

**WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
STANDARDS AND REGULATIONS**

**Monitoring Regulations**

**CHAPTER 7**

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**CHAPTER 7**

**Section 1. Introduction to monitoring regulations.**

(a) These sections establish general monitoring regulations. These regulations may be superseded by specific monitoring requirements under other chapters of the Wyoming Air Quality Standards and Regulations.

**Section 2. Continuous monitoring requirements for existing sources.**

(a) The owner or operator of any existing solid fossil fuel-fired steam generator with a heat input greater than 250 million Btu per hour shall install, calibrate, operate, and maintain a continuous monitoring system for stack gas opacity.

(i) Such continuous monitoring equipment shall be demonstrated by the owners or operators to meet the performance specifications for such equipment as given in 40 CFR part 60, Appendix B.

(ii) Such continuous monitoring equipment shall complete a minimum of one cycle of sampling and analyzing for each successive ten-second period and one cycle of data recording for each successive six-minute period.

(iii) The owner or operator of such equipment shall:

(A) Record the zero and span drift in accordance with the method prescribed by the manufacturer of such instruments;

(B) Subject the instruments to the manufacturer's recommended zero and span check at least once daily unless the manufacturer has recommended adjustments at shorter intervals, in which case such recommendations shall be followed;

(C) Adjust the zero and span whenever the 24-hour zero drift or 24-hour calibration drift limits of the applicable performance specifications in 40 CFR part 60, Appendix B, are exceeded.

(iv) Instrument span shall be approximately 200 percent of the expected instrument data display output corresponding to the emission standard for the source.

(v) The owner or operator of a source subject to this regulation shall install the required continuous monitoring systems such that representative measurements

of emissions from the affected facility are obtained. The location of such systems shall be approved by the Administrator.

(vi) The owner or operator of any facility subject to the requirements of this regulation shall submit a written report of excess emissions for each calendar quarter and the nature and cause of the excess emissions, if known. The averaging period used for data reporting shall be six minutes. The required report shall include as a minimum:

(A) The magnitude in actual percent opacity of all six-minute averages of opacity greater than the applicable opacity standard for each hour of operation of the facility. Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four equally spaced, instantaneous opacity measurements per minute. The date and time of the recorded excesses shall be included.

(B) The date and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments shall be reported. The Administrator may require proof of continuous monitoring system performance whenever system repairs or adjustments have been made.

(C) When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be included in the report.

(D) The owners or operators of affected facilities shall maintain a file of all information reported in the quarterly summaries, and all other data collected either by the continuous monitoring system for a minimum of two years from the date of collection of such data or submission of such summaries.

(vii) The reporting requirements of paragraph 23(a)(vi)(A) shall not apply during any period of monitoring system malfunction, provided that the source owner or operator shows, to the satisfaction of the Administrator, that the malfunction was unavoidable and is being repaired as expeditiously as practicable.

(viii) The owner or operator of any source subject to this regulation shall complete the installation and performance tests of the equipment required by this regulation and begin monitoring and recording within 18 months from promulgation of this regulation.

(b) The requirements for continuous opacity monitors set forth in paragraph 23(a) above shall not apply to an otherwise affected source if such source utilizes a wet type air pollution control device such that the stack gas contains uncombined water vapor. In such cases, the Administrator may require the installation and operation of such alternate particulate emission continuous monitoring systems as he deems appropriate.

Section 3. **Compliance assurance monitoring (CAM).**

(a) Definitions. For purposes of this section:

“*Act*” means the Clean Air Act, as amended by Pub.L. 101-549, 42 U.S.C. 7401, et seq.

“*Applicable requirement*” means all of the following as they apply to emissions units at a source subject to this section (including requirements with future effective compliance dates that have been promulgated or approved by the EPA or the State through rulemaking at the time of issuance of the operating permit):

- (i) Any standard or other requirement provided for in the Wyoming Implementation Plan approved or promulgated by the EPA under Title I of the Act that implements the relevant requirements of the Act, including any revisions to the plan promulgated in 40 CFR part 52;
- (ii) Any standards or requirements in the WAQSR which are not a part of the approved Wyoming Implementation Plan and are not federally enforceable;
- (iii) Any term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rulemaking under Title I, including parts C or D of the Act and including Chapter 5, Section 2 and Chapter 6, Sections 2 and 4 of the WAQSR;
- (iv) Any standard or other requirement promulgated under section 111 of the Act, including section 111(d) and Chapter 5, Section 2 of the WAQSR;
- (v) Any standard or other requirement under section 112 of the Act, including any requirement concerning accident prevention under section 112(r)(7) of the Act and including any regulations promulgated by the EPA and the State pursuant to section 112 of the Act;
- (vi) Any standard or other requirement of the acid rain program under Title IV of the Act or the regulations promulgated thereunder;
- (vii) Any requirements established pursuant to section 504(b) or section 114(a)(3) of the Act concerning enhanced monitoring and compliance certifications;
- (viii) Any standard or other requirement governing solid waste incineration, under section 129 of the Act;
- (ix) Any standard or other requirement for consumer and commercial products, under section 183(e) of the Act (having to do with the release of volatile organic compounds under ozone control requirements);

(x) Any standard or other requirement of the regulations promulgated to protect stratospheric ozone under Title VI of the Act, unless the EPA has determined that such requirements need not be contained in a Title V permit;

(xi) Any national ambient air quality standard or increment or visibility requirement under part C of Title I of the Act, but only as it would apply to temporary sources permitted pursuant to section 504(e) of the Act; and

(xii) Any state ambient air quality standard or increment or visibility requirement of the WAQSR.

(xiii) Nothing under Chapter 6, Section 3(b)(v) shall be construed as affecting the allowance program and Phase II compliance schedule under the acid rain provision of Title IV of the Act.

**“Capture system”** means the equipment (including but not limited to hoods, ducts, fans, and booths) used to contain, capture and transport a pollutant to a control device.

**“Continuous compliance determination method”** means a method, specified by the applicable standard or an applicable permit condition, which:

(i) Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and

(ii) Provides data either in units of the standard or correlated directly with the compliance unit.

**“Control device”** means equipment, other than inherent process equipment, that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere. The types of equipment that may commonly be used as control devices include, but are not limited to, fabric filters, mechanical collectors, electrostatic precipitators, inertial separators, afterburners, thermal or catalytic incinerators, adsorption devices (such as carbon beds), condensers, scrubbers (such as wet collection and gas absorption devices), selective catalytic or non-catalytic reduction systems, flue gas recirculation systems, spray dryers, spray towers, mist eliminators, acid plants, sulfur recovery plants, injection systems (such as water, steam, ammonia, sorbent or limestone injection), and combustion devices independent of the particular process being conducted at an emissions unit (e.g., the destruction of emissions achieved by venting process emission streams to flares, boilers or process heaters). For purposes of this part, a control device does not include passive control measures that act to prevent pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of pollutants, use of low-polluting fuel or feedstocks, or the use of combustion or other process design features or characteristics. If an applicable requirement establishes that particular equipment which otherwise meets this definition of a control device does not constitute a control device as applied to a

particular pollutant-specific emissions unit, then that definition shall be binding for purposes of this part.

**“Data”** means the results of any type of monitoring or method, including the results of instrumental or non-instrumental monitoring, emission calculations, manual sampling procedures, recordkeeping procedures, or any other form of information collection procedure used in connection with any type of monitoring or method.

**“Emission limitation or standard”** means any applicable requirement that constitutes an emission limitation, emission standard, standard of performance or means of emission limitation as defined under the Act. An emission limitation or standard may be expressed in terms of the pollutant, expressed either as a specific quantity, rate or concentration of emissions (e.g., pounds of SO<sub>2</sub> per hour, pounds of SO<sub>2</sub> per million British thermal units of fuel input, kilograms of VOC per liter of applied coating solids, or parts per million by volume of SO<sub>2</sub>) or as the relationship of uncontrolled to controlled emissions (e.g., percentage capture and destruction efficiency of VOC or percentage reduction of SO<sub>2</sub>). An emission limitation or standard may also be expressed either as a work practice, process or control device parameter, or other form of specific design, equipment, operational, or operation and maintenance requirement. For purposes of this part, an emission limitation or standard shall not include general operation requirements that an owner or operator may be required to meet, such as requirements to obtain a permit, to operate and maintain sources in accordance with good air pollution control practices, to develop and maintain a malfunction abatement plan, to keep records, submit reports, or conduct monitoring.

**“Emissions unit”** means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act. This term is not meant to alter or affect the definition of the term “unit” for purposes of Title IV of the Act.

**“Exceedance”** shall mean a condition that is detected by monitoring that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) are greater than the applicable emission limitation or standard (or less than the applicable standard in the case of a percent reduction requirement) consistent with any averaging period specified for averaging the results of the monitoring.

**“Excursion”** shall mean a departure from an indicator range established for monitoring under this part, consistent with any averaging period specified for averaging the results of the monitoring.

**“Greenhouse gases (GHGs)”** means the air pollutant defined as the aggregate group of six greenhouse gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

**“Inherent process equipment”** means equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or

operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process equipment. For the purposes of this part, inherent process equipment is not considered a control device.

**“Major source”** means any stationary source (or any group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control of the same person or persons under common control) belonging to a single major industrial grouping and that is described in paragraphs (i), (ii), or (iii) of this definition. For the purpose of defining “major source”, a stationary source or group of stationary sources shall be considered part of a single industrial grouping if all of the pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same Major Group (i.e., all have the same two-digit code) as described in the Standard Industrial Classification Manual, 1987.

(i) A major source under section 112 of the Act, which is defined as:

(A) For pollutants other than radionuclides, any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, in the aggregate, 10 tons per year (tpy) or more of any hazardous air pollutant which has been listed pursuant to section 112(b) of the Act, 25 tpy or more of any combination of such hazardous air pollutants, or such lesser quantity as the EPA may establish by rule. Notwithstanding the preceding sentence, emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources; or

(B) For radionuclides, “major source” shall have the meaning specified by the EPA by rule.

(ii) A major stationary source of air pollutants, as defined in section 302 of the Act, that directly emits or has the potential to emit, 100 tpy or more of any air pollutant including any major source of fugitive emissions of any such pollutant, as determined by the rule by the EPA, except that a source that meets this definition for only GHGs and no other air pollutant, shall not be required to comply with the provisions of this section ~~unless, on or after July 1, 2011, the stationary source emits or has the potential to emit 100,000 tpy CO<sub>2</sub>-equivalent emissions (as defined in this section) and 100 tpy of GHGs on a mass basis.~~ Emissions of air pollutants regulated solely due to section 112(r) of the Act shall not be considered in determining whether a source is a “major source” for purposes of Chapter 6, Section 3 applicability. The fugitive emissions of a stationary source shall not be considered in determining whether it is a major



stationary source unless the source belongs to one of the following categories of stationary sources:

(A) Stationary sources listed in Chapter 6, Section 4(a)(i)(a) of the WAQSR; or

(B) Any other stationary source category, which as of August 7, 1980 is being regulated under section 111 or 112 of the Act.

(iii) A major stationary source as defined in part D of Title I of the Act (in reference to sources located in nonattainment areas).

**“Monitoring”** means any form of collecting data on a routine basis to determine or otherwise assess compliance with emission limitations or standards. Recordkeeping may be considered monitoring where such records are used to determine or assess compliance with an emission limitation or standard (such as records of raw material content and usage, or records documenting compliance with work practice requirements). The conduct of compliance method tests, such as the procedures in 40 CFR part 60, Appendix A, on a routine periodic basis may be considered monitoring (or as a supplement to other monitoring), provided that requirements to conduct such tests on a one-time basis or at such times as a regulatory authority may require on a non-regular basis are not considered monitoring requirements for purposes of this paragraph. Monitoring may include one or more than one of the following data collection techniques, where appropriate for a particular circumstance:

(i) Continuous emission or opacity monitoring systems;

(ii) Continuous process, capture system, control device or other relevant parameter monitoring systems or procedures, including a predictive emission monitoring system;

(iii) Emission estimation and calculation procedures (e.g., mass balance or stoichiometric calculations);

(iv) Maintenance and analysis of records of fuel or raw materials usage;

(v) Recording results of a program or protocol to conduct specific operation and maintenance procedures;

(vi) Verification of emissions, process parameters, capture system parameters, or control device parameters using portable or in situ measurement devices;

(vii) Visible emission observations;

(viii) Any other form of measuring, recording, or verifying on a routine basis emissions, process parameters, capture system parameters, control device

parameters or other factors relevant to assessing compliance with emission limitations or standards.

**“Operating permit”** means any permit or group of permits covering a source under Chapter 6, Section 3, Operating Permits that is issued, renewed, amended, or revised pursuant to Chapter 6, Section 3.

**“Operating permit application”** shall mean an application (including any supplement to a previously submitted application) that is submitted by the owner or operator in order to obtain a Chapter 6, Section 3, operating permit.

**“Owner or operator”** means any person who owns, leases, operates, controls or supervises a stationary source subject to this part.

**“Pollutant-specific emissions unit”** means an emissions unit considered separately with respect to each regulated air pollutant.

**“Potential to emit”** means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term “capacity factor” as used in Title IV of the Act or the regulations promulgated thereunder.

**“Predictive emission monitoring system (PEMS)”** means a system that uses process and other parameters as inputs to a computer program or other data reduction system to produce values in terms of the applicable emission limitation or standard.

**“Regulated air pollutant”** means the following:

- (i) Nitrogen oxides (NO<sub>x</sub>) or any volatile organic compound;
- (ii) Any pollutant for which a national ambient air quality standard has been promulgated;
- (iii) Any pollutant that is subject to any standard established in Chapter 5, Section 2 of the WAQSR or section 111 of the Act;
- (iv) Any Class I or II substance subject to a standard promulgated under or established by Title VI of the Act; or
- (v) Any pollutant subject to a standard promulgated under section 112 or other requirements established under section 112 of the Act, including sections 112(g), (j), and (r) of the Act, including the following:

(A) Any pollutant subject to requirements under section 112(j) of the Act. If the EPA fails to promulgate a standard by the date established pursuant to section 112(e) of the Act, any pollutant for which a subject source would be major shall be considered to be regulated on the date 18 months after the applicable date established pursuant to section 112(e) of the Act; and

(B) Any pollutant for which the requirements of section 112(g)(2) of the Act have been met, but only with respect to the individual source subject to section 112(g)(2) requirement.

(vi) Pollutants regulated solely under section 112(r) of the Act are to be regulated only with respect to the requirements of section 112(r) for permits issued under Chapter 6, Section 3, Operating Permits.

**“Stationary source”** means any building, structure, facility, or installation that emits or may emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act.

**“tpy CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e)”** shall represent an amount of GHGs emitted, and shall be computed by multiplying the mass amount of emissions (tpy), for each of the six greenhouse gases in the pollutant GHGs, by the gas’s associated global warming potential published at Table A-1 to Subpart A of 40 CFR part 98--Global Warming Potentials, and summing the resultant value for each to compute a tpy CO<sub>2</sub>e. Prior to July 21, 2014, the mass of the greenhouse gas carbon dioxide shall not include carbon dioxide emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material originating from plants, animals, or micro-organisms (including products, by-products, residues and waste from agriculture, forestry and related industries as well as the non-fossilized and biodegradable organic fractions of industrial and municipal wastes, including gases and liquids recovered from the decomposition of non-fossilized and biodegradable organic material). Table A-1 to Subpart A of 40 CFR part 98 is adopted by reference ~~from the *Federal Register*, as published by the National Archives and Records Administration on November 29, 2013, Volume 78, pages 71903-71981, not including any later amendments. Copies of the November 29, 2013 *Federal Register* article are available for public inspection and can be obtained online at [http://www.gpo.gov/fdsys/pkg/FR\\_2013-11-29/pdf/2013-27996.pdf](http://www.gpo.gov/fdsys/pkg/FR_2013-11-29/pdf/2013-27996.pdf) or at cost from the Department of Environmental Quality, Division of Air Quality, Cheyenne Office. Contact information for the Cheyenne Office can be obtained at: <http://deq.wyoming.gov><http://deq.state.wy.us>.~~

(b) Applicability.

(i) General Applicability. Except for backup utility units that are exempt under paragraph (ii)(B) of this subsection (b), the requirements of this part shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a Chapter 6, Section 3, operating permit if the unit satisfies all of the following criteria:

(A) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (ii)(A) of this subsection (b);

(B) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

(C) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. For purposes of this paragraph, “potential pre-control device emissions” shall have the same meaning as “potential to emit”, as defined in Chapter 7, Section 3(a), except that emission reductions achieved by the applicable control device shall not be taken into account.

(ii) Exemptions.

(A) Exempt emission limitations or standards. The requirements of this part shall not apply to any of the following emission limitations or standards:

(I) Emission limitations or standards proposed by the EPA Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act;

(II) Stratospheric ozone protection requirements under Title VI of the Act;

(III) Acid Rain Program requirements pursuant to sections 404, 405, 406, 407(a), 407(b), or 410 of the Act;

(IV) Emission limitations or standards or other applicable requirements that apply solely under an emissions trading program approved or promulgated by the Administrator under the Act that allows for trading emissions within a source or between sources;

(V) A federally enforceable emissions cap included in the Chapter 6, Section 3 operating permit;

(VI) Emission limitations or standards for which a Chapter 6, Section 3, operating permit specifies a continuous compliance determination method, as defined in Chapter 7, Section 3(a). The exemption provided in (b)(ii)(A)(VI) of this section shall not apply if the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device (such as a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an

initial performance test; in this example, this part would apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage).

(B) Exemption for backup utility power emissions units. The requirements of this part shall not apply to a utility unit, as defined in §72.2 of Chapter 11, Section 2(b) that is municipally-owned if the owner or operator provides documentation in a Chapter 6, Section 3, operating permit application that:

(I) The utility unit is exempt from all monitoring requirements in Chapter 11, Section 2(b), Acid Rain, Continuous Emission Monitoring (including the appendices thereto);

(II) The utility unit is operated for the sole purpose of providing electricity during periods of peak electrical demand or emergency situations and will be operated consistent with that purpose throughout the Chapter 6, Section 3 operating permit term. The owner or operator shall provide historical operating data and relevant contractual obligations to document that this criterion is satisfied; and

(III) The actual emissions from the utility unit, based on the average annual emissions over the last three calendar years of operation (or such shorter time period that is available for units with fewer than three years of operation) are less than 50 percent of the amount in tons per year required for a source to be classified as a major source and are expected to remain so.

(c) Monitoring Design Criteria.

(i) General Criteria. To provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations at a pollutant-specific emissions unit, monitoring under this part shall meet the following general criteria:

(A) The owner or operator shall design the monitoring to obtain data for one or more indicators of emission control performance for the control device, any associated capture system and, if necessary to satisfy paragraph (c)(i)(B) of this section, processes at a pollutant-specific emissions unit. Indicators of performance may include, but are not limited to, direct or predicted emissions (including visible emissions or opacity), process and control device parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities conducted by the owner or operator.

(B) The owner or operator shall establish an appropriate range(s) or designated condition(s) for the selected indicator(s) such that operation within the ranges provides a reasonable assurance of ongoing compliance with emission limitations or standards for the anticipated range of operating conditions. Such range(s) or condition(s) shall reflect the proper operation and maintenance of the control device (and

associated capture system), in accordance with applicable design properties, for minimizing emissions over the anticipated range of operating conditions at least to the level required to achieve compliance with the applicable requirements. The reasonable assurance of compliance will be assessed by maintaining performance within the indicator range(s) or designated condition(s). The ranges shall be established in accordance with the design and performance requirements in this section and documented in accordance with the requirements in Chapter 7, Section 3(d). If necessary to assure that the control device and associated capture system can satisfy this criterion, the owner or operator shall monitor appropriate process operational parameters (such as total throughput where necessary to stay within the rated capacity for a control device). In addition, unless specifically stated otherwise by an applicable requirement, the owner or operator shall monitor indicators to detect any bypass of the control device (or capture system) to the atmosphere, if such bypass can occur based on the design of the pollutant-specific emissions unit.

(C) The design of indicator ranges or designated conditions may be:

(I) Based on a single maximum or minimum value if appropriate (e.g., maintaining condenser temperatures a certain number of degrees below the condensation temperature of the applicable compound(s) being processed) or at multiple levels that are relevant to distinctly different operating conditions (e.g., high versus low load levels);

(II) Expressed as a function of process variables (e.g., an indicator range expressed as minimum to maximum pressure drop across a venturi throat in a particulate control scrubber);

(III) Expressed as maintaining the applicable parameter in a particular operational status or designated condition (e.g., position of a damper controlling gas flow to the atmosphere through a bypass duct);

(IV) Established as interdependent between more than one indicator.

(ii) Performance Criteria. The owner or operator shall design the monitoring to meet the following performance criteria:

(A) Specifications that provide for obtaining data that are representative of the emissions or parameters being monitored (such as detector location and installation specifications, if applicable);

(B) For new or modified monitoring equipment, verification procedures to confirm the operational status of the monitoring prior to the date by which the owner or operator must conduct monitoring under this part as specified in Chapter 7, Section 3(g)(i). The owner or operator shall consider the monitoring equipment

manufacturer's requirements or recommendations for installation, calibration, and start-up operation;

(C) Quality assurance and control practices that are adequate to ensure the continuing validity of the data. The owner or operator shall consider manufacturer recommendations or requirements applicable to the monitoring in developing appropriate quality assurance and control practices;

(D) Specifications for the frequency of conducting the monitoring, the data collection procedures that will be used (e.g., computerized data acquisition and handling, alarm sensor, or manual log entries based on gauge readings), and, if applicable, the period over which discrete data points will be averaged for the purpose of determining whether an excursion or exceedance has occurred.

(I) At a minimum, the owner or operator shall design the period over which data are obtained and, if applicable, averaged consistent with the characteristics and typical variability of the pollutant-specific emissions unit (including the control device and associated capture system). Such intervals shall be commensurate with the time period over which a change in control device performance that would require actions by owner or operator to return operations within normal ranges or designated conditions is likely to be observed.

(II) For all pollutant-specific emissions units with the potential to emit, calculated including the effect of control devices, the applicable regulated air pollutant in an amount equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source, for each parameter monitored, the owner or operator shall collect four or more data values equally spaced over each hour and average the values, as applicable, over the applicable averaging period as determined in accordance with paragraph (c)(ii)(D)(I) of this section. The Division may approve a reduced data collection frequency, if appropriate, based on information presented by the owner or operator concerning the data collection mechanisms available for a particular parameter for the particular pollutant-specific emissions unit (e.g., integrated raw material or fuel analysis data, noninstrumental measurement of waste feed rate or visible emissions, use of a portable analyzer or an alarm sensor).

(III) For other pollutant-specific emissions units, the frequency of data collection may be less than the frequency specified in subparagraph (c)(ii)(D)(II) of this section but the monitoring shall include some data collection at least once per 24-hour period (e.g., a daily inspection of a carbon adsorber operation in conjunction with a weekly or monthly check of emissions with a portable analyzer).

(iii) Evaluation Factors. In designing monitoring to meet the requirements in paragraphs (c)(i) and (c)(ii) of this section, the owner or operator shall take into account site-specific factors including the applicability of existing monitoring equipment and procedures, the ability of the monitoring to account for process and

control device operational variability, the reliability and latitude built into the control technology, and the level of actual emissions relative to the compliance limitation.

(iv) Special Criteria for the Use of Continuous Emission, Opacity or Predictive Monitoring Systems.

(A) If a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS) or predictive emission monitoring system (PEMS) is required pursuant to other authority under the Act or state or local law, the owner or operator shall use such system to satisfy the requirements of this section.

(B) The use of a CEMS, COMS, or PEMS that satisfies any of the following monitoring requirements shall be deemed to satisfy the general design criteria in paragraphs (c)(i) and (c)(ii) of this section, provided that a COMS may be subject to the criteria for establishing indicator ranges under paragraph (c)(i) of this section:

(I) Section 51.214 and Appendix P of 40 CFR part 51;

(II) Chapter 5, Section 2(j) and Section 2(b)(i), 40 CFR part 60, Appendix B;

(III) Chapter 5, Section 3(j) and any applicable performance specifications required pursuant to the applicable subpart of Chapter 5, Section 3;

(IV) Chapter 11, Section 2b, Acid Rain, Continuous Emission Monitoring;

(V) 40 CFR part 266, Subpart H and Appendix IX; or

(VI) If an applicable requirement does not otherwise require compliance with the requirements listed in the preceding paragraphs (c)(iv)(B)(I)-(V) of this section, comparable requirements and specifications established by the Division.

(C) The owner or operator shall design the monitoring system subject to subsection (c)(iv) to:

(I) Allow for reporting of exceedances (or excursions if applicable to a COMS used to assure compliance with a particulate matter standard), consistent with any period for reporting of exceedances in an underlying requirement. If an underlying requirement does not contain a provision for establishing an averaging period for the reporting of exceedances or excursions, the criteria used to develop an averaging period in (c)(ii)(D) of this section shall apply; and



(II) Provide an indicator range consistent with paragraph (c)(i) of this section for a COMS used to assure compliance with a particulate matter standard. If an opacity standard applies to the pollutant-specific emissions unit, such limit may be used as the appropriate indicator range unless the opacity limit fails to meet the criteria in paragraph (c)(i) of this section after considering the type of control device and other site-specific factors applicable to the pollutant-specific emissions unit.

(d) Submittal Requirements.

(i) The owner or operator shall submit to the Division monitoring that satisfies the design requirements in Chapter 7, Section 3(c). The submission shall include the following information:

(A) The indicators to be monitored to satisfy Chapter 7, Section 3(c)(i)(A)-(B);

(B) The ranges or designated conditions for such indicators, or the process by which such indicator ranges or designated conditions shall be established;

(C) The performance criteria for the monitoring to satisfy Chapter 7, Section 3(c)(ii); and

(D) If applicable, the indicator ranges and performance criteria for a CEMS, COMS or PEMS pursuant to Chapter 7, Section 3(c)(iv).

(ii) As part of the information submitted, the owner or operator shall submit a justification for the proposed elements of the monitoring. If the performance specifications proposed to satisfy Chapter 7, Section 3(c)(ii)(B) or (C) include differences from manufacturer recommendations, the owner or operator shall explain the reasons for the differences between the requirements proposed by the owner or operator and the manufacturer's recommendations or requirements. The owner or operator also shall submit any data supporting the justification, and may refer to generally available sources of information used to support the justification (such as generally available air pollution engineering manuals, or EPA publications on appropriate monitoring for various types of control devices or capture systems). To justify the appropriateness of the monitoring elements proposed, the owner or operator may rely in part on existing applicable requirements that establish the monitoring for the applicable pollutant-specific emissions unit or a similar unit. If an owner or operator relies on presumptively acceptable monitoring, no further justification for the appropriateness of that monitoring should be necessary other than an explanation of the applicability of such monitoring to the unit in question, unless data or information is brought forward to rebut the assumption. Presumptively acceptable monitoring includes:

(A) Presumptively acceptable or required monitoring approaches, established by the Division in a rule that constitutes part of the applicable implementation

plan required pursuant to Title I of the Act, that are designed to achieve compliance with this section for particular pollutant-specific emissions units;

(B) Continuous emission, opacity or predictive emission monitoring systems that satisfy applicable monitoring requirements and performance specifications as specified in Chapter 7, Section 3(c)(iv);

(C) Excepted or alternative monitoring methods allowed or approved pursuant to Chapter 11, Section 2(b), Acid Rain, Continuous Emission Monitoring;

(D) Monitoring included for standards exempt from this section pursuant to Chapter 7, Section 3(b)(ii)(A)(I) or (VI) to the extent such monitoring is applicable to the performance of the control device (and associated capture system) for the pollutant-specific emissions unit; and

(E) Presumptively acceptable monitoring identified in guidance by EPA. Such guidance will address the requirements under Chapter 7, Section 3(d)(i), (ii) and (iii) to the extent practicable.

(iii) (A) Except as provided in Chapter 7, Section 3(d)(iv), the owner or operator shall submit control device (and process and capture system, if applicable) operating parameter data obtained during the conduct of the applicable compliance or performance test conducted under conditions specified by the applicable rule. If the applicable rule does not specify testing conditions or only partially specifies test conditions, the performance test generally shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit. Such data may be supplemented, if desired, by engineering assessments and manufacturer's recommendations to justify the indicator ranges (or, if applicable, the procedures for establishing such indicator ranges). Emission testing is not required to be conducted over the entire indicator range or range of potential emissions.

(B) The owner or operator must document that no changes to the pollutant-specific emissions unit, including the control device and capture system, have taken place that could result in a significant change in the control system performance or the selected ranges or designated conditions for the indicators to be monitored since the performance or compliance tests were conducted.

(iv) If existing data from unit-specific compliance or performance testing specified in Chapter 7, Section 3(d)(iii) are not available, the owner or operator:

(A) Shall submit a test plan and schedule for obtaining such data in accordance with Chapter 7, Section 3(d)(v); or

(B) May submit indicator ranges (or procedures for establishing indicator ranges) that rely on engineering assessments and other data, provided that the owner or operator demonstrates that factors specific to the type of monitoring, control device, or pollutant-specific emissions unit make compliance or performance testing unnecessary to establish indicator ranges at levels that satisfy the criteria in Chapter 7, Section 3(c)(i).

(v) If the monitoring submitted by the owner or operator requires installation, testing, or other necessary activities prior to use of the monitoring for purposes of this part, the owner or operator shall include an implementation plan and schedule for installing, testing and performing any other appropriate activities prior to use of the monitoring. The implementation plan and schedule shall provide for use of the monitoring as expeditiously as practicable after approval of the monitoring in the Chapter 6, Section 3 operating permit pursuant to Chapter 7, Section 3(f), but in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval of the permit.

(vi) If a control device is common to more than one pollutant-specific emissions unit, the owner or operator may submit monitoring for the control device and identify the pollutant-specific emissions units affected and any process or associated capture device conditions that must be maintained or monitored in accordance with Chapter 7, Section 3(c)(i) rather than submit separate monitoring for each pollutant-specific emissions unit.

(vii) If a single pollutant-specific emissions unit is controlled by more than one control device similar in design and operation, the owner or operator may submit monitoring that applies to all the control devices and identify the control devices affected and any process or associated capture device conditions that must be maintained or monitored in accordance with Chapter 7, Section 3(c)(i) rather than submit a separate description of monitoring for each control device.

(e) Deadlines for Submittals.

(i) Large Pollutant-Specific Emissions Units. For all pollutant-specific emissions units with the potential to emit (taking into account control devices to the extent appropriate under the definition of this term in Chapter 7, Section 3(a) the applicable regulated air pollutant in an amount equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source, the owner or operator shall submit the information required under Chapter 7, Section 3(d) at the following times:

(A) On or after April 20, 1998, the owner or operator shall submit information as part of an application for an initial Chapter 6, Section 3 operating permit if, by that date, the application either:

(I) Has not been filed; or

(II) Has not yet been determined to be complete by the Division.

(B) On or after April 20, 1998, the owner or operator shall submit information as part of an application for a significant permit revision under Chapter 6, Section 3, but only with respect to those pollutant-specific emissions units for which the proposed permit revision is applicable.

(C) The owner or operator shall submit any information not submitted under the deadlines set forth in Chapter 7, Section 3(e)(i)(A) and (B) as part of the application for the renewal of a Chapter 6, Section 3 operating permit.

(ii) Other Pollutant-Specific Emissions Units. For all other pollutant-specific emissions units subject to this part and not subject to Chapter 7, Section 3(e)(i), the owner or operator shall submit the information required under Chapter 7, Section 3(d) as part of an application for a renewal of a Chapter 6, Section 3 operating permit.

(iii) The effective date for the requirement to submit information under Chapter 7, Section 3(d) shall be as specified pursuant to Chapter 7, Section 3(e)(i)-(iii) and a permit reopening to require the submittal of information under this section shall not be required pursuant to Chapter 6, Section 3(d)(vii)(A)(I), provided, however, that, if a Chapter 6, Section 3 operating permit is reopened for cause by EPA or the Division pursuant to Chapter 6, Section 3(d)(vii)(A)(III) or (IV), the applicable agency may require the submittal of information under this section for those pollutant-specific emissions units that are subject to this part and that are affected by the permit reopening.

(iv) Prior to approval of monitoring that satisfies this part, the owner or operator is subject to the requirements of Chapter 6, Section 3(h)(i)(C)(I)(2.).

(f) Approval of Monitoring.

(i) Based on an application that includes the information submitted in accordance with Chapter 7, Section 3(e), the Division shall act to approve the monitoring submitted by the owner or operator by confirming that the monitoring satisfies the requirements in Chapter 7, Section 3(c).

(ii) In approving monitoring under this section, the Division may condition the approval on the owner or operator collecting additional data on the indicators to be monitored for a pollutant-specific emissions unit, including required compliance or performance testing, to confirm the ability of the monitoring to provide data that are sufficient to satisfy the requirements of this part and to confirm the appropriateness of an indicator range(s) or designated condition(s) proposed to satisfy Chapter 7, Section 3(c)(i)(B) and (C) and consistent with the schedule in Chapter 7, Section 3(d)(v).

(iii) If the Division approves the proposed monitoring, the Division shall establish one or more permit terms or conditions that specify the required monitoring in accordance with Chapter 6, Section 3(h)(i)(C)(I). At a minimum, the permit shall specify:

(A) The approved monitoring approach that includes all of the following:

(I) The indicator(s) to be monitored (such as temperature, pressure drop, emissions, or similar parameter);

(II) The means or device to be used to measure the indicator(s) (such as temperature measurement device, visual observation, or CEMS); and

(III) The performance requirements established to satisfy Chapter 7, Section 3(c)(ii) or (iv), as applicable.

(B) The means by which the owner or operator will define an exceedance or excursion for purposes of responding to and reporting exceedances or excursions under Chapter 7, Section 3(g) and (h). The permit shall specify the level at which an excursion or exceedance will be deemed to occur, including the appropriate averaging period associated with such exceedance or excursion. For defining an excursion from an indicator range or designated condition, the permit may either include the specific value(s) or condition(s) at which an excursion shall occur, or the specific procedures that will be used to establish that value or condition. If the latter, the permit shall specify appropriate notice procedures for the owner or operator to notify the Division upon any establishment or reestablishment of the value.

(C) The obligation to conduct the monitoring and fulfill the other obligations specified in Chapter 7, Section 3(g) through (i).

(D) If appropriate, a minimum data availability requirement for valid data collection for each averaging period, and, if appropriate, a minimum data availability requirement for the averaging periods in a reporting period.

(iv) If the monitoring proposed by the owner or operator requires installation, testing or final verification of operational status, the Chapter 6, Section 3 operating permit shall include an enforceable schedule with appropriate milestones for completing such installation, testing, or final verification consistent with the requirements in Chapter 7, Section 3(d)(v).

(v) If the Division disapproves the proposed monitoring, the following applies:

(A) The draft or final permit shall include, at a minimum, monitoring that satisfies the requirements of Chapter 6, Section 3(h)(i)(C)(I)(2.);

(B) The Division shall include in the draft or final permit a compliance schedule for the source owner to submit monitoring that satisfies Chapter 7, Section 3(c) and (d), but in no case shall the owner or operator submit revised monitoring more than 180 days from the date of issuance of the Chapter 6, Section 3 operating permit; and

(C) If the source owner or operator does not submit the monitoring in accordance with the compliance schedule as required in Chapter 7, Section 3(f)(v)(B) or if the Division disapproves the monitoring submitted, the source owner or operator shall be deemed not in compliance with Chapter 7, Section 3, unless the source owner or operator successfully challenges the disapproval.

(g) Operation of Approved Monitoring.

(i) Commencement of Operation. The owner or operator shall conduct the monitoring required under this part upon issuance of a Chapter 6, Section 3 operating permit that includes such monitoring, or by such later date specified in the permit pursuant to Chapter 7, Section 3(f)(v).

(ii) Proper Maintenance. At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(iii) Continued Operation. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(iv) Response to Excursions or Exceedances.

(A) Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal

operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(B) Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(v) Documentation of Need for Improved Monitoring. After approval of monitoring under this part, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Division and, if necessary, submit a proposed modification to the Chapter 6, Section 3 operating permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(h) Quality Improvement Plan (QIP) Requirements.

(i) Based on the results of a determination made under Chapter 7, Section 3(g)(iv)(B), the Administrator or the Division may require the owner or operator to develop and implement a QIP. Consistent with Chapter 7, Section 3(f)(iii)(C), the Chapter 6, Section 3 operating permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.

(ii) Elements of a QIP.

(A) The owner or operator shall maintain a written QIP, if required, and have it available for inspection.

(B) The plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the

owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:

(I) Improved Preventive Maintenance Practices.

(II) Process Operation Changes.

(III) Appropriate Improvements to Control Methods.

(IV) Other Steps Appropriate to Correct Control Performance.

(V) More Frequent or Improved Monitoring (only in conjunction with one or more steps under Chapter 7, Section 3(h)(ii)(B)(I)-(IV)).

(iii) If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Division if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(iv) Following implementation of a QIP, upon any subsequent determination pursuant to Chapter 7, Section 3(g)(iv)(B), the Administrator or the Division may require that an owner or operator make reasonable change to the QIP if the QIP is found to have:

(A) Failed to address the cause of the control device performance problems; or

(B) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(v) Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(i) Reporting and Recordkeeping Requirements.

(i) General Reporting Requirements.

(A) On and after the date specified in Chapter 7, Section 3(g)(i) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the Division in accordance with Chapter 6, Section 3(h)(i)(C)(III).



(B) A report for monitoring under this part shall include, at a minimum, the information required under Chapter 6, Section 3(h)(i)(C)(III) and the following information, as applicable:

(I) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(II) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(III) A description of the actions taken to implement a QIP during the reporting period as specified in Chapter 7, Section 3(h). Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

(ii) General Recordkeeping Requirements.

(A) The owner or operator shall comply with the recordkeeping requirements specified in Chapter 6, Section 3(h)(i)(C)(II). The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to Chapter 7, Section 3(h) and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

(B) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

(j) Savings Provisions.

(i) Nothing in This Part Shall:

(A) Excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act. The requirements of this part shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purpose of determining the monitoring to be imposed under separate

authority under the Act, including monitoring in permits issued pursuant to Chapter 6, Section 2. The purpose of this part is to require, as part of the issuance of a permit under Chapter 6, Section 3, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of this part.

(B) Restrict or abrogate the authority of the Administrator or the Division to impose additional or more stringent monitoring, recordkeeping, testing, or reporting requirements on any owner or operator of a source under any provision of the Act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable.

(C) Restrict or abrogate the authority of the Administrator or Division to take any enforcement action under the Act for any violation of an applicable requirement or of any person to take action under section 304 of the Act.