 100 percent readings are produced without adjustment. Simulated 0 percent and 100 percent opacity values may be produced by alternately switching the power to the light source on and off while the smoke generator is not producing smoke.

<u>Table 1</u>		
<u>Smoke Meter Design and Performance Specifications</u>		
<u>Parameter</u>		<u>Specification</u>
a.	Light Source	Incandescent lamp operated at nominal rate voltage
b.	Spectral Response of Photocell	Photopic (daylight spectral response of the human eye - reference d(iii))
c.	Angle of View	15° maximum total angle
d.	Angle of Projection Angle	15° maximum total
e.	Calibration Error	3% opacity, maximum
f.	Zero and Span	1% opacity, maximum
g.	Response Time	Five seconds

B. Smoke Meter Evaluation. The smoke meter design and performance are to be evaluated as follows:

(1) Light Source. Verify from manufacturer's data and from voltage measurements made at the lamp, as installed, that the lamp is operated within 6 percent of the nominal rated voltage.

(2) Spectral Response of Photocell. Verify from manufacturer's data that the photocell has a photopic response; i.e., the spectral sensitivity of the cell shall closely approximate this standard spectral-luminosity curve for photopic vision that is referenced in (b) of Table 1.

(3) Angle of View. Check construction geometry to ensure that the total angle of view of the smoke plume, as seen by the photocell, does not exceed 15°. The total angle of view may be calculated from: $\theta = 2 \tan^{-1} d/2L$ where θ =total angle of view; d=the sum of the photocell diameter + the diameter of the limiting aperture; and L=the distance from the photocell to the limiting aperture. The limiting aperture is the point in the path between the photocell and the smoke plume where the angle of view is most restricted. In smoke generator smoke meters this is normally an orifice plate.

(4) Angle of Projection. Check construction geometry to ensure that the total angle of projection of the lamp on the smoke plume does not exceed 15° . The total angle of projection may be calculated from: $\theta = 2 \tan^{-1} d/2L$, where θ =total angle of projection; d =the sum of the length of the lamp filament and the diameter of the limiting aperture; and L =the distance from the lamp to the limiting aperture.

(5) Calibration Error. Using neutral-density filters of known opacity, check the error between the actual response and the theoretical linear response of the smoke meter. This check is accomplished by first calibrating the smoke meter according to (1) and then inserting a series of three neutral-density filters of nominal opacity of 20, 50, and 75 percent in the smoke meter path length. Filters calibrated within 2 percent shall be used. Care should be taken when inserting the filters to prevent stray light from affecting the meter. Make a total of five nonconsecutive readings for each filter. The maximum error on any one reading shall be 3 percent opacity.

(6) Zero and Span Drift. Determine the zero and span drift by calibrating and operating the smoke generator in a normal manner over a 1-hour period. The drift is measured by checking the zero and span at the end of this period.

(7) Response Time. Determine the response time by producing the series of five simulated 0 percent and 100 percent opacity values and observing the time required to reach stable response. Opacity values of 0 percent and 100 percent may be simulated by alternately switching the power to the light source off and on while the smoke generator is not operating.

APPENDIX B

Method of Measurement of Off-Property Transport of Fugitive Particulate Emissions

a. Applicability. This method is applicable for the determination of the off-property transport of fugitive particulate emissions sources covered by Section III.D.2 of this regulation; provided, however, this method shall not be used when wind velocities exceed 30 m.p.h. as determined by records from the nearest official station of the U.S.

Weather Service, by interpretation of surface weather maps by a qualified meteorologist, or by use of one or more anemometers at the site. The Division shall use anemometers where practicable.

b. Procedure

(i) Position. The observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. The observer shall position himself off said property so as to be able to sight along a line which does not cross the property of emission origination. Consistent with maintaining the above requirements, the observer shall, to the extent possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction.

(ii) Field Records. The observer shall record the name of the plant, emission location, type facility, observer's name and affiliation, and the date on a field data sheet. The time, estimated distance and the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on a field data sheet at the time readings are initiated and completed.

(iii) Observations. Observations shall be made in accordance with the provisions of this Appendix B sighting along a line which does not cross the property of emission origination and two such observations

of fugitive particulate emissions transported off the property of at least 15 seconds in duration [within 24 hours] must be made and must be separated by at least fifteen (15) minutes.