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Title 40 —Protection of Environment

Chapter I —Environmental Protection Agency

Subchapter C —Air Programs

Part 51 —Requirements for Preparation, Adoption, and Submittal of Implementation Plans

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Subpart I Review of New Sources and Modifications

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Subpart I—Review of New Sources and Modifications

Source: 51 FR 40669, Nov. 7, 1986, unless otherwise noted.

§ 51.160 Legally enforceable procedures.

- (a) Each plan must set forth legally enforceable procedures that enable the State or local agency to determine whether the construction or modification of a facility, building, structure or installation, or combination of these will result in—
 - (1) A violation of applicable portions of the control strategy; or
 - (2) Interference with attainment or maintenance of a national standard in the State in which the proposed source (or modification) is located or in a neighboring State.
- (b) Such procedures must include means by which the State or local agency responsible for final decisionmaking on an application for approval to construct or modify will prevent such construction or modification if—
 - (1) It will result in a violation of applicable portions of the control strategy; or
 - (2) It will interfere with the attainment or maintenance of a national standard.
- (c) The procedures must provide for the submission, by the owner or operator of the building, facility, structure, or installation to be constructed or modified, of such information on—
 - (1) The nature and amounts of emissions to be emitted by it or emitted by associated mobile sources;

- (2) The location, design, construction, and operation of such facility, building, structure, or installation as may be necessary to permit the State or local agency to make the determination referred to in paragraph (a) of this section.
- (d) The procedures must provide that approval of any construction or modification must not affect the responsibility to the owner or operator to comply with applicable portions of the control strategy.
- (e) The procedures must identify types and sizes of facilities, buildings, structures, or installations which will be subject to review under this section. The plan must discuss the basis for determining which facilities will be subject to review.
- (f) The procedures must discuss the air quality data and the dispersion or other air quality modeling used to meet the requirements of this subpart.
- (1) All applications of air quality modeling involved in this subpart shall be based on the applicable models, data bases, and other requirements specified in appendix W of this part (Guideline on Air Quality Models).
- (2) Where an air quality model specified in appendix W of this part (Guideline on Air Quality Models) is inappropriate, the model may be modified or another model substituted. Such a modification or substitution of a model may be made on a case-by-case basis or, where appropriate, on a generic basis for a specific State program. Written approval of the Administrator must be obtained for any modification or substitution. In addition, use of a modified or substituted model must be subject to notice and opportunity for public comment under procedures set forth in § 51.102.

[51 FR 40669, Nov. 7, 1986, as amended at 58 FR 38822, July 20, 1993; 60 FR 40468, Aug. 9, 1995; 61 FR 41840, Aug. 12, 1996]

§ 51.161 Public availability of information.

- (a) The legally enforceable procedures in § 51.160 must also require the State or local agency to provide opportunity for public comment on information submitted by owners and operators. The public information must include the agency's analysis of the effect of construction or modification on ambient air quality, including the agency's proposed approval or disapproval.
- (b) For purposes of paragraph (a) of this section, opportunity for public comment shall include, as a minimum—
 - (1) Availability for public inspection in at least one location in the area affected of the information submitted by the owner or operator and of the State or local agency's analysis of the effect on air quality. This requirement may be met by making these materials available at a physical location or on a public Web site identified by the State or local agency;
 - (2) A 30-day period for submittal of public comment; and
 - (3) A notice by prominent advertisement in the area affected of the location of the source information and analysis specified in paragraph (b)(1) of this section.
- (c) Where the 30-day comment period required in paragraph (b) of this section would conflict with existing requirements for acting on requests for permission to construct or modify, the State may submit for approval a comment period which is consistent with such existing requirements.

- (d) A copy of the notice required by paragraph (b) of this section must also be sent to the Administrator through the appropriate Regional Office, and to all other State and local air pollution control agencies having jurisdiction in the region in which such new or modified installation will be located. The notice also must be sent to any other agency in the region having responsibility for implementing the procedures required under this subpart. For lead, a copy of the notice is required for all point sources. The definition of point for lead is given in § 51.100(k)(2).

[51 FR 40669, Nov. 7, 1986, as amended at 81 FR 71629, Oct. 18, 2016]

§ 51.162 Identification of responsible agency.

Each plan must identify the State or local agency which will be responsible for meeting the requirements of this subpart in each area of the State. Where such responsibility rests with an agency other than an air pollution control agency, such agency will consult with the appropriate State or local air pollution control agency in carrying out the provisions of this subpart.

§ 51.163 Administrative procedures.

The plan must include the administrative procedures, which will be followed in making the determination specified in paragraph (a) of § 51.160.

§ 51.164 Stack height procedures.

Such procedures must provide that the degree of emission limitation required of any source for control of any air pollutant must not be affected by so much of any source's stack height that exceeds good engineering practice or by any other dispersion technique, except as provided in § 51.118(b). Such procedures must provide that before a State issues a permit to a source based on a good engineering practice stack height that exceeds the height allowed by § 51.100(ii) (1) or (2), the State must notify the public of the availability of the demonstration study and must provide opportunity for public hearing on it. This section does not require such procedures to restrict in any manner the actual stack height of any source.

§ 51.165 Permit requirements.

- (a) State Implementation Plan and Tribal Implementation Plan provisions satisfying sections 172(c)(5) and 173 of the Act shall meet the following conditions:
 - (1) All such plans shall use the specific definitions. Deviations from the following wording will be approved only if the State specifically demonstrates that the submitted definition is more stringent, or at least as stringent, in all respects as the corresponding definition below:
 - (i) **Stationary source** means any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant.
 - (ii)
 - (A) **Building, structure, facility, or installation** means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant emitting activities shall be considered as part of the same industrial grouping if they belong to the same *Major Group*

(i.e., which have the same two-digit code) as described in the *Standard Industrial Classification Manual*, 1972, as amended by the 1977 Supplement (U.S. Government Printing Office stock numbers 4101-0065 and 003-005-00176-0, respectively).

(B) The plan may include the following provision: Notwithstanding the provisions of paragraph (a)(1)(ii)(A) of this section, *building, structure, facility, or installation* means, for onshore activities under Standard Industrial Classification (SIC) Major Group 13: Oil and Gas Extraction, all of the pollutant-emitting activities included in Major Group 13 that are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant emitting activities shall be considered adjacent if they are located on the same surface site; or if they are located on surface sites that are located within $\frac{1}{4}$ mile of one another (measured from the center of the equipment on the surface site) and they share equipment. Shared equipment includes, but is not limited to, produced fluids storage tanks, phase separators, natural gas dehydrators or emissions control devices. Surface site, as used in this paragraph (a)(1)(ii)(B), has the same meaning as in 40 CFR 63.761.

(iii) **Potential to emit** means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a 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 only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

(iv)

(A) **Major stationary source** means:

(1) Any stationary source of air pollutants that emits, or has the potential to emit, 100 tons per year or more of any regulated NSR pollutant (as defined in paragraph (a)(1)(xxvii) of this section), except that lower emissions thresholds shall apply in areas subject to subpart 2, subpart 3, or subpart 4 of part D, title I of the Act, according to paragraphs (a)(1)(iv)(A)(1)(i) through (viii) of this section.

(i) 50 tons per year of Volatile organic compounds in any serious ozone nonattainment area.

(ii) 50 tons per year of Volatile organic compounds in an area within an ozone transport region, except for any severe or extreme ozone nonattainment area.

(iii) 25 tons per year of Volatile organic compounds in any severe ozone nonattainment area.

(iv) 10 tons per year of Volatile organic compounds in any extreme ozone nonattainment area.

(v) 50 tons per year of Carbon monoxide in any serious nonattainment area for carbon monoxide, where stationary sources contribute significantly to Carbon monoxide levels in the area (as determined under rules issued by the Administrator).

(vi) 70 tons per year of PM₁₀ in any serious nonattainment area for PM₁₀.

- (vii) 70 tons per year of PM_{2.5} in any serious nonattainment area for PM_{2.5}.
 - (viii) 70 tons per year of any individual precursor for PM_{2.5} (as defined in paragraph (a)(1)(xxxvii) of this section), in any serious nonattainment area for PM_{2.5}.
 - (2) For the purposes of applying the requirements of paragraph (a)(8) of this section to stationary sources of nitrogen oxides located in an ozone nonattainment area or in an ozone transport region, any stationary source which emits, or has the potential to emit, 100 tons per year or more of nitrogen oxides emissions, except that the emission thresholds in paragraphs (a)(1)(iv)(A)(2)(i) through (vi) of this section shall apply in areas subject to subpart 2 of part D, title I of the Act.
 - (i) 100 tons per year or more of nitrogen oxides in any ozone nonattainment area classified as marginal or moderate.
 - (ii) 100 tons per year or more of nitrogen oxides in any ozone nonattainment area classified as a transitional, submarginal, or incomplete or no data area, when such area is located in an ozone transport region.
 - (iii) 100 tons per year or more of nitrogen oxides in any area designated under section 107(d) of the Act as attainment or unclassifiable for ozone that is located in an ozone transport region.
 - (iv) 50 tons per year or more of nitrogen oxides in any serious nonattainment area for ozone.
 - (v) 25 tons per year or more of nitrogen oxides in any severe nonattainment area for ozone.
 - (vi) 10 tons per year or more of nitrogen oxides in any extreme nonattainment area for ozone; or
 - (3) Any physical change that would occur at a stationary source not qualifying under paragraphs (a)(1)(iv)(A)(1) or (2) of this section as a major stationary source, if the change would constitute a major stationary source by itself.
- (B) A major stationary source that is major for volatile organic compounds shall be considered major for ozone
- (C) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this paragraph whether it is a major stationary source, unless the source belongs to one of the following categories of stationary sources:
 - (1) Coal cleaning plants (with thermal dryers);
 - (2) Kraft pulp mills;
 - (3) Portland cement plants;
 - (4) Primary zinc smelters;
 - (5) Iron and steel mills;
 - (6) Primary aluminum ore reduction plants;
 - (7) Primary copper smelters;

- (8) Municipal incinerators capable of charging more than 50 tons of refuse per day;
- (9) Hydrofluoric, sulfuric, or nitric acid plants;
- (10) Petroleum refineries;
- (11) Lime plants;
- (12) Phosphate rock processing plants;
- (13) Coke oven batteries;
- (14) Sulfur recovery plants;
- (15) Carbon black plants (furnace process);
- (16) Primary lead smelters;
- (17) Fuel conversion plants;
- (18) Sintering plants;
- (19) Secondary metal production plants;
- (20) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
- (21) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- (22) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (23) Taconite ore processing plants;
- (24) Glass fiber processing plants;
- (25) Charcoal production plants;
- (26) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; and
- (27) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

(v)

- (A) **Major modification** means any physical change in or change in the method of operation of a major stationary source that would result in:
 - (1) A significant emissions increase of a regulated NSR pollutant (as defined in paragraph (a)(1)(xxxvii) of this section); and
 - (2) A significant net emissions increase of that pollutant from the major stationary source.

- (B) Any significant emissions increase (as defined in paragraph (a)(1)(xxvii) of this section) from any emissions units or net emissions increase (as defined in paragraph (a)(1)(vi) of this section) at a major stationary source that is significant for volatile organic compounds shall be considered significant for ozone.
- (C) A physical change or change in the method of operation shall not include:
 - (1) Routine maintenance, repair and replacement;
 - (2) Use of an alternative fuel or raw material by reason of an order under sections 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
 - (3) Use of an alternative fuel by reason of an order or rule section 125 of the Act;
 - (4) Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
 - (5) Use of an alternative fuel or raw material by a stationary source which:
 - (i) The source was capable of accommodating before December 21, 1976, unless such change would be prohibited under any federally enforceable permit condition which was established after December 12, 1976, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR part 51, subpart I.
 - (ii) The source is approved to use under any permit issued under regulations approved pursuant to this section;
 - (6) An increase in the hours of operation or in the production rate, unless such change is prohibited under any federally enforceable permit condition which was established after December 21, 1976, pursuant to 40 CFR 52.21 or regulations approved pursuant to 40 CFR part 51, subpart I.
 - (7) Any change in ownership at a stationary source.
 - (8) [Reserved]
 - (9) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:
 - (i) The State Implementation Plan for the State in which the project is located, and
 - (ii) Other requirements necessary to attain and maintain the national ambient air quality standard during the project and after it is terminated.
- (D) This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under paragraph (f) of this section for a PAL for that pollutant. Instead, the definition at paragraph (f)(2)(viii) of this section shall apply.
- (E) For the purpose of applying the requirements of (a)(8) of this section to modifications at major stationary sources of nitrogen oxides located in ozone nonattainment areas or in ozone transport regions, whether or not subject to subpart 2, part D, title I of the Act, any significant net emissions increase of nitrogen oxides is considered significant for ozone.

- (F) Any physical change in, or change in the method of operation of, a major stationary source of volatile organic compounds that results in any increase in emissions of volatile organic compounds from any discrete operation, emissions unit, or other pollutant emitting activity at the source shall be considered a significant net emissions increase and a major modification for ozone, if the major stationary source is located in an extreme ozone nonattainment area that is subject to subpart 2, part D, title I of the Act.
- (G) Fugitive emissions shall not be included in determining for any of the purposes of this section whether a physical change in or change in the method of operation of a major stationary source is a major modification, unless the source belongs to one of the source categories listed in paragraph (a)(1)(iv)(C) of this section.

(vi)

- (A) **Net emissions increase** means, with respect to any regulated NSR pollutant emitted by a major stationary source, the amount by which the sum of the following exceeds zero:
 - (1) The increase in emissions from a particular physical change or change in the method of operation at a stationary source as calculated pursuant to paragraph (a)(2)(ii) of this section; and
 - (2) Any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. Baseline actual emissions for calculating increases and decreases under this paragraph (a)(1)(vi)(A)(2) shall be determined as provided in paragraph (a)(1)(xxv) of this section, except that paragraphs (a)(1)(xxv)(A)(3) and (a)(1)(xxv)(B)(4) of this section shall not apply.
- (B) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs before the date that the increase from the particular change occurs;
- (C) An increase or decrease in actual emissions is creditable only if:
 - (1) It occurs within a reasonable period to be specified by the reviewing authority; and
 - (2) The reviewing authority has not relied on it in issuing a permit for the source under regulations approved pursuant to this section, which permit is in effect when the increase in actual emissions from the particular change occurs; and
 - (3) As it pertains to an increase or decrease in fugitive emissions (to the extent quantifiable), it occurs at an emissions unit that is part of one of the source categories listed in paragraph (a)(1)(iv)(C) of this section or it occurs at an emissions unit that is located at a major stationary source that belongs to one of the listed source categories. Fugitive emission increases or decreases are not creditable for those emissions units located at a facility whose primary activity is not represented by one of the source categories listed in paragraph (a)(1)(iv)(C) of this section and that are not, by themselves, part of a listed source category.
- (D) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
- (E) A decrease in actual emissions is creditable only to the extent that:

- (1) The old level of actual emission or the old level of allowable emissions whichever is lower, exceeds the new level of actual emissions;
 - (2) It is enforceable as a practical matter at and after the time that actual construction on the particular change begins; and
 - (3) The reviewing authority has not relied on it in issuing any permit under regulations approved pursuant to 40 CFR part 51 subpart I or the State has not relied on it in demonstrating attainment or reasonable further progress;
 - (4) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change; and
- (F) An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.
- (G) Paragraph (a)(1)(xii)(B) of this section shall not apply for determining creditable increases and decreases or after a change.
- (vii) **Emissions unit** means any part of a stationary source that emits or would have the potential to emit any regulated NSR pollutant and includes an electric steam generating unit as defined in paragraph (a)(1)(xx) of this section. For purposes of this section, there are two types of emissions units as described in paragraphs (a)(1)(vii)(A) and (B) of this section.
 - (A) A new emissions unit is any emissions unit which is (or will be) newly constructed and which has existed for less than 2 years from the date such emissions unit first operated.
 - (B) An existing emissions unit is any emissions unit that does not meet the requirements in paragraph (a)(1)(vii)(A) of this section. A replacement unit, as defined in paragraph (a)(1)(xxi) of this section, is an existing emissions unit.
- (viii) **Secondary emissions** means emissions which would occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. For the purpose of this section, secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the stationary source or modification which causes the secondary emissions. Secondary emissions include emissions from any offsite support facility which would not be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.
- (ix) **Fugitive emissions** means those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening.
- (x)
 - (A) **Significant** means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Pollutant Emission Rate

Carbon monoxide: 100 tons per year (tpy)

Nitrogen oxides: 40 tpy

Sulfur dioxide: 40 tpy

Ozone: 40 tpy of Volatile organic compounds or Nitrogen oxides

Lead: 0.6 tpy

PM₁₀: 15 tpy

PM_{2.5}: 10 tpy of direct PM_{2.5} emissions; 40 tpy of Sulfur dioxide emissions, 40 tpy of Nitrogen oxide emissions, or 40 tpy of VOC emissions, to the extent that any such pollutant is defined as a precursor for PM_{2.5} in paragraph (a)(1)(xxxvii) of this section.

- (B) Notwithstanding the significant emissions rate for ozone in paragraph (a)(1)(x)(A) of this section, significant means, in reference to an emissions increase or a net emissions increase, any increase in actual emissions of volatile organic compounds that would result from any physical change in, or change in the method of operation of, a major stationary source locating in a serious or severe ozone nonattainment area that is subject to subpart 2, part D, title I of the Act, if such emissions increase of volatile organic compounds exceeds 25 tons per year.
- (C) For the purposes of applying the requirements of paragraph (a)(8) of this section to modifications at major stationary sources of nitrogen oxides located in an ozone nonattainment area or in an ozone transport region, the significant emission rates and other requirements for volatile organic compounds in paragraphs (a)(1)(x)(A), (B), and (E) of this section shall apply to nitrogen oxides emissions.
- (D) Notwithstanding the significant emissions rate for carbon monoxide under paragraph (a)(1)(x)(A) of this section, significant means, in reference to an emissions increase or a net emissions increase, any increase in actual emissions of carbon monoxide that would result from any physical change in, or change in the method of operation of, a major stationary source in a serious nonattainment area for carbon monoxide if such increase equals or exceeds 50 tons per year, provided the Administrator has determined that stationary sources contribute significantly to carbon monoxide levels in that area.
- (E) Notwithstanding the significant emissions rates for ozone under paragraphs (a)(1)(x)(A) and (B) of this section, any increase in actual emissions of volatile organic compounds from any emissions unit at a major stationary source of volatile organic compounds located in an extreme ozone nonattainment area that is subject to subpart 2, part D, title I of the Act shall be considered a significant net emissions increase.
- (F) For the purposes of applying the requirements of paragraph (a)(13) of this section to modifications at existing major stationary sources of Ammonia located in a PM_{2.5} nonattainment area, if the plan requires that the control requirements of this section apply

to major stationary sources and major modifications of Ammonia as a regulated NSR pollutant (as a PM_{2.5} precursor), the plan shall also define “significant” for Ammonia for that area, subject to the approval of the Administrator.

(xi) **Allowable emissions** means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

- (A) The applicable standards set forth in 40 CFR part 60 or 61;
- (B) Any applicable State Implementation Plan emissions limitation including those with a future compliance date; or
- (C) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

(xii)

(A) **Actual emissions** means the actual rate of emissions of a regulated NSR pollutant from an emissions unit, as determined in accordance with paragraphs (a)(1)(xii)(B) through (D) of this section, except that this definition shall not apply for calculating whether a significant emissions increase has occurred, or for establishing a PAL under paragraph (f) of this section. Instead, paragraphs (a)(1)(xxviii) and (xxxv) of this section shall apply for those purposes.

(B) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a consecutive 24-month period which precedes the particular date and which is representative of normal source operation. The reviewing authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

(C) The reviewing authority may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.

(D) For any emissions unit that has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

(xiii) **Lowest achievable emission rate (LAER)** means, for any source, the more stringent rate of emissions based on the following:

(A) The most stringent emissions limitation which is contained in the implementation plan of any State for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or

(B) The most stringent emissions limitation which is achieved in practice by such class or category of stationary sources. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within or stationary source. In no event shall the application of the term permit a proposed new or modified stationary source to emit any pollutant in excess of the amount allowable under an applicable new source standard of performance.

- (xiv) **Federally enforceable** means all limitations and conditions which are enforceable by the Administrator, including those requirements developed pursuant to 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, any permit requirements established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR part 51, subpart I, including operating permits issued under an EPA-approved program that is incorporated into the State implementation plan and expressly requires adherence to any permit issued under such program.
- (xv) **Begin actual construction** means in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipework, and construction of permanent storage structures. With respect to a change in method of operating this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.
- (xvi) **Commence** as applied to construction of a major stationary source or major modification means that the owner or operator has all necessary preconstruction approvals or permits and either has:
 - (A) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or
 - (B) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.
- (xvii) **Necessary preconstruction approvals or permits** means those Federal air quality control laws and regulations and those air quality control laws and regulations which are part of the applicable State Implementation Plan.
- (xviii) **Construction** means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in emissions.
- (xix) **Volatile organic compounds (VOC)** is as defined in § 51.100(s) of this part.
- (xx) **Electric utility steam generating unit** means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.
- (xxi) **Replacement unit** means an emissions unit for which all the criteria listed in paragraphs (a)(1)(xxi)(A) through (D) of this section are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.
 - (A) The emissions unit is a reconstructed unit within the meaning of § 60.15(b)(1) of this chapter, or the emissions unit completely takes the place of an existing emissions unit;
 - (B) The emissions unit is identical to or functionally equivalent to the replaced emissions unit;
 - (C) The replacement does not alter the basic design parameters of the process unit; and

- (D) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.
- (xxii) **Temporary clean coal technology demonstration project** means a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State Implementation Plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- (xxiii) **Clean coal technology** means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.
- (xxiv) **Clean coal technology demonstration project** means a project using funds appropriated under the heading "Department of Energy-Clean Coal Technology," up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.
- (xxv) [Reserved]
- (xxvi) **Pollution prevention** means any activity that through process changes, product reformulation or redesign, or substitution of less polluting raw materials, eliminates or reduces the release of air pollutants (including fugitive emissions) and other pollutants to the environment prior to recycling, treatment, or disposal; it does not mean recycling (other than certain "in-process recycling" practices), energy recovery, treatment, or disposal.
- (xxvii) **Significant emissions increase** means, for a regulated NSR pollutant, an increase in emissions that is significant (as defined in paragraph (a)(1)(x) of this section) for that pollutant.
- (xxviii)
 - (A) **Projected actual emissions** means, the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit of that regulated NSR pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source.
 - (B) In determining the projected actual emissions under paragraph (a)(1)(xxviii)(A) of this section before beginning actual construction, the owner or operator of the major stationary source:

- (1) Shall consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans under the approved plan; and
- (2) Shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions; and
- (3) Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions under paragraph (a)(1)(xxv) of this section and that are also unrelated to the particular project, including any increased utilization due to product demand growth; or,
- (4) In lieu of using the method set out in paragraphs (a)(1)(xxviii)(B)(1) through (3) of this section, may elect to use the emissions unit's potential to emit, in tons per year, as defined under paragraph (a)(1)(iii) of this section.

(xxix) [Reserved]

(xxx) **Nonattainment major new source review (NSR) program** means a major source preconstruction permit program that has been approved by the Administrator and incorporated into the plan to implement the requirements of this section, or a program that implements part 51, appendix S, Sections I through VI of this chapter. Any permit issued under such a program is a major NSR permit.

(xxxi) **Continuous emissions monitoring system (CEMS)** means all of the equipment that may be required to meet the data acquisition and availability requirements of this section, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.

(xxxii) **Predictive emissions monitoring system (PEMS)** means all of the equipment necessary to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O₂ or CO₂ concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.

(xxxiii) **Continuous parameter monitoring system (CPMS)** means all of the equipment necessary to meet the data acquisition and availability requirements of this section, to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O₂ or CO₂ concentrations), and to record average operational parameter value(s) on a continuous basis.

(xxxiv) **Continuous emissions rate monitoring system (CERMS)** means the total equipment required for the determination and recording of the pollutant mass emissions rate (in terms of mass per unit of time).

(xxxv) **Baseline actual emissions** means the rate of emissions, in tons per year, of a regulated NSR pollutant, as determined in accordance with paragraphs (a)(1)(xxv)(A) through (D) of this section.

- (A) For any existing electric utility steam generating unit, baseline actual emissions means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding when the owner or operator begins actual construction of the project. The reviewing authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation.
- (1) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.
 - (2) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the consecutive 24-month period.
 - (3) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used for each regulated NSR pollutant.
 - (4) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by paragraph (a)(1)(xxv)(A)(2) of this section.
- (B) For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the reviewing authority for a permit required either under this section or under a plan approved by the Administrator, whichever is earlier, except that the 10-year period shall not include any period earlier than November 15, 1990.
- (1) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.
 - (2) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.
 - (3) The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period. However, if an emission limitation is part of a maximum achievable control technology standard that the Administrator proposed or promulgated under part 63 of this chapter, the baseline actual emissions need only be adjusted if the State has taken credit for such emissions reductions in an attainment demonstration or maintenance plan consistent with the requirements of paragraph (a)(3)(ii)(G) of this section.

- (4) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used For each regulated NSR pollutant.
- (5) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by paragraphs (a)(1)(xxxv)(B)(2) and (3) of this section.
- (C) For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's potential to emit.
- (D) For a PAL for a major stationary source, the baseline actual emissions shall be calculated for existing electric utility steam generating units in accordance with the procedures contained in paragraph (a)(1)(xxxv)(A) of this section, for other existing emissions units in accordance with the procedures contained in paragraph (a)(1)(xxxv)(B) of this section, and for a new emissions unit in accordance with the procedures contained in paragraph (a)(1)(xxxv)(C) of this section.

(xxxvi) [Reserved]

(xxxvii) **Regulated NSR pollutant**, for purposes of this section, means the following:

- (A) Nitrogen oxides or any volatile organic compounds;
- (B) Any pollutant for which a national ambient air quality standard has been promulgated;
- (C) Any pollutant that is identified under this paragraph (a)(1)(xxxvii)(C) as a constituent or precursor of a general pollutant listed under paragraph (a)(1)(xxxvii)(A) or (B) of this section, provided that such constituent or precursor pollutant may only be regulated under NSR as part of regulation of the general pollutant. Precursors identified by the Administrator for purposes of NSR are the following:
 - (1) Volatile organic compounds and nitrogen oxides are precursors to ozone in all ozone nonattainment areas.
 - (2) Sulfur dioxide, Nitrogen oxides, Volatile organic compounds and Ammonia are precursors to PM_{2.5} in any PM_{2.5} nonattainment area.
- (D) PM_{2.5} emissions and PM₁₀ emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures. On or after January 1, 2011 (or any earlier date established in the upcoming rulemaking codifying test methods), such condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM_{2.5} and PM₁₀ in nonattainment major NSR permits. Compliance with emissions limitations for PM_{2.5} and PM₁₀ issued prior to this date shall not be based on condensable particulate matter unless required by the terms and conditions of the permit or the applicable implementation plan. Applicability determinations made prior to this date without

accounting for condensable particulate matter shall not be considered in violation of this section unless the applicable implementation plan required condensable particulate matter to be included.

- (xxxviii) **Reviewing authority** means the State air pollution control agency, local agency, other State agency, Indian tribe, or other agency authorized by the Administrator to carry out a permit program under this section and § 51.166, or the Administrator in the case of EPA-implemented permit programs under § 52.21.
- (xxxix) **Project** means a physical change in, or change in the method of operation of, an existing major stationary source.
- (xl) **Best available control technology (BACT)** means an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major stationary source or major modification which the reviewing authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR part 60, 61, or 63. If the reviewing authority determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.
- (xli) **Prevention of Significant Deterioration (PSD) permit** means any permit that is issued under a major source preconstruction permit program that has been approved by the Administrator and incorporated into the plan to implement the requirements of § 51.166 of this chapter, or under the program in § 52.21 of this chapter.
- (xlii) **Federal Land Manager** means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.
- (2) **Applicability procedures.**
- (i) Each plan shall adopt a preconstruction review program to satisfy the requirements of sections 172(c)(5) and 173 of the Act for any area designated nonattainment for any national ambient air quality standard under subpart C of 40 CFR part 81. Such a program shall apply to any new major stationary source or major modification that is major for the pollutant for which the area is designated nonattainment under section 107(d)(1)(A)(i) of the Act, if the stationary source or modification would locate anywhere in the designated nonattainment area. Different pollutants, including individual precursors, are not summed to determine applicability of a major stationary source or major modification.

- (ii) Each plan shall use the specific provisions of paragraphs (a)(2)(ii)(A) through (F) of this section. Deviations from these provisions will be approved only if the State specifically demonstrates that the submitted provisions are more stringent than or at least as stringent in all respects as the corresponding provisions in paragraphs (a)(2)(ii)(A) through (F) of this section.
 - (A) Except as otherwise provided in paragraph (a)(2)(iii) of this section, and consistent with the definition of major modification contained in paragraph (a)(1)(v)(A) of this section, a project is a major modification for a regulated NSR pollutant (as defined in paragraph (a)(1)(xxvii) of this section) if it causes two types of emissions increases—a significant emissions increase (as defined in paragraph (a)(1)(xxvii) of this section) and a significant net emissions increase (as defined in paragraphs (a)(1)(vi) and (x) of this section). The project is not a major modification if it does not cause a significant emissions increase. If the project causes a significant emissions increase, then the project is a major modification only if it also results in a significant net emissions increase.
 - (B) The procedure for calculating (before beginning actual construction) whether a significant emissions increase (*i.e.*, the first step of the process) will occur depends upon the type of emissions units being modified, according to paragraphs (a)(2)(ii)(C) through (F) of this section. The procedure for calculating (before beginning actual construction) whether a significant net emissions increase will occur at the major stationary source (*i.e.*, the second step of the process) is contained in the definition in paragraph (a)(1)(vi) of this section. Regardless of any such preconstruction projections, a major modification results if the project causes a significant emissions increase and a significant net emissions increase.
 - (C) ***Actual-to-projected-actual applicability test for projects that only involve existing emissions units.*** A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (as defined in paragraph (a)(1)(xxviii) of this section) and the baseline actual emissions (as defined in paragraphs (a)(1)(xxv)(A) and (B) of this section, as applicable), for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (a)(1)(x) of this section).
 - (D) ***Actual-to-potential test for projects that only involve construction of a new emissions unit(s).*** A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit (as defined in paragraph (a)(1)(iii) of this section) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in paragraph (a)(1)(xxv)(C) of this section) of these units before the project equals or exceeds the significant amount for that pollutant (as defined in paragraph (a)(1)(x) of this section).
 - (E) [Reserved]
 - (F) ***Hybrid test for projects that involve multiple types of emissions units.*** A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference for all emissions units, using the method specified in paragraphs (a)(2)(ii)(C) through (D) of this section as applicable with respect to each emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (a)(1)(x) of this section).

- (G) The “sum of the difference” as used in paragraphs (C), (D) and (F) of this section shall include both increases and decreases in emissions calculated in accordance with those paragraphs.
- (iii) The plan shall require that for any major stationary source with a PAL for a regulated NSR pollutant, the major stationary source shall comply with requirements under paragraph (f) of this section.
- (3)
 - (i) Each plan shall provide that for sources and modifications subject to any preconstruction review program adopted pursuant to this subsection the baseline for determining credit for emissions reductions is the emissions limit under the applicable State Implementation Plan in effect at the time the application to construct is filed, except that the offset baseline shall be the actual emissions of the source from which offset credit is obtained where;
 - (A) The demonstration of reasonable further progress and attainment of ambient air quality standards is based upon the actual emissions of sources located within a designated nonattainment area for which the preconstruction review program was adopted; or
 - (B) The applicable State Implementation Plan does not contain an emissions limitation for that source or source category.
 - (ii) The plan shall further provide that:
 - (A) Where the emissions limit under the applicable State Implementation Plan allows greater emissions than the potential to emit of the source, emissions offset credit will be allowed only for control below this potential;
 - (B) For an existing fuel combustion source, credit shall be based on the allowable emissions under the applicable State Implementation Plan for the type of fuel being burned at the time the application to construct is filed. If the existing source commits to switch to a cleaner fuel at some future date, emissions offset credit based on the allowable (or actual) emissions for the fuels involved is not acceptable, unless the permit is conditioned to require the use of a specified alternative control measure which would achieve the same degree of emissions reduction should the source switch back to a dirtier fuel at some later date. The reviewing authority should ensure that adequate long-term supplies of the new fuel are available before granting emissions offset credit for fuel switches,
 - (C)
 - (1) Emissions reductions achieved by shutting down an existing emission unit or curtailing production or operating hours may be generally credited for offsets if they meet the requirements in paragraphs (a)(3)(ii)(C)(1)(i) through (ii) of this section.
 - (i) Such reductions are surplus, permanent, quantifiable, and federally enforceable.
 - (ii) The shutdown or curtailment occurred after the last day of the base year for the SIP planning process. For purposes of this paragraph, a reviewing authority may choose to consider a prior shutdown or curtailment to have occurred after the last day of the base year if the projected emissions inventory used to develop

the attainment demonstration explicitly includes the emissions from such previously shutdown or curtailed emission units. However, in no event may credit be given for shutdowns that occurred before August 7, 1977.

- (2) Emissions reductions achieved by shutting down an existing emissions unit or curtailing production or operating hours and that do not meet the requirements in paragraph (a)(3)(ii)(C)(1)(ii) of this section may be generally credited only if:
 - (i) The shutdown or curtailment occurred on or after the date the construction permit application is filed; or
 - (ii) The applicant can establish that the proposed new emissions unit is a replacement for the shutdown or curtailed emissions unit, and the emissions reductions achieved by the shutdown or curtailment met the requirements of paragraph (a)(3)(ii)(C)(1)(i) of this section.
 - (D) No emissions credit may be allowed for replacing one hydrocarbon compound with another of lesser reactivity, except that emissions credit may be allowed for the replacement with those compounds listed as having negligible photochemical reactivity in § 51.100(s).
 - (E) All emission reductions claimed as offset credit shall be federally enforceable;
 - (F) Procedures relating to the permissible location of offsetting emissions shall be followed which are at least as stringent as those set out in 40 CFR part 51 appendix S section IV.D.
 - (G) Credit for an emissions reduction can be claimed to the extent that the reviewing authority has not relied on it in issuing any permit under regulations approved pursuant to 40 CFR part 51 subpart I or the State has not relied on it in demonstration attainment or reasonable further progress.
 - (H) [Reserved]
 - (I) [Reserved]
 - (J) The total tonnage of increased emissions, in tons per year, resulting from a major modification that must be offset in accordance with section 173 of the Act shall be determined by summing the difference between the allowable emissions after the modification (as defined by paragraph (a)(1)(xi) of this section) and the actual emissions before the modification (as defined in paragraph (a)(1)(xii) of this section) for each emissions unit.
- (4) Each plan may provide that the provisions of this paragraph do not apply to a source or modification that would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and the source does not belong to any of the following categories:
- (i) Coal cleaning plants (with thermal dryers);
 - (ii) Kraft pulp mills;
 - (iii) Portland cement plants;
 - (iv) Primary zinc smelters;

- (v) Iron and steel mills;
 - (vi) Primary aluminum ore reduction plants;
 - (vii) Primary copper smelters;
 - (viii) Municipal incinerators capable of charging more than 50 tons of refuse per day;
 - (ix) Hydrofluoric, sulfuric, or citric acid plants;
 - (x) Petroleum refineries;
 - (xi) Lime plants;
 - (xii) Phosphate rock processing plants;
 - (xiii) Coke oven batteries;
 - (xiv) Sulfur recovery plants;
 - (xv) Carbon black plants (furnace process);
 - (xvi) Primary lead smelters;
 - (xvii) Fuel conversion plants;
 - (xviii) Sintering plants;
 - (xix) Secondary metal production plants;
 - (xx) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
 - (xxi) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
 - (xxii) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
 - (xxiii) Taconite ore processing plants;
 - (xxiv) Glass fiber processing plants;
 - (xxv) Charcoal production plants;
 - (xxvi) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
 - (xxvii) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.
- (5) Each plan shall include enforceable procedures to provide that:
- (i) Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provision of the plan and any other requirements under local, State or Federal law.
 - (ii) At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforcement limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to

emit a pollutant, such as a restriction on hours of operation, then the requirements of regulations approved pursuant to this section shall apply to the source or modification as though construction had not yet commenced on the source or modification;

- (6) Each plan shall provide that, except as otherwise provided in paragraph (a)(6)(vi) of this section, the following specific provisions apply with respect to any regulated NSR pollutant emitted from projects at existing emissions units at a major stationary source (other than projects at a source with a PAL) in circumstances where there is a reasonable possibility, within the meaning of paragraph (a)(6)(vi) of this section, that a project that is not a part of a major modification may result in a significant emissions increase of such pollutant, and the owner or operator elects to use the method specified in paragraphs (a)(1)(xxviii)(B)(1) through (3) of this section for calculating projected actual emissions. Deviations from these provisions will be approved only if the State specifically demonstrates that the submitted provisions are more stringent than or at least as stringent in all respects as the corresponding provisions in paragraphs (a)(6)(i) through (vi) of this section.
 - (i) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:
 - (A) A description of the project;
 - (B) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
 - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (a)(1)(xxviii)(B)(3) of this section and an explanation for why such amount was excluded, and any netting calculations, if applicable.
 - (ii) If the emissions unit is an existing electric utility steam generating unit, before beginning actual construction, the owner or operator shall provide a copy of the information set out in paragraph (a)(6)(i) of this section to the reviewing authority. Nothing in this paragraph (a)(6)(ii) shall be construed to require the owner or operator of such a unit to obtain any determination from the reviewing authority before beginning actual construction.
 - (iii) The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions units identified in paragraph (a)(6)(i)(B) of this section; and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.
 - (iv) If the unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the reviewing authority within 60 days after the end of each year during which records must be generated under paragraph (a)(6)(iii) of this section setting out the unit's annual emissions during the year that preceded submission of the report.
 - (v) If the unit is an existing unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the reviewing authority if the annual emissions, in tons per year, from the project identified in paragraph (a)(6)(i) of this section, exceed the baseline actual emissions (as documented and maintained pursuant to paragraph (a)(6)(i)(C) of this section, by

a significant amount (as defined in paragraph (a)(1)(x) of this section) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to paragraph (a)(6)(i)(C) of this section. Such report shall be submitted to the reviewing authority within 60 days after the end of such year. The report shall contain the following:

- (A) The name, address and telephone number of the major stationary source;
 - (B) The annual emissions as calculated pursuant to paragraph (a)(6)(iii) of this section; and
 - (C) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).
- (vi) A “reasonable possibility” under paragraph (a)(6) of this section occurs when the owner or operator calculates the project to result in either:
- (A) A projected actual emissions increase of at least 50 percent of the amount that is a “significant emissions increase,” as defined under paragraph (a)(1)(xxvii) of this section (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant; or
 - (B) A projected actual emissions increase that, added to the amount of emissions excluded under paragraph (a)(1)(xxviii)(B)(3), sums to at least 50 percent of the amount that is a “significant emissions increase,” as defined under paragraph (a)(1)(xxvii) of this section (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant. For a project for which a reasonable possibility occurs only within the meaning of paragraph (a)(6)(vi)(B) of this section, and not also within the meaning of paragraph (a)(6)(vi)(A) of this section, then provisions (a)(6)(ii) through (v) do not apply to the project.
- (7) Each plan shall provide that the owner or operator of the source shall make the information required to be documented and maintained pursuant to paragraph (a)(6) of this section available for review upon a request for inspection by the reviewing authority or the general public pursuant to the requirements contained in § 70.4(b)(3)(viii) of this chapter.
- (8) The plan shall provide that the requirements of this section applicable to major stationary sources and major modifications of volatile organic compounds shall apply to nitrogen oxides emissions from major stationary sources and major modifications of nitrogen oxides in an ozone transport region or in any ozone nonattainment area, except in ozone nonattainment areas or in portions of an ozone transport region where the Administrator has granted a NO_x waiver applying the standards set forth under section 182(f) of the Act and the waiver continues to apply.
- (9)
- (i) The plan shall require that in meeting the emissions offset requirements of paragraph (a)(3) of this section, the ratio of total actual emissions reductions to the emissions increase shall be at least 1:1 unless an alternative ratio is provided for the applicable nonattainment area in paragraphs (a)(9)(ii) through (a)(9)(iv) of this section.
 - (ii) The plan shall require that in meeting the emissions offset requirements of paragraph (a)(3) of this section for ozone nonattainment areas that are subject to subpart 2, part D, title I of the Act, the ratio of total actual emissions reductions of VOC to the emissions increase of VOC shall be as follows:

- (A) In any marginal nonattainment area for ozone—at least 1.1:1;
 - (B) In any moderate nonattainment area for ozone—at least 1.15:1;
 - (C) In any serious nonattainment area for ozone—at least 1.2:1;
 - (D) In any severe nonattainment area for ozone—at least 1.3:1 (except that the ratio may be at least 1.2:1 if the approved plan also requires all existing major sources in such nonattainment area to use BACT for the control of VOC); and
 - (E) In any extreme nonattainment area for ozone—at least 1.5:1 (except that the ratio may be at least 1.2:1 if the approved plan also requires all existing major sources in such nonattainment area to use BACT for the control of VOC); and
- (iii) Notwithstanding the requirements of paragraph (a)(9)(ii) of this section for meeting the requirements of paragraph (a)(3) of this section, the ratio of total actual emissions reductions of VOC to the emissions increase of VOC shall be at least 1.15:1 for all areas within an ozone transport region that is subject to subpart 2, part D, title I of the Act, except for serious, severe, and extreme ozone nonattainment areas that are subject to subpart 2, part D, title I of the Act.
- (iv) The plan shall require that in meeting the emissions offset requirements of paragraph (a)(3) of this section for ozone nonattainment areas that are subject to subpart 1, part D, title I of the Act (but are not subject to subpart 2, part D, title I of the Act, including 8-hour ozone nonattainment areas subject to 40 CFR 51.902(b)), the ratio of total actual emissions reductions of VOC to the emissions increase of VOC shall be at least 1:1.
- (10) The plan shall require that the requirements of this section applicable to major stationary sources and major modifications of PM-10 shall also apply to major stationary sources and major modifications of PM-10 precursors, except where the Administrator determines that such sources do not contribute significantly to PM-10 levels that exceed the PM-10 ambient standards in the area.
- (11) The plan shall require that, in meeting the emissions offset requirements of paragraph (a)(3) of this section, the emissions offsets obtained shall be for the same regulated NSR pollutant, unless interprecursor offsetting is permitted for a particular pollutant as specified in this paragraph. The plan may allow the offset requirements in paragraph (a)(3) of this section for direct PM_{2.5} emissions or emissions of precursors of PM_{2.5} to be satisfied by offsetting reductions in direct PM_{2.5} emissions or emissions of any PM_{2.5} precursor identified under paragraph (a)(1)(xxvii)(C) of this section if such offsets comply with the interprecursor trading hierarchy and ratio established in the approved plan for a particular nonattainment area.
- (12) The plan shall require that in any area designated nonattainment for the 2008 ozone NAAQS and designated nonattainment for the 1997 ozone NAAQS on April 6, 2015 the requirements of this section applicable to major stationary sources and major modifications of ozone shall include the anti-backsliding requirements contained at § 51.1105.
- (13) The plan shall require that the control requirements of this section applicable to major stationary sources and major modifications of PM_{2.5} shall also apply to major stationary sources and major modifications of PM_{2.5} precursors in a PM_{2.5} nonattainment area, except that a reviewing authority may exempt new major stationary sources and major modifications of a particular precursor from the requirements of this section for PM_{2.5} if the NNSR precursor demonstration submitted to and

approved by the Administrator shows that such sources do not contribute significantly to PM_{2.5} levels that exceed the standard in the area. Any demonstration submitted for the Administrator's review must meet the conditions for a NNSR precursor demonstration as set forth in § 51.1006(a)(3).

(b)

- (1) Each plan shall include a preconstruction review permit program or its equivalent to satisfy the requirements of section 110(a)(2)(D)(i) of the Act for any new major stationary source or major modification as defined in paragraphs (a)(1) (iv) and (v) of this section. Such a program shall apply to any such source or modification that would locate in any area designated as attainment or unclassifiable for any national ambient air quality standard pursuant to section 107 of the Act, when it would cause or contribute to a violation of any national ambient air quality standard.
- (2) A major source or major modification will be considered to cause or contribute to a violation of a national ambient air quality standard when such source or modification would, at a minimum, exceed the following significance levels at any locality that does not or would not meet the applicable national standard:

Pollutant	Annual	Averaging time (hours)			
		24	8	3	1
SO ₂	1.0 µg/m ³	5 µg/m ³		25 µg/m ³	
PM ₁₀	1.0 µg/m ³	5 µg/m ³			
PM _{2.5}	0.3 µg/m ³	1.2 µg/m ³			
NO ₂	1.0 µg/m ³				
CO			0.5 mg/m ³		2 mg/m ³

- (3) Such a program may include a provision which allows a proposed major source or major modification subject to paragraph (b) of this section to reduce the impact of its emissions upon air quality by obtaining sufficient emission reductions to, at a minimum, compensate for its adverse ambient impact where the major source or major modification would otherwise cause or contribute to a violation of any national ambient air quality standard. The plan shall require that, in the absence of such emission reductions, the State or local agency shall deny the proposed construction.
- (4) The requirements of paragraph (b) of this section shall not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as nonattainment pursuant to section 107 of the Act.

(c)-(e) [Reserved]

- (f) **Actuals PALs.** The plan shall provide for PALs according to the provisions in paragraphs (f)(1) through (15) of this section.

- (1) **Applicability.**

- (i) The reviewing authority may approve the use of an actuals PAL for any existing major stationary source (except as provided in paragraph (f)(1)(ii) of this section) if the PAL meets the requirements in paragraphs (f)(1) through (15) of this section. The term “PAL” shall mean “actuals PAL” throughout paragraph (f) of this section.
 - (ii) The reviewing authority shall not allow an actuals PAL for VOC or NO_x for any major stationary source located in an extreme ozone nonattainment area.
 - (iii) Any physical change in or change in the method of operation of a major stationary source that maintains its total source-wide emissions below the PAL level, meets the requirements in paragraphs (f)(1) through (15) of this section, and complies with the PAL permit:
 - (A) Is not a major modification for the PAL pollutant;
 - (B) Does not have to be approved through the plan's nonattainment major NSR program; and
 - (C) Is not subject to the provisions in paragraph (a)(5)(ii) of this section (restrictions on relaxing enforceable emission limitations that the major stationary source used to avoid applicability of the nonattainment major NSR program).
 - (iv) Except as provided under paragraph (f)(1)(iii)(C) of this section, a major stationary source shall continue to comply with all applicable Federal or State requirements, emission limitations, and work practice requirements that were established prior to the effective date of the PAL.
- (2) **Definitions.** The plan shall use the definitions in paragraphs (f)(2)(i) through (xi) of this section for the purpose of developing and implementing regulations that authorize the use of actuals PALs consistent with paragraphs (f)(1) through (15) of this section. When a term is not defined in these paragraphs, it shall have the meaning given in paragraph (a)(1) of this section or in the Act.
- (i) **Actuals PAL** for a major stationary source means a PAL based on the baseline actual emissions (as defined in paragraph (a)(1)(xxxv) of this section) of all emissions units (as defined in paragraph (a)(1)(vii) of this section) at the source, that emit or have the potential to emit the PAL pollutant.
 - (ii) **Allowable emissions** means “allowable emissions” as defined in paragraph (a)(1)(xi) of this section, except as this definition is modified according to paragraphs (f)(2)(ii)(A) through (B) of this section.
 - (A) The allowable emissions for any emissions unit shall be calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit's potential to emit.
 - (B) An emissions unit's potential to emit shall be determined using the definition in paragraph (a)(1)(iii) of this section, except that the words “or enforceable as a practical matter” should be added after “federally enforceable.”
 - (iii) **Small emissions unit** means an emissions unit that emits or has the potential to emit the PAL pollutant in an amount less than the significant level for that PAL pollutant, as defined in paragraph (a)(1)(x) of this section or in the Act, whichever is lower.
 - (iv) **Major emissions unit** means:
 - (A) Any emissions unit that emits or has the potential to emit 100 tons per year or more of the PAL pollutant in an attainment area; or

- (B) Any emissions unit that emits or has the potential to emit the PAL pollutant in an amount that is equal to or greater than the major source threshold for the PAL pollutant as defined by the Act for nonattainment areas. For example, in accordance with the definition of major stationary source in section 182(c) of the Act, an emissions unit would be a major emissions unit for VOC if the emissions unit is located in a serious ozone nonattainment area and it emits or has the potential to emit 50 or more tons of VOC per year.
- (v) **Plantwide applicability limitation (PAL)** means an emission limitation expressed in tons per year, for a pollutant at a major stationary source, that is enforceable as a practical matter and established source-wide in accordance with paragraphs (f)(1) through (f)(15) of this section.
- (vi) **PAL effective date** generally means the date of issuance of the PAL permit. However, the PAL effective date for an increased PAL is the date any emissions unit which is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.
- (vii) **PAL effective period** means the period beginning with the PAL effective date and ending 10 years later.
- (viii) **PAL major modification** means, notwithstanding paragraphs (a)(1)(v) and (vi) of this section (the definitions for major modification and net emissions increase), any physical change in or change in the method of operation of the PAL source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL.
- (ix) **PAL permit** means the major NSR permit, the minor NSR permit, or the State operating permit under a program that is approved into the plan, or the title V permit issued by the reviewing authority that establishes a PAL for a major stationary source.
- (x) **PAL pollutant** means the pollutant for which a PAL is established at a major stationary source.
- (xi) **Significant emissions unit** means an emissions unit that emits or has the potential to emit a PAL pollutant in an amount that is equal to or greater than the significant level (as defined in paragraph (a)(1)(x) of this section or in the Act, whichever is lower) for that PAL pollutant, but less than the amount that would qualify the unit as a major emissions unit as defined in paragraph (f)(2)(iv) of this section.
- (3) **Permit application requirements.** As part of a permit application requesting a PAL, the owner or operator of a major stationary source shall submit the following information to the reviewing authority for approval:
 - (i) A list of all emissions units at the source designated as small, significant or major based on their potential to emit. In addition, the owner or operator of the source shall indicate which, if any, Federal or State applicable requirements, emission limitations or work practices apply to each unit.
 - (ii) Calculations of the baseline actual emissions (with supporting documentation). Baseline actual emissions are to include emissions associated not only with operation of the unit, but also emissions associated with startup, shutdown and malfunction.
 - (iii) The calculation procedures that the major stationary source owner or operator proposes to use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by paragraph (f)(13)(i) of this section.
- (4) **General requirements for establishing PALs.**

- (i) The plan allows the reviewing authority to establish a PAL at a major stationary source, provided that at a minimum, the requirements in paragraphs (f)(4)(i)(A) through (G) of this section are met.
 - (A) The PAL shall impose an annual emission limitation in tons per year, that is enforceable as a practical matter, for the entire major stationary source. For each month during the PAL effective period after the first 12 months of establishing a PAL, the major stationary source owner or operator shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL (a 12-month average, rolled monthly). For each month during the first 11 months from the PAL effective date, the major stationary source owner or operator shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.
 - (B) The PAL shall be established in a PAL permit that meets the public participation requirements in paragraph (f)(5) of this section.
 - (C) The PAL permit shall contain all the requirements of paragraph (f)(7) of this section.
 - (D) The PAL shall include fugitive emissions, to the extent quantifiable, from all emissions units that emit or have the potential to emit the PAL pollutant at the major stationary source.
 - (E) Each PAL shall regulate emissions of only one pollutant.
 - (F) Each PAL shall have a PAL effective period of 10 years.
 - (G) The owner or operator of the major stationary source with a PAL shall comply with the monitoring, recordkeeping, and reporting requirements provided in paragraphs (f)(12) through (14) of this section for each emissions unit under the PAL through the PAL effective period.
 - (ii) At no time (during or after the PAL effective period) are emissions reductions of a PAL pollutant, which occur during the PAL effective period, creditable as decreases for purposes of offsets under paragraph (a)(3)(ii) of this section unless the level of the PAL is reduced by the amount of such emissions reductions and such reductions would be creditable in the absence of the PAL.
- (5) **Public participation requirement for PALs.** PALs for existing major stationary sources shall be established, renewed, or increased through a procedure that is consistent with §§ 51.160 and 51.161 of this chapter. This includes the requirement that the reviewing authority provide the public with notice of the proposed approval of a PAL permit and at least a 30-day period for submittal of public comment. The reviewing authority must address all material comments before taking final action on the permit.
- (6) **Setting the 10-year actuals PAL level.**
- (i) Except as provided in paragraph (f)(6)(ii) of this section, the plan shall provide that the actuals PAL level for a major stationary source shall be established as the sum of the baseline actual emissions (as defined in paragraph (a)(1)(xxv) of this section) of the PAL pollutant for each emissions unit at the source; plus an amount equal to the applicable significant level for the PAL pollutant under paragraph (a)(1)(x) of this section or under the Act, whichever is lower. When establishing the actuals PAL level, for a PAL pollutant, only one consecutive 24-month period must be used to determine the baseline actual emissions for all existing emissions

units. However, a different consecutive 24-month period may be used for each different PAL pollutant. Emissions associated with units that were permanently shut down after this 24-month period must be subtracted from the PAL level. The reviewing authority shall specify a reduced PAL level(s) (in tons/yr) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or State regulatory requirement(s) that the reviewing authority is aware of prior to issuance of the PAL permit. For instance, if the source owner or operator will be required to reduce emissions from industrial boilers in half from baseline emissions of 60 ppm NO_x to a new rule limit of 30 ppm, then the permit shall contain a future effective PAL level that is equal to the current PAL level reduced by half of the original baseline emissions of such unit(s).

- (ii) For newly constructed units (which do not include modifications to existing units) on which actual construction began after the 24-month period, in lieu of adding the baseline actual emissions as specified in paragraph (f)(6)(i) of this section, the emissions must be added to the PAL level in an amount equal to the potential to emit of the units.

(7) **Contents of the PAL permit.** The plan shall require that the PAL permit contain, at a minimum, the information in paragraphs (f)(7)(i) through (x) of this section.

- (i) The PAL pollutant and the applicable source-wide emission limitation in tons per year.
- (ii) The PAL permit effective date and the expiration date of the PAL (PAL effective period).
- (iii) Specification in the PAL permit that if a major stationary source owner or operator applies to renew a PAL in accordance with paragraph (f)(10) of this section before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the reviewing authority.
- (iv) A requirement that emission calculations for compliance purposes include emissions from startups, shutdowns and malfunctions.
- (v) A requirement that, once the PAL expires, the major stationary source is subject to the requirements of paragraph (f)(9) of this section.
- (vi) The calculation procedures that the major stationary source owner or operator shall use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by paragraph (f)(13)(i) of this section.
- (vii) A requirement that the major stationary source owner or operator monitor all emissions units in accordance with the provisions under paragraph (f)(12) of this section.
- (viii) A requirement to retain the records required under paragraph (f)(13) of this section on site. Such records may be retained in an electronic format.
- (ix) A requirement to submit the reports required under paragraph (f)(14) of this section by the required deadlines.
- (x) Any other requirements that the reviewing authority deems necessary to implement and enforce the PAL.

(8) **PAL effective period and reopening of the PAL permit.** The plan shall require the information in paragraphs (f)(8)(i) and (ii) of this section.

- (i) **PAL effective period.** The reviewing authority shall specify a PAL effective period of 10 years.

(ii) *Reopening of the PAL permit.*

- (A) During the PAL effective period, the plan shall require the reviewing authority to reopen the PAL permit to:
 - (1) Correct typographical/calculation errors made in setting the PAL or reflect a more accurate determination of emissions used to establish the PAL.
 - (2) Reduce the PAL if the owner or operator of the major stationary source creates creditable emissions reductions for use as offsets under paragraph (a)(3)(ii) of this section.
 - (3) Revise the PAL to reflect an increase in the PAL as provided under paragraph (f)(11) of this section.
- (B) The plan shall provide the reviewing authority discretion to reopen the PAL permit for the following:
 - (1) Reduce the PAL to reflect newly applicable Federal requirements (for example, NSPS) with compliance dates after the PAL effective date.
 - (2) Reduce the PAL consistent with any other requirement, that is enforceable as a practical matter, and that the State may impose on the major stationary source under the plan.
 - (3) Reduce the PAL if the reviewing authority determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an air quality related value that has been identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public.
- (C) Except for the permit reopening in paragraph (f)(8)(ii)(A)(1) of this section for the correction of typographical/calculation errors that do not increase the PAL level, all other reopenings shall be carried out in accordance with the public participation requirements of paragraph (f)(5) of this section.

(9) *Expiration of a PAL.* Any PAL which is not renewed in accordance with the procedures in paragraph (f)(10) of this section shall expire at the end of the PAL effective period, and the requirements in paragraphs (f)(9)(i) through (v) of this section shall apply.

- (i) Each emissions unit (or each group of emissions units) that existed under the PAL shall comply with an allowable emission limitation under a revised permit established according to the procedures in paragraphs (f)(9)(i)(A) through (B) of this section.
 - (A) Within the time frame specified for PAL renewals in paragraph (f)(10)(ii) of this section, the major stationary source shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if such a distribution is more appropriate as decided by the reviewing authority) by distributing the PAL allowable emissions for the major stationary source among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for an applicable requirement that became effective during the PAL effective period, as required under paragraph (f)(10)(v) of this section, such distribution shall be made as if the PAL had been adjusted.

- (B) The reviewing authority shall decide whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the reviewing authority determines is appropriate.
 - (ii) Each emissions unit(s) shall comply with the allowable emission limitation on a 12-month rolling basis. The reviewing authority may approve the use of monitoring systems (source testing, emission factors, etc.) other than CEMS, CERMS, PEMS or CPMS to demonstrate compliance with the allowable emission limitation.
 - (iii) Until the reviewing authority issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as required under paragraph (f)(9)(i)(A) of this section, the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.
 - (iv) Any physical change or change in the method of operation at the major stationary source will be subject to the nonattainment major NSR requirements if such change meets the definition of major modification in paragraph (a)(1)(v) of this section.
 - (v) The major stationary source owner or operator shall continue to comply with any State or Federal applicable requirements (BACT, RACT, NSPS, etc.) that may have applied either during the PAL effective period or prior to the PAL effective period except for those emission limitations that had been established pursuant to paragraph (a)(5)(ii) of this section, but were eliminated by the PAL in accordance with the provisions in paragraph (f)(1)(iii)(C) of this section.
- (10) **Renewal of a PAL.**
- (i) The reviewing authority shall follow the procedures specified in paragraph (f)(5) of this section in approving any request to renew a PAL for a major stationary source, and shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During such public review, any person may propose a PAL level for the source for consideration by the reviewing authority.
 - (ii) **Application deadline.** The plan shall require that a major stationary source owner or operator shall submit a timely application to the reviewing authority to request renewal of a PAL. A timely application is one that is submitted at least 6 months prior to, but not earlier than 18 months from, the date of permit expiration. This deadline for application submittal is to ensure that the permit will not expire before the permit is renewed. If the owner or operator of a major stationary source submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.
 - (iii) **Application requirements.** The application to renew a PAL permit shall contain the information required in paragraphs (f)(10)(iii)(A) through (D) of this section.
 - (A) The information required in paragraphs (f)(3)(i) through (iii) of this section.
 - (B) A proposed PAL level.
 - (C) The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).

- (D) Any other information the owner or operator wishes the reviewing authority to consider in determining the appropriate level for renewing the PAL.
 - (iv) **PAL adjustment.** In determining whether and how to adjust the PAL, the reviewing authority shall consider the options outlined in paragraphs (f)(10)(iv)(A) and (B) of this section. However, in no case may any such adjustment fail to comply with paragraph (f)(10)(iv)(C) of this section.
 - (A) If the emissions level calculated in accordance with paragraph (f)(6) of this section is equal to or greater than 80 percent of the PAL level, the reviewing authority may renew the PAL at the same level without considering the factors set forth in paragraph (f)(10)(iv)(B) of this section; or
 - (B) The reviewing authority may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the reviewing authority in its written rationale.
 - (C) Notwithstanding paragraphs (f)(10)(iv)(A) and (B) of this section,
 - (1) If the potential to emit of the major stationary source is less than the PAL, the reviewing authority shall adjust the PAL to a level no greater than the potential to emit of the source; and
 - (2) The reviewing authority shall not approve a renewed PAL level higher than the current PAL, unless the major stationary source has complied with the provisions of paragraph (f)(11) of this section (increasing a PAL).
 - (v) If the compliance date for a State or Federal requirement that applies to the PAL source occurs during the PAL effective period, and if the reviewing authority has not already adjusted for such requirement, the PAL shall be adjusted at the time of PAL permit renewal or title V permit renewal, whichever occurs first.
- (11) **Increasing a PAL during the PAL effective period.**
- (i) The plan shall require that the reviewing authority may increase a PAL emission limitation only if the major stationary source complies with the provisions in paragraphs (f)(11)(i)(A) through (D) of this section.
 - (A) The owner or operator of the major stationary source shall submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions unit(s) contributing to the increase in emissions so as to cause the major stationary source's emissions to equal or exceed its PAL.
 - (B) As part of this application, the major stationary source owner or operator shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions unit(s) exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER

requirement that was established within the preceding 10 years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply.

- (C) The owner or operator obtains a major NSR permit for all emissions unit(s) identified in paragraph (f)(11)(i)(A) of this section, regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions unit(s) shall comply with any emissions requirements resulting from the nonattainment major NSR program process (for example, LAER), even though they have also become subject to the PAL or continue to be subject to the PAL.
- (D) The PAL permit shall require that the increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.
- (ii) The reviewing authority shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with paragraph (f)(11)(i)(B)), plus the sum of the baseline actual emissions of the small emissions units.
- (iii) The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of paragraph (f)(5) of this section.

(12) Monitoring requirements for PALs –

- (i) **General requirements.**
 - (A) Each PAL permit must contain enforceable requirements for the monitoring system that accurately determines plantwide emissions of the PAL pollutant in terms of mass per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.
 - (B) The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in paragraphs (f)(12)(ii)(A) through (D) of this section and must be approved by the reviewing authority.
 - (C) Notwithstanding paragraph (f)(12)(i)(B) of this section, you may also employ an alternative monitoring approach that meets paragraph (f)(12)(i)(A) of this section if approved by the reviewing authority.
 - (D) Failure to use a monitoring system that meets the requirements of this section renders the PAL invalid.
- (ii) **Minimum Performance Requirements for Approved Monitoring Approaches.** The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in paragraphs (f)(12)(iii) through (ix) of this section:
 - (A) Mass balance calculations for activities using coatings or solvents;
 - (B) CEMS;

- (C) CPMS or PEMS; and
 - (D) Emission Factors.
- (iii) Mass Balance Calculations. An owner or operator using mass balance calculations to monitor PAL pollutant emissions from activities using coating or solvents shall meet the following requirements:
 - (A) Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;
 - (B) Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; and
 - (C) Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the reviewing authority determines there is site-specific data or a site-specific monitoring program to support another content within the range.
- (iv) CEMS. An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:
 - (A) CEMS must comply with applicable Performance Specifications found in 40 CFR part 60, appendix B; and
 - (B) CEMS must sample, analyze and record data at least every 15 minutes while the emissions unit is operating.
- (v) CPMS or PEMS. An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements:
 - (A) The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and
 - (B) Each CPMS or PEMS must sample, analyze, and record data at least every 15 minutes, or at another less frequent interval approved by the reviewing authority, while the emissions unit is operating.
- (vi) Emission factors. An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:
 - (A) All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development;
 - (B) The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and
 - (C) If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the reviewing authority determines that testing is not required.

- (vii) A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit.
- (viii) Notwithstanding the requirements in paragraphs (f)(12)(iii) through (vii) of this section, where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of the emissions unit, the reviewing authority shall, at the time of permit issuance:
 - (A) Establish default value(s) for determining compliance with the PAL based on the highest potential emissions reasonably estimated at such operating point(s); or
 - (B) Determine that operation of the emissions unit during operating conditions when there is no correlation between monitored parameter(s) and the PAL pollutant emissions is a violation of the PAL.
- (ix) Re-validation. All data used to establish the PAL pollutant must be re-validated through performance testing or other scientifically valid means approved by the reviewing authority. Such testing must occur at least once every 5 years after issuance of the PAL.

(13) Recordkeeping requirements.

- (i) The PAL permit shall require an owner or operator to retain a copy of all records necessary to determine compliance with any requirement of paragraph (f) of this section and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions, for 5 years from the date of such record.
- (ii) The PAL permit shall require an owner or operator to retain a copy of the following records for the duration of the PAL effective period plus 5 years:
 - (A) A copy of the PAL permit application and any applications for revisions to the PAL; and
 - (B) Each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.

(14) Reporting and notification requirements. The owner or operator shall submit semi-annual monitoring reports and prompt deviation reports to the reviewing authority in accordance with the applicable title V operating permit program. The reports shall meet the requirements in paragraphs (f)(14)(i) through (iii).

- (i) Semi-Annual Report. The semi-annual report shall be submitted to the reviewing authority within 30 days of the end of each reporting period. This report shall contain the information required in paragraphs (f)(14)(i)(A) through (G) of this section.
 - (A) The identification of owner and operator and the permit number.
 - (B) Total annual emissions (tons/year) based on a 12-month rolling total for each month in the reporting period recorded pursuant to paragraph (f)(13)(i) of this section.
 - (C) All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions.
 - (D) A list of any emissions units modified or added to the major stationary source during the preceding 6-month period.

- (E) The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective action taken.
 - (F) A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system, and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided by paragraph (f)(12)(vii) of this section.
 - (G) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.
- (ii) Deviation report. The major stationary source owner or operator shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available. A report submitted pursuant to § 70.6(a)(3)(iii)(B) of this chapter shall satisfy this reporting requirement. The deviation reports shall be submitted within the time limits prescribed by the applicable program implementing § 70.6(a)(3)(iii)(B) of this chapter. The reports shall contain the following information:
- (A) The identification of owner and operator and the permit number;
 - (B) The PAL requirement that experienced the deviation or that was exceeded;
 - (C) Emissions resulting from the deviation or the exceedance; and
 - (D) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.
- (iii) Re-validation results. The owner or operator shall submit to the reviewing authority the results of any re-validation test or method within 3 months after completion of such test or method.

(15) **Transition requirements.**

- (i) No reviewing authority may issue a PAL that does not comply with the requirements in paragraphs (f)(1) through (15) of this section after the Administrator has approved regulations incorporating these requirements into a plan.
 - (ii) The reviewing authority may supersede any PAL which was established prior to the date of approval of the plan by the Administrator with a PAL that complies with the requirements of paragraphs (f)(1) through (15) of this section.
- (g) If any provision of this section, or the application of such provision to any person or circumstance, is held invalid, the remainder of this section, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.
- (h) [Reserved]

- (i) **Public participation requirements.** The reviewing authority shall notify the public of a draft permit by a method described in either paragraph (i)(1) or (2) of this section. The selected method, known as the “consistent noticing method,” shall comply with the public participation procedural requirements of § 51.161 of this chapter and be used for all permits issued under this section and may, when appropriate, be supplemented by other noticing methods on individual permits.
- (1) Post the information in paragraphs (i)(1)(i) through (iii) of this section, for the duration of the public comment period, on a public Web site identified by the reviewing authority.
 - (i) A notice of availability of the draft permit for public comment;
 - (ii) The draft permit; and
 - (iii) Information on how to access the administrative record for the draft permit.
- (2) Publish a notice of availability of the draft permit for public comment in a newspaper of general circulation in the area where the source is located. The notice shall include information on how to access the draft permit and the administrative record for the draft permit.

[51 FR 40669, Nov. 7, 1986]

Editorial Note: For FEDERAL REGISTER citations affecting § 51.165, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

Effective Date Note: At 76 FR 17552, Mar. 30, 2011, § 51.165, paragraphs (a)(1)(v)(G) and (v)(1)(vi)(C)(3) are stayed indefinitely.

§ 51.166 Prevention of significant deterioration of air quality.

- (a)
 - (1) **Plan requirements.** In accordance with the policy of section 101(b)(1) of the Act and the purposes of section 160 of the Act, each applicable State Implementation Plan and each applicable Tribal Implementation Plan shall contain emission limitations and such other measures as may be necessary to prevent significant deterioration of air quality.
 - (2) **Plan revisions.** If a State Implementation Plan revision would result in increased air quality deterioration over any baseline concentration, the plan revision shall include a demonstration that it will not cause or contribute to a violation of the applicable increment(s). If a plan revision proposing less restrictive requirements was submitted after August 7, 1977 but on or before any applicable baseline date and was pending action by the Administrator on that date, no such demonstration is necessary with respect to the area for which a baseline date would be established before final action is taken on the plan revision. Instead, the assessment described in paragraph (a)(4) of this section, shall review the expected impact to the applicable increment(s).
 - (3) **Required plan revision.** If the State or the Administrator determines that a plan is substantially inadequate to prevent significant deterioration or that an applicable increment is being violated, the plan shall be revised to correct the inadequacy or the violation. The plan shall be revised within 60 days of such a finding by a State or within 60 days following notification by the Administrator, or by such later date as prescribed by the Administrator after consultation with the State.

- (4) **Plan assessment.** The State shall review the adequacy of a plan on a periodic basis and within 60 days of such time as information becomes available that an applicable increment is being violated.
- (5) **Public participation.** Any State action taken under this paragraph shall be subject to the opportunity for public hearing in accordance with procedures equivalent to those established in § 51.102.
- (6) **Amendments.**
 - (i) Any State required to revise its implementation plan by reason of an amendment to this section, with the exception of amendments to add new maximum allowable increases or other measures pursuant to section 166(a) of the Act, shall adopt and submit such plan revision to the Administrator for approval no later than 3 years after such amendment is published in the FEDERAL REGISTER. With regard to a revision to an implementation plan by reason of an amendment to paragraph (c) of this section to add maximum allowable increases or other measures, the State shall submit such plan revision to the Administrator for approval within 21 months after such amendment is published in the FEDERAL REGISTER.
 - (ii) Any revision to an implementation plan that would amend the provisions for the prevention of significant air quality deterioration in the plan shall specify when and as to what sources and modifications the revision is to take effect.
 - (iii) Any revision to an implementation plan that an amendment to this section required shall take effect no later than the date of its approval and may operate prospectively.
- (7) **Applicability.** Each plan shall contain procedures that incorporate the requirements in paragraphs (a)(7)(i) through (v) of this section.
 - (i) The requirements of this section apply to the construction of any new major stationary source (as defined in paragraph (b)(1) of this section) or any project at an existing major stationary source in an area designated as attainment or unclassifiable under sections 107(d)(1)(A)(ii) or (iii) of the Act.
 - (ii) The requirements of paragraphs (j) through (r) of this section apply to the construction of any new major stationary source or the major modification of any existing major stationary source, except as this section otherwise provides.
 - (iii) No new major stationary source or major modification to which the requirements of paragraphs (j) through (r)(5) of this section apply shall begin actual construction without a permit that states that the major stationary source or major modification will meet those requirements.
 - (iv) Each plan shall use the specific provisions of paragraphs (a)(7)(iv)(a) through (f) of this section. Deviations from these provisions will be approved only if the State specifically demonstrates that the submitted provisions are more stringent than or at least as stringent in all respects as the corresponding provisions in paragraphs (a)(7)(iv)(a) through (f) of this section.
 - (a) Except as otherwise provided in paragraph (a)(7)(v) of this section, and consistent with the definition of major modification contained in paragraph (b)(2) of this section, a project is a major modification for a regulated NSR pollutant if it causes two types of emissions increases—a significant emissions increase (as defined in paragraph (b)(39) of this section), and a significant net emissions increase (as defined in paragraphs (b)(3) and (23) of this section). The project is not a major modification if it does not cause a

significant emissions increase. If the project causes a significant emissions increase, then the project is a major modification only if it also results in a significant net emissions increase.

- (b) The procedure for calculating (before beginning actual construction) whether a significant emissions increase (*i.e.*, the first step of the process) will occur depends upon the type of emissions units being modified, according to paragraphs (a)(7)(iv)(c) through (f) of this section. The procedure for calculating (before beginning actual construction) whether a significant net emissions increase will occur at the major stationary source (*i.e.*, the second step of the process) is contained in the definition in paragraph (b)(3) of this section. Regardless of any such preconstruction projections, a major modification results if the project causes a significant emissions increase and a significant net emissions increase.
- (c) **Actual-to-projected-actual applicability test for projects that only involve existing emissions units.** A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (as defined in paragraph (b)(40) of this section) and the baseline actual emissions (as defined in paragraphs (b)(47)(i) and (ii) of this section) for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).
- (d) **Actual-to-potential test for projects that only involve construction of a new emissions unit(s).** A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit (as defined in paragraph (b)(4) of this section) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in paragraph (b)(47)(iii) of this section) of these units before the project equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).
- (e) [Reserved]
- (f) **Hybrid test for projects that involve multiple types of emissions units.** A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference for all emissions units, using the method specified in paragraphs (a)(7)(iv)(c) through (d) of this section as applicable with respect to each emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).
- (g) The "sum of the difference" as used in paragraphs (c), (d) and (f) of this section shall include both increases and decreases in emissions calculated in accordance with those paragraphs.
- (v) The plan shall require that for any major stationary source with a PAL for a regulated NSR pollutant, the major stationary source shall comply with requirements under paragraph (w) of this section.

(b) **Definitions.** All State plans shall use the following definitions for the purposes of this section. Deviations from the following wording will be approved only if the State specifically demonstrates that the submitted definition is more stringent, or at least as stringent, in all respects as the corresponding definitions below:

(1)

(i) **Major stationary source** means:

- (a) Any of the following stationary sources of air pollutants which emits, or has the potential to emit, 100 tons per year or more of any regulated NSR pollutant: Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants (with thermal dryers), primary copper smelters, municipal incinerators capable of charging more than 50 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants (which does not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140), fossil-fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants, and charcoal production plants;
 - (b) Notwithstanding the stationary source size specified in paragraph (b)(1)(i)(a) of this section, any stationary source which emits, or has the potential to emit, 250 tons per year or more of a regulated NSR pollutant; or
 - (c) Any physical change that would occur at a stationary source not otherwise qualifying under paragraph (b)(1) of this section as a major stationary source, if the change would constitute a major stationary source by itself.
- (ii) A major source that is major for volatile organic compounds or NO_x shall be considered major for ozone.
- (iii) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the following categories of stationary sources:
- (a) Coal cleaning plants (with thermal dryers);
 - (b) Kraft pulp mills;
 - (c) Portland cement plants;
 - (d) Primary zinc smelters;
 - (e) Iron and steel mills;
 - (f) Primary aluminum ore reduction plants;
 - (g) Primary copper smelters;
 - (h) Municipal incinerators capable of charging more than 50 tons of refuse per day;
 - (i) Hydrofluoric, sulfuric, or nitric acid plants;
 - (j) Petroleum refineries;
 - (k) Lime plants;
 - (l) Phosphate rock processing plants;

- (m) Coke oven batteries;
- (n) Sulfur recovery plants;
- (o) Carbon black plants (furnace process);
- (p) Primary lead smelters;
- (q) Fuel conversion plants;
- (r) Sintering plants;
- (s) Secondary metal production plants;
- (t) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
- (u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- (v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (w) Taconite ore processing plants;
- (x) Glass fiber processing plants;
- (y) Charcoal production plants;
- (z) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, and
- (aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

(2)

- (i) **Major modification** means any physical change in or change in the method of operation of a major stationary source that would result in: a significant emissions increase (as defined in paragraph (b)(39) of this section) of a regulated NSR pollutant (as defined in paragraph (b)(49) of this section); and a significant net emissions increase of that pollutant from the major stationary source.
- (ii) Any significant emissions increase (as defined at paragraph (b)(39) of this section) from any emissions units or net emissions increase (as defined in paragraph (b)(3) of this section) at a major stationary source that is significant for volatile organic compounds or NO_x shall be considered significant for ozone.
- (iii) A physical change or change in the method of operation shall not include:
 - (a) Routine maintenance, repair and replacement;

Note to paragraph (b)(2)(iii)(a): On December 24, 2003, the second sentence of this paragraph (b)(2)(iii)(a) is stayed indefinitely by court order. The stayed provisions

will become effective immediately if the court terminates the stay. At that time, EPA will publish a document in the FEDERAL REGISTER advising the public of the termination of the stay.

- (b) Use of an alternative fuel or raw material by reason of any order under section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
- (c) Use of an alternative fuel by reason of an order or rule under section 125 of the Act;
- (d) Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
- (e) Use of an alternative fuel or raw material by a stationary source which:
 - (1) The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR part 51, subpart I.
 - (2) The source is approved to use under any permit issued under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166;
- (f) An increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR part 51, subpart I.
- (g) Any change in ownership at a stationary source.
- (h) [Reserved]
- (i) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:
 - (1) The State implementation plan for the State in which the project is located; and
 - (2) Other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- (j) The installation or operation of a permanent clean coal technology demonstration project that constitutes repowering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. This exemption shall apply on a pollutant-by-pollutant basis.
- (k) The reactivation of a very clean coal-fired electric utility steam generating unit.
- (iv) This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under paragraph (w) of this section for a PAL for that pollutant. Instead, the definition at paragraph (w)(2)(viii) of this section shall apply.

- (v) Fugitive emissions shall not be included in determining for any of the purposes of this section whether a physical change in or change in the method of operation of a major stationary source is a major modification, unless the source belongs to one of the source categories listed in paragraph (b)(1)(iii) of this section.

(3)

- (i) **Net emissions increase** means, with respect to any regulated NSR pollutant emitted by a major stationary source, the amount by which the sum of the following exceeds zero:
 - (a) The increase in emissions from a particular physical change or change in the method of operation at a stationary source as calculated pursuant to paragraph (a)(7)(iv) of this section; and
 - (b) Any other increases and decreases in actual emissions at the major stationary source that are contemporaneous with the particular change and are otherwise creditable. Baseline actual emissions for calculating increases and decreases under this paragraph (b)(3)(i)(b) shall be determined as provided in paragraph (b)(47), except that paragraphs (b)(47)(i)(c) and (b)(47)(ii)(d) of this section shall not apply.
- (ii) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs within a reasonable period (to be specified by the State) before the date that the increase from the particular change occurs.
- (iii) An increase or decrease in actual emissions is creditable only if:
 - (a) It occurs within a reasonable period (to be specified by the reviewing authority); and
 - (b) The reviewing authority has not relied on it in issuing a permit for the source under regulations approved pursuant to this section, which permit is in effect when the increase in actual emissions from the particular change occurs; and
 - (c) [Reserved]
 - (d) As it pertains to an increase or decrease in fugitive emissions (to the extent quantifiable), it occurs at an emissions unit that is part of one of the source categories listed in paragraph (b)(1)(iii) of this section or it occurs at an emission unit that is located at a major stationary source that belongs to one of the listed source categories. Fugitive emission increases or decreases are not included for those emissions units located at a facility whose primary activity is not represented by one of the source categories listed in paragraph (b)(1)(iii) of this section and that are not, by themselves, part of a listed source category.
- (iv) An increase or decrease in actual emissions of sulfur dioxide, particulate matter, or nitrogen oxides that occurs before the applicable minor source baseline date is creditable only if it is required to be considered in calculating the amount of maximum allowable increases remaining available.
- (v) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
- (vi) A decrease in actual emissions is creditable only to the extent that:

- (a) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;
 - (b) It is enforceable as a practical matter at and after the time that actual construction on the particular change begins;
 - (c) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change; and
 - (vii) An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.
 - (viii) Paragraph (b)(21)(ii) of this section shall not apply for determining creditable increases and decreases.
- (4) **Potential to emit** means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a 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 or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.
- (5) **Stationary source** means any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant.
- (6)
- (i) **Building, structure, facility, or installation** means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same *Major Group* (i.e., which have the same two-digit code) as described in the *Standard Industrial Classification Manual, 1972*, as amended by the 1977 Supplement (U.S. Government Printing Office stock numbers 4101-0066 and 003-005-00176-0, respectively).
 - (ii) The plan may include the following provision: Notwithstanding the provisions of paragraph (b)(6)(i) of this section, *building, structure, facility, or installation* means, for onshore activities under SIC Major Group 13: Oil and Gas Extraction, all of the pollutant-emitting activities included in Major Group 13 that are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant emitting activities shall be considered adjacent if they are located on the same surface site; or if they are located on surface sites that are located within $\frac{1}{4}$ mile of one another (measured from the center of the equipment on the surface site) and they share equipment. Shared equipment includes, but is not limited to, produced fluids storage tanks, phase separators, natural gas dehydrators or emissions control devices. Surface site, as used in this paragraph (b)(6)(ii), has the same meaning as in 40 CFR 63.761.

- (7) **Emissions unit** means any part of a stationary source that emits or would have the potential to emit any regulated NSR pollutant and includes an electric utility steam generating unit as defined in paragraph (b)(30) of this section. For purposes of this section, there are two types of emissions units as described in paragraphs (b)(7)(i) and (ii) of this section.
- (i) A new emissions unit is any emissions unit that is (or will be) newly constructed and that has existed for less than 2 years from the date such emissions unit first operated.
- (ii) An existing emissions unit is any emissions unit that does not meet the requirements in paragraph (b)(7)(i) of this section. A replacement unit, as defined in paragraph (b)(32) of this section, is an existing emissions unit.
- (8) **Construction** means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) that would result in a change in emissions.
- (9) **Commence** as applied to construction of a major stationary source or major modification means that the owner or operator has all necessary preconstruction approvals or permits and either has:
- (i) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or
- (ii) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.
- (10) **Necessary preconstruction approvals or permits** means those permits or approvals required under Federal air quality control laws and regulations and those air quality control laws and regulations which are part of the applicable State Implementation Plan.
- (11) **Begin actual construction** means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipework, and construction of permanent storage structures. With respect to a change in method of operation this term refers to those on-site activities, other than preparatory activities, which mark the initiation of the change.
- (12) **Best available control technology** means an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major stationary source or major modification which the reviewing authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combination techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR part 60, 61, or 63. If the reviewing authority determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results.

(13)

- (i) **Baseline concentration** means that ambient concentration level that exists in the baseline area at the time of the applicable minor source baseline date. A baseline concentration is determined for each pollutant for which a minor source baseline date is established and shall include:
 - (a) The actual emissions, as defined in paragraph (b)(21) of this section, representative of sources in existence on the applicable minor source baseline date, except as provided in paragraph (b)(13)(ii) of this section;
 - (b) The allowable emissions of major stationary sources that commenced construction before the major source baseline date, but were not in operation by the applicable minor source baseline date.
- (ii) The following will not be included in the baseline concentration and will affect the applicable maximum allowable increase(s):
 - (a) Actual emissions, as defined in paragraph (b)(21) of this section, from any major stationary source on which construction commenced after the major source baseline date; and
 - (b) Actual emissions increases and decreases, as defined in paragraph (b)(21) of this section, at any stationary source occurring after the minor source baseline date.

(14)

- (i) **Major source baseline date** means:
 - (a) In the case of PM₁₀ and sulfur dioxide, January 6, 1975;
 - (b) In the case of nitrogen dioxide, February 8, 1988; and
 - (c) In the case of PM_{2.5}, October 20, 2010.
- (ii) **Minor source baseline date** means the earliest date after the trigger date on which a major stationary source or a major modification subject to 40 CFR 52.21 or to regulations approved pursuant to 40 CFR 51.166 submits a complete application under the relevant regulations. The trigger date is:
 - (a) In the case of PM₁₀ and sulfur dioxide, August 7, 1977;
 - (b) In the case of nitrogen dioxide, February 8, 1988; and
 - (c) In the case of PM_{2.5}, October 20, 2011.
- (iii) The baseline date is established for each pollutant for which increments or other equivalent measures have been established if:
 - (a) The area in which the proposed source or modification would construct is designated as attainment or unclassifiable under section 107(d)(1)(A)(ii) or (iii) of the Act for the pollutant on the date of its complete application under 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166; and

- (b) In the case of a major stationary source, the pollutant would be emitted in significant amounts, or, in the case of a major modification, there would be a significant net emissions increase of the pollutant.
 - (iv) Any minor source baseline date established originally for the TSP increments shall remain in effect and shall apply for purposes of determining the amount of available PM-10 increments, except that the reviewing authority may rescind any such minor source baseline date where it can be shown, to the satisfaction of the reviewing authority, that the emissions increase from the major stationary source, or the net emissions increase from the major modification, responsible for triggering that date did not result in a significant amount of PM-10 emissions.
- (15)
- (i) **Baseline area** means any intrastate area (and every part thereof) designated as attainment or unclassifiable under section 107(d)(1)(A)(ii) or (iii) of the Act in which the major source or major modification establishing the minor source baseline date would construct or would have an air quality impact for the pollutant for which the baseline date is established, as follows: Equal to or greater than $1 \mu\text{g}/\text{m}^3$ (annual average) for SO_2 , NO_2 , or PM_{10} ; or equal or greater than $0.3 \mu\text{g}/\text{m}^3$ (annual average) for $\text{PM}_{2.5}$.
 - (ii) Area redesignations under section 107(d)(1)(A)(ii) or (iii) of the Act cannot intersect or be smaller than the area of impact of any major stationary source or major modification which:
 - (a) Establishes a minor source baseline date; or
 - (b) Is subject to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR 51.166, and would be constructed in the same State as the State proposing the redesignation.
 - (iii) Any baseline area established originally for the TSP increments shall remain in effect and shall apply for purposes of determining the amount of available PM-10 increments, except that such baseline area shall not remain in effect if the permit authority rescinds the corresponding minor source baseline date in accordance with paragraph (b)(14)(iv) of this section.
- (16) **Allowable emissions** means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:
- (i) The applicable standards as set forth in 40 CFR parts 60 and 61;
 - (ii) The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or
 - (iii) The emissions rate specified as a federally enforceable permit condition.
- (17) **Federally enforceable** means all limitations and conditions which are enforceable by the Administrator, including those requirements developed pursuant to 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, any permit requirements established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR part 51, subpart I, including operating permits issued under an EPA-approved program that is incorporated into the State implementation plan and expressly requires adherence to any permit issued under such program.

- (18) **Secondary emissions** means emissions which occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. For the purposes of this section, secondary emissions must be specific, well defined, quantifiable, and impact the same general areas the stationary source modification which causes the secondary emissions. Secondary emissions include emissions from any offsite support facility which would not be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source, such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.
- (19) **Innovative control technology** means any system of air pollution control that has not been adequately demonstrated in practice, but would have a substantial likelihood of achieving greater continuous emissions reduction than any control system in current practice or of achieving at least comparable reductions at lower cost in terms of energy, economics, or nonair quality environmental impacts.
- (20) Fugitive emissions means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.
- (21)
- (i) **Actual emissions** means the actual rate of emissions of a regulated NSR pollutant from an emissions unit, as determined in accordance with paragraphs (b)(21)(ii) through (iv) of this section, except that this definition shall not apply for calculating whether a significant emissions increase has occurred, or for establishing a PAL under paragraph (w) of this section. Instead, paragraphs (b)(40) and (b)(47) of this section shall apply for those purposes.
- (ii) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the unit actually emitted the pollutant during a consecutive 24-month period which precedes the particular date and which is representative of normal source operation. The reviewing authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.
- (iii) The reviewing authority may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.
- (iv) For any emissions unit that has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.
- (22) **Complete** means, in reference to an application for a permit, that the application contains all the information necessary for processing the application. Designating an application complete for purposes of permit processing does not preclude the reviewing authority from requesting or accepting any additional information.
- (23)
- (i) **Significant** means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Pollutant and Emissions Rate

Carbon monoxide: 100 tons per year (tpy)

Nitrogen oxides: 40 tpy

Sulfur dioxide: 40 tpy

Particulate matter: 25 tpy of particulate matter emissions. 15 tpy of PM₁₀ emissions

PM_{2.5}: 10 tpy of direct PM_{2.5} emissions; 40 tpy of sulfur dioxide emissions; 40 tpy of nitrogen oxide emissions unless demonstrated not to be a PM_{2.5} precursor under paragraph (b)(49) of this section

Ozone: 40 tpy of volatile organic compounds or nitrogen oxides

Lead: 0.6 tpy

Fluorides: 3 tpy

Sulfuric acid mist: 7 tpy

Hydrogen sulfide (H₂S): 10 tpy

Total reduced sulfur (including H₂S): 10 tpy

Reduced sulfur compounds (including H₂S): 10 tpy

Municipal waste combustor organics (measured as total tetra-through octa-chlorinated dibenzo-p-dioxins and dibenzofurans): 3.2×10^{-6} megagrams per year (3.5×10^{-6} tons per year)

Municipal waste combustor metals (measured as particulate matter): 14 megagrams per year (15 tons per year)

Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride): 36 megagrams per year (40 tons per year)

Municipal solid waste landfill emissions (measured as nonmethane organic compounds): 45 megagrams per year (50 tons per year)

(ii) **Significant** means, in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that paragraph (b)(23)(i) of this section does not list, any emissions rate.

(iii) Notwithstanding paragraph (b)(23)(i) of this section, *significant* means any emissions rate or any net emissions increase associated with a major stationary source or major modification, which would construct within 10 kilometers of a Class I area, and have an impact on such area equal to or greater than 1 µg/m³ (24-hour average).

- (24) **Federal Land Manager** means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.
- (25) **High terrain** means any area having an elevation 900 feet or more above the base of the stack of a source.
- (26) **Low terrain** means any area other than high terrain.
- (27) **Indian Reservation** means any federally recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.
- (28) **Indian Governing Body** means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.
- (29) **Volatile organic compounds (VOC)** is as defined in § 51.100(s) of this part.
- (30) **Electric utility steam generating unit** means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.
- (31) [Reserved]
- (32) **Replacement unit** means an emissions unit for which all the criteria listed in paragraphs (b)(32)(i) through (iv) of this section are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.
 - (i) The emissions unit is a reconstructed unit within the meaning of § 60.15(b)(1) of this chapter, or the emissions unit completely takes the place of an existing emissions unit;
 - (ii) The emissions unit is identical to or functionally equivalent to the replaced emissions unit;
 - (iii) The replacement does not change the basic design parameter(s) of the process unit; and
 - (iv) The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.
- (33) **Clean coal technology** means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.
- (34) **Clean coal technology demonstration project** means a project using funds appropriated under the heading "Department of Energy—Clean Coal Technology", up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.

- (35) **Temporary clean coal technology demonstration project** means a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during and after the project is terminated.
- (36)
- (i) **Repowering** means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.
 - (ii) Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.
 - (iii) The reviewing authority shall give expedited consideration to permit applications for any source that satisfies the requirements of this subsection and is granted an extension under section 409 of the Clean Air Act.
- (37) **Reactivation of a very clean coal-fired electric utility steam generating unit** means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:
- (i) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;
 - (ii) Was equipped prior to shutdown with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;
 - (iii) Is equipped with low-NO_x burners prior to the time of commencement of operations following reactivation; and
 - (iv) Is otherwise in compliance with the requirements of the Clean Air Act.
- (38) **Pollution prevention** means any activity that through process changes, product reformulation or redesign, or substitution of less polluting raw materials, eliminates or reduces the release of air pollutants (including fugitive emissions) and other pollutants to the environment prior to recycling, treatment, or disposal; it does not mean recycling (other than certain "in-process recycling" practices), energy recovery, treatment, or disposal.
- (39) **Significant emissions increase** means, for a regulated NSR pollutant, an increase in emissions that is significant (as defined in paragraph (b)(23) of this section) for that pollutant.
- (40)

- (i) **Projected actual emissions** means the maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a regulated NSR pollutant in any one of the 5 years (12-month period) following the date the unit resumes regular operation after the project, or in any one of the 10 years following that date, if the project involves increasing the emissions unit's design capacity or its potential to emit that regulated NSR pollutant, and full utilization of the unit would result in a significant emissions increase, or a significant net emissions increase at the major stationary source.
- (ii) In determining the projected actual emissions under paragraph (b)(40)(i) of this section (before beginning actual construction), the owner or operator of the major stationary source:
 - (a) Shall consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans under the approved plan; and
 - (b) Shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions; and
 - (c) Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions under paragraph (b)(47) of this section and that are also unrelated to the particular project, including any increased utilization due to product demand growth; or,
 - (d) In lieu of using the method set out in paragraphs (b)(40)(ii)(a) through (c) of this section, may elect to use the emissions unit's potential to emit, in tons per year, as defined under paragraph (b)(4) of this section.
- (41) [Reserved]
- (42) **Prevention of Significant Deterioration Program (PSD) program** means a major source preconstruction permit program that has been approved by the Administrator and incorporated into the plan to implement the requirements of this section, or the program in § 52.21 of this chapter. Any permit issued under such a program is a major NSR permit.
- (43) **Continuous emissions monitoring system (CEMS)** means all of the equipment that may be required to meet the data acquisition and availability requirements of this section, to sample, condition (if applicable), analyze, and provide a record of emissions on a continuous basis.
- (44) **Predictive emissions monitoring system (PEMS)** means all of the equipment necessary to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O² or CO² concentrations), and calculate and record the mass emissions rate (for example, lb/hr) on a continuous basis.
- (45) **Continuous parameter monitoring system (CPMS)** means all of the equipment necessary to meet the data acquisition and availability requirements of this section, to monitor process and control device operational parameters (for example, control device secondary voltages and electric currents) and other information (for example, gas flow rate, O² or CO² concentrations), and to record average operational parameter value(s) on a continuous basis.

- (46) **Continuous emissions rate monitoring system (CERMS)** means the total equipment required for the determination and recording of the pollutant mass emissions rate (in terms of mass per unit of time).
- (47) **Baseline actual emissions** means the rate of emissions, in tons per year, of a regulated NSR pollutant, as determined in accordance with paragraphs (b)(47)(i) through (iv) of this section.
- (i) For any existing electric utility steam generating unit, baseline actual emissions means the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding when the owner or operator begins actual construction of the project. The reviewing authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation.
- (a) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.
- (b) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.
- (c) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used For each regulated NSR pollutant.
- (d) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by paragraph (b)(47)(i)(b) of this section.
- (ii) For an existing emissions unit (other than an electric utility steam generating unit), baseline actual emissions means the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 10-year period immediately preceding either the date the owner or operator begins actual construction of the project, or the date a complete permit application is received by the reviewing authority for a permit required either under this section or under a plan approved by the Administrator, whichever is earlier, except that the 10-year period shall not include any period earlier than November 15, 1990.
- (a) The average rate shall include fugitive emissions to the extent quantifiable, and emissions associated with startups, shutdowns, and malfunctions.
- (b) The average rate shall be adjusted downward to exclude any non-compliant emissions that occurred while the source was operating above an emission limitation that was legally enforceable during the consecutive 24-month period.
- (c) The average rate shall be adjusted downward to exclude any emissions that would have exceeded an emission limitation with which the major stationary source must currently comply, had such major stationary source been required to comply with such limitations during the consecutive 24-month period. However, if an emission limitation is part of a maximum achievable control technology standard that the Administrator proposed or promulgated under part 63 of this chapter, the baseline actual emissions need only be

adjusted if the State has taken credit for such emissions reductions in an attainment demonstration or maintenance plan consistent with the requirements of § 51.165(a)(3)(ii)(G).

- (d) For a regulated NSR pollutant, when a project involves multiple emissions units, only one consecutive 24-month period must be used to determine the baseline actual emissions for the emissions units being changed. A different consecutive 24-month period can be used For each regulated NSR pollutant.
 - (e) The average rate shall not be based on any consecutive 24-month period for which there is inadequate information for determining annual emissions, in tons per year, and for adjusting this amount if required by paragraphs (b)(47)(ii)(b) and (c) of this section.
 - (iii) For a new emissions unit, the baseline actual emissions for purposes of determining the emissions increase that will result from the initial construction and operation of such unit shall equal zero; and thereafter, for all other purposes, shall equal the unit's potential to emit.
 - (iv) For a PAL for a stationary source, the baseline actual emissions shall be calculated for existing electric utility steam generating units in accordance with the procedures contained in paragraph (b)(47)(i) of this section, for other existing emissions units in accordance with the procedures contained in paragraph (b)(47)(ii) of this section, and for a new emissions unit in accordance with the procedures contained in paragraph (b)(47)(iii) of this section.
- (48) **Subject to regulation** means, for any air pollutant, that the pollutant is subject to either a provision in the Clean Air Act, or a nationally-applicable regulation codified by the Administrator in subchapter C of this chapter, that requires actual control of the quantity of emissions of that pollutant, and that such a control requirement has taken effect and is operative to control, limit or restrict the quantity of emissions of that pollutant released from the regulated activity. Except that:
- (i) **Greenhouse gases (GHGs)**, the air pollutant defined in § 86.1818-12(a) of this chapter as the aggregate group of six greenhouse gases: Carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, shall not be subject to regulation except as provided in paragraph (b)(48)(iv) of this section.
 - (ii) For purposes of paragraphs (b)(48)(iii) and (iv) of this section, the term *tpy CO₂ equivalent emissions (CO₂e)* shall represent an amount of GHGs emitted, and shall be computed as follows:
 - (a) 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 part 98 of this chapter—Global Warming Potentials.
 - (b) Sum the resultant value from paragraph (b)(48)(ii)(a) of this section for each gas to compute a tpy CO₂e.
 - (iii) The term *emissions increase* as used in paragraph (b)(48)(iv) of this section shall mean that both a significant emissions increase (as calculated using the procedures in paragraph (a)(7)(iv) of this section) and a significant net emissions increase (as defined in paragraphs (b)(3) and (23) of this section) occur. For the pollutant GHGs, an emissions increase shall be based on tpy CO₂e, and shall be calculated assuming the pollutant GHGs is a regulated NSR pollutant and “significant” is defined as 75,000 tpy CO₂e instead of applying the value in paragraph (b)(23)(ii) of this section.

(iv) Beginning January 2, 2011, the pollutant GHGs is subject to regulation if:

- (a) The stationary source is a new major stationary source for a regulated NSR pollutant that is not GHGs, and also will emit or will have the potential to emit 75,000 tpy CO₂e or more; or
- (b) The stationary source is an existing major stationary source for a regulated NSR pollutant that is not GHGs, and also will have an emissions increase of a regulated NSR pollutant, and an emissions increase of 75,000 tpy CO₂e or more.

(49) **Regulated NSR pollutant**, for purposes of this section, means the following:

- (i) Any pollutant for which a national ambient air quality standard has been promulgated. This includes, but is not limited to, the following:
 - (a) PM_{2.5} emissions and PM₁₀ emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures. On or after January 1, 2011, such condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM_{2.5} and PM₁₀ in PSD permits. Compliance with emissions limitations for PM_{2.5} and PM₁₀ issued prior to this date shall not be based on condensable particulate matter unless required by the terms and conditions of the permit or the applicable implementation plan. Applicability determinations made prior to this date without accounting for condensable particulate matter shall not be considered in violation of this section unless the applicable implementation plan required condensable particulate matter to be included;
 - (b) Any pollutant identified under this paragraph (b)(49)(i)(b) as a constituent or precursor to a pollutant for which a national ambient air quality standard has been promulgated. Precursors identified by the Administrator for purposes of NSR are the following:
 - (1) Volatile organic compounds and nitrogen oxides are precursors to ozone in all attainment and unclassifiable areas.
 - (2) Sulfur dioxide is a precursor to PM_{2.5} in all attainment and unclassifiable areas.
 - (3) Nitrogen oxides are presumed to be precursors to PM_{2.5} in all attainment and unclassifiable areas, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of nitrogen oxides from sources in a specific area are not a significant contributor to that area's ambient PM_{2.5} concentrations.
 - (4) Volatile organic compounds are presumed not to be precursors to PM_{2.5} in any attainment or unclassifiable area, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of volatile organic compounds from sources in a specific area are a significant contributor to that area's ambient PM_{2.5} concentrations.
- (ii) Any pollutant that is subject to any standard promulgated under section 111 of the Act;
- (iii) Any Class I or II substance subject to a standard promulgated under or established by title VI of the Act;
- (iv) Any pollutant that otherwise is subject to regulation under the Act as defined in paragraph (b)(48) of this section.

(v) Notwithstanding paragraphs (b)(49)(i) through (iv) of this section, the term *regulated NSR pollutant* shall not include any or all hazardous air pollutants either listed in section 112 of the Act, or added to the list pursuant to section 112(b)(2) of the Act, and which have not been delisted pursuant to section 112(b)(3) of the Act, unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the Act.

(50) **Reviewing authority** means the State air pollution control agency, local agency, other State agency, Indian tribe, or other agency authorized by the Administrator to carry out a permit program under § 51.165 and this section, or the Administrator in the case of EPA-implemented permit programs under § 52.21 of this chapter.

(51) **Project** means a physical change in, or change in method of operation of, an existing major stationary source.

(52) **Lowest achievable emission rate (LAER)** is as defined in § 51.165(a)(1)(xiii).

(c) **Ambient air increments and other measures.**

(1) The plan shall contain emission limitations and such other measures as may be necessary to assure that in areas designated as Class I, II, or III, increases in pollutant concentrations over the baseline concentration shall be limited to the following:

Pollutant	Maximum allowable increase (micrograms per cubic meter)
Class I Area	
PM _{2.5} :	
Annual arithmetic mean	1
24-hr maximum	2
PM ₁₀ :	
Annual arithmetic mean	4
24-hr maximum	8
Sulfur dioxide:	
Annual arithmetic mean	2
24-hr maximum	5
3-hr maximum	25
Nitrogen dioxide:	
Annual arithmetic mean	2.5
Class II Area	
PM _{2.5} :	
Annual arithmetic mean	4
24-hr maximum	9
PM ₁₀ :	

Pollutant	Maximum allowable increase (micrograms per cubic meter)
Annual arithmetic mean	17
24-hr maximum	30
Sulfur dioxide:	
Annual arithmetic mean	20
24-hr maximum	91
3-hr maximum	512
Nitrogen dioxide:	
Annual arithmetic mean	25
Class III Area	
PM _{2.5} :	
Annual arithmetic mean	8
24-hr maximum	18
PM ₁₀ :	
Annual arithmetic mean	34
24-hr maximum	60
Sulfur dioxide:	
Annual arithmetic mean	40
24-hr maximum	182
3-hr maximum	700
Nitrogen dioxide:	
Annual arithmetic mean	50

For any period other than an annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one location.

- (2) Where the State can demonstrate that it has alternative measures in its plan other than maximum allowable increases as defined under paragraph (c)(1) of this section, that satisfy the requirements in sections 166(c) and 166(d) of the Clean Air Act for a regulated NSR pollutant for which the Administrator has established maximum allowable increases pursuant to section 166(a) of the Act, the requirements for maximum allowable increases for that pollutant under paragraph (c)(1) of this section shall not apply upon approval of the plan by the Administrator. The following regulated NSR pollutants are eligible for such treatment:

(i) Nitrogen dioxide.

(ii) PM_{2.5}.

(d) **Ambient air ceilings.** The plan shall provide that no concentration of a pollutant shall exceed:

- (1) The concentration permitted under the national secondary ambient air quality standard, or

- (2) The concentration permitted under the national primary ambient air quality standard, whichever concentration is lowest for the pollutant for a period of exposure.

(e) **Restrictions on area classifications.** The plan shall provide that—

- (1) All of the following areas which were in existence on August 7, 1977, shall be Class I areas and may not be redesignated:
 - (i) International parks,
 - (ii) National wilderness areas which exceed 5,000 acres in size,
 - (iii) National memorial parks which exceed 5,000 acres in size, and
 - (iv) National parks which exceed 6,000 acres in size.
- (2) Areas which were redesignated as Class I under regulations promulgated before August 7, 1977, shall remain Class I, but may be redesignated as provided in this section.
- (3) Any other area, unless otherwise specified in the legislation creating such an area, is initially designated Class II, but may be redesignated as provided in this section.
- (4) The following areas may be redesignated only as Class I or II:
 - (i) An area which as of August 7, 1977, exceeded 10,000 acres in size and was a national monument, a national primitive area, a national preserve, a national recreational area, a national wild and scenic river, a national wildlife refuge, a national lakeshore or seashore; and
 - (ii) A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres in size.

(f) **Exclusions from increment consumption.**

- (1) The plan may provide that the following concentrations shall be excluded in determining compliance with a maximum allowable increase:
 - (i) Concentrations attributable to the increase in emissions from stationary sources which have converted from the use of petroleum products, natural gas, or both by reason of an order in effect under section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) over the emissions from such sources before the effective date of such an order;
 - (ii) Concentrations attributable to the increase in emissions from sources which have converted from using natural gas by reason of natural gas curtailment plan in effect pursuant to the Federal Power Act over the emissions from such sources before the effective date of such plan;
 - (iii) Concentrations of particulate matter attributable to the increase in emissions from construction or other temporary emission-related activities of new or modified sources;
 - (iv) The increase in concentrations attributable to new sources outside the United States over the concentrations attributable to existing sources which are included in the baseline concentration; and

- (v) Concentrations attributable to the temporary increase in emissions of sulfur dioxide, particulate matter, or nitrogen oxides from stationary sources which are affected by plan revisions approved by the Administrator as meeting the criteria specified in paragraph (f)(4) of this section.
- (2) If the plan provides that the concentrations to which paragraph (f)(1) (i) or (ii) of this section, refers shall be excluded, it shall also provide that no exclusion of such concentrations shall apply more than five years after the effective date of the order to which paragraph (f)(1)(i) of this section, refers or the plan to which paragraph (f)(1)(ii) of this section, refers, whichever is applicable. If both such order and plan are applicable, no such exclusion shall apply more than five years after the later of such effective dates.
- (3) [Reserved]
- (4) For purposes of excluding concentrations pursuant to paragraph (f)(1)(v) of this section, the Administrator may approve a plan revision that:
 - (i) Specifies the time over which the temporary emissions increase of sulfur dioxide, particulate matter, or nitrogen oxides would occur. Such time is not to exceed 2 years in duration unless a longer time is approved by the Administrator.
 - (ii) Specifies that the time period for excluding certain contributions in accordance with paragraph (f)(4)(i) of this section, is not renewable;
 - (iii) Allows no emissions increase from a stationary source which would:
 - (a) Impact a Class I area or an area where an applicable increment is known to be violated; or
 - (b) Cause or contribute to the violation of a national ambient air quality standard;
 - (iv) Requires limitations to be in effect the end of the time period specified in accordance with paragraph (f)(4)(i) of this section, which would ensure that the emissions levels from stationary sources affected by the plan revision would not exceed those levels occurring from such sources before the plan revision was approved.

(g) **Redesignation.**

- (1) The plan shall provide that all areas of the State (except as otherwise provided under paragraph (e) of this section) shall be designated either Class I, Class II, or Class III. Any designation other than Class II shall be subject to the redesignation procedures of this paragraph. Redesignation (except as otherwise precluded by paragraph (e) of this section) may be proposed by the respective States or Indian Governing Bodies, as provided below, subject to approval by the Administrator as a revision to the applicable State implementation plan.
- (2) The plan may provide that the State may submit to the Administrator a proposal to redesignate areas of the State Class I or Class II: *Provided, That:*
 - (i) At least one public hearing has been held in accordance with procedures established in § 51.102.
 - (ii) Other States, Indian Governing Bodies, and Federal Land Managers whose lands may be affected by the proposed redesignation were notified at least 30 days prior to the public hearing;

- (iii) A discussion of the reasons for the proposed redesignation, including a satisfactory description and analysis of the health, environmental, economic, social, and energy effects of the proposed redesignation, was prepared and made available for public inspection at least 30 days prior to the hearing and the notice announcing the hearing contained appropriate notification of the availability of such discussion;
 - (iv) Prior to the issuance of notice respecting the redesignation of an area that includes any Federal lands, the State has provided written notice to the appropriate Federal Land Manager and afforded adequate opportunity (not in excess of 60 days) to confer with the State respecting the redesignation and to submit written comments and recommendations. In redesignating any area with respect to which any Federal Land Manager had submitted written comments and recommendations, the State shall have published a list of any inconsistency between such redesignation and such comments and recommendations (together with the reasons for making such redesignation against the recommendation of the Federal Land Manager); and
 - (v) The State has proposed the redesignation after consultation with the elected leadership of local and other substate general purpose governments in the area covered by the proposed redesignation.
- (3) The plan may provide that any area other than an area to which paragraph (e) of this section refers may be redesignated as Class III if—
- (i) The redesignation would meet the requirements of provisions established in accordance with paragraph (g)(2) of this section;
 - (ii) The redesignation, except any established by an Indian Governing Body, has been specifically approved by the Governor of the State, after consultation with the appropriate committees of the legislature, if it is in session, or with the leadership of the legislature, if it is not in session (unless State law provides that such redesignation must be specifically approved by State legislation) and if general purpose units of local government representing a majority of the residents of the area to be redesignated enact legislation (including resolutions where appropriate) concurring in the redesignation;
 - (iii) The redesignation would not cause, or contribute to, a concentration of any air pollutant which would exceed any maximum allowable increase permitted under the classification of any other area or any national ambient air quality standard; and
 - (iv) Any permit application for any major stationary source or major modification subject to provisions established in accordance with paragraph (l) of this section which could receive a permit only if the area in question were redesignated as Class III, and any material submitted as part of that application, were available, insofar as was practicable, for public inspection prior to any public hearing on redesignation of any area as Class III.
- (4) The plan shall provide that lands within the exterior boundaries of Indian Reservations may be redesignated only by the appropriate Indian Governing Body. The appropriate Indian Governing Body may submit to the Administrator a proposal to redesignate areas Class I, Class II, or Class III provided that:
- (i) The Indian Governing Body has followed procedures equivalent to those required of a State under paragraphs (g) (2), (3)(iii), and (3)(iv) of this section; and

- (ii) Such redesignation is proposed after consultation with the State(s) in which the Indian Reservation is located and which border the Indian Reservation.
- (5) The Administrator shall disapprove, within 90 days of submission, a proposed redesignation of any area only if he finds, after notice and opportunity for public hearing, that such redesignation does not meet the procedural requirements of this section or is inconsistent with paragraph (e) of this section. If any such disapproval occurs, the classification of the area shall be that which was in effect prior to the redesignation which was disapproved.
- (6) If the Administrator disapproves any proposed area designation, the State or Indian Governing Body, as appropriate, may resubmit the proposal after correcting the deficiencies noted by the Administrator.
- (h) **Stack heights.** The plan shall provide, as a minimum, that the degree of emission limitation required for control of any air pollutant under the plan shall not be affected in any manner by—
 - (1) So much of a stack height, not in existence before December 31, 1970, as exceeds good engineering practice, or
 - (2) Any other dispersion technique not implemented before then.
- (i) **Exemptions.**
 - (1) The plan may provide that requirements equivalent to those contained in paragraphs (j) through (r) of this section do not apply to a particular major stationary source or major modification if:
 - (i) The major stationary source would be a nonprofit health or nonprofit educational institution or a major modification that would occur at such an institution; or
 - (ii) The source or modification would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and such source does not belong to any of the following categories:
 - (a) Coal cleaning plants (with thermal dryers);
 - (b) Kraft pulp mills;
 - (c) Portland cement plants;
 - (d) Primary zinc smelters;
 - (e) Iron and steel mills;
 - (f) Primary aluminum ore reduction plants;
 - (g) Primary copper smelters;
 - (h) Municipal incinerators capable of charging more than 50 tons of refuse per day;
 - (i) Hydrofluoric, sulfuric, or nitric acid plants;
 - (j) Petroleum refineries;
 - (k) Lime plants;
 - (l) Phosphate rock processing plants;

- (m) Coke oven batteries;
 - (n) Sulfur recovery plants;
 - (o) Carbon black plants (furnace process);
 - (p) Primary lead smelters;
 - (q) Fuel conversion plants;
 - (r) Sintering plants;
 - (s) Secondary metal production plants;
 - (t) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
 - (u) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
 - (v) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
 - (w) Taconite ore processing plants;
 - (x) Glass fiber processing plants;
 - (y) Charcoal production plants;
 - (z) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
 - (aa) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act; or
- (iii) The source or modification is a portable stationary source which has previously received a permit under requirements equivalent to those contained in paragraphs (j) through (r) of this section, if:
- (a) The source proposes to relocate and emissions of the source at the new location would be temporary; and
 - (b) The emissions from the source would not exceed its allowable emissions; and
 - (c) The emissions from the source would impact no Class I area and no area where an applicable increment is known to be violated; and
 - (d) Reasonable notice is given to the reviewing authority prior to the relocation identifying the proposed new location and the probable duration of operation at the new location. Such notice shall be given to the reviewing authority not less than 10 days in advance of the proposed relocation unless a different time duration is previously approved by the reviewing authority.
- (2) The plan may provide that requirements equivalent to those contained in paragraphs (j) through (r) of this section do not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or

modification is located in an area designated as nonattainment under section 107 of the Act. Nonattainment designations for revoked NAAQS, as contained in part 81 of this chapter, shall not be viewed as current designations under section 107 of the Act for purposes of determining the applicability of requirements equivalent to those contained in paragraphs (j) through (r) of this section to a major stationary source or major modification after the revocation of that NAAQS is effective.

- (3) The plan may provide that requirements equivalent to those contained in paragraphs (k), (m), and (o) of this section do not apply to a proposed major stationary source or major modification with respect to a particular pollutant, if the allowable emissions of that pollutant from a new source, or the net emissions increase of that pollutant from a modification, would be temporary and impact no Class I area and no area where an applicable increment is known to be violated.
 - (4) The plan may provide that requirements equivalent to those contained in paragraphs (k), (m), and (o) of this section as they relate to any maximum allowable increase for a Class II area do not apply to a modification of a major stationary source that was in existence on March 1, 1978, if the net increase in allowable emissions of each a regulated NSR pollutant from the modification after the application of best available control technology would be less than 50 tons per year.
 - (5) The plan may provide that the reviewing authority may exempt a proposed major stationary source or major modification from the requirements of paragraph (m) of this section, with respect to monitoring for a particular pollutant, if:
 - (i) The emissions increase of the pollutant from a new stationary source or the net emissions increase of the pollutant from a modification would cause, in any area, air quality impacts less than the following amounts:
 - (a) Carbon monoxide—575 ug/m³, 8-hour average;
 - (b) Nitrogen dioxide—14 ug/m³, annual average;
 - (c) PM_{2.5}—0 µg/m³;
- Note to paragraph (i)(5)(i)(c): In accordance with *Sierra Club v. EPA*, 706 F.3d 428 (D.C. Cir. 2013), no exemption is available with regard to PM_{2.5}.
- (d) PM₁₀—10 µg/m³, 24-hour average;
 - (e) Sulfur dioxide—13 ug/m³, 24-hour average;
 - (f) Ozone;^[1]
 - (g) Lead—0.1 µg/m³, 3-month average.
 - (h) Fluorides—0.25 µg/m³, 24-hour average;
 - (i) Total reduced sulfur—10 µg/m³, 1-hour average

^[1] No *de minimis* air quality level is provided for ozone. However, any net emissions increase of 100 tons per year or more of volatile organic compounds or nitrogen oxides subject to PSD would be required to perform an ambient impact analysis, including the gathering of air quality data.

- (j) Hydrogen sulfide—0.2 µg/m³, 1-hour average;
- (k) Reduced sulfur compounds—10 µg/m³, 1-hour average; or
- (ii) The concentrations of the pollutant in the area that the source or modification would affect are less than the concentrations listed in paragraph (i)(5)(i) of this section; or
- (iii) The pollutant is not listed in paragraph (i)(5)(i) of this section.

(6)-(11) [Reserved]

(j) **Control technology review.** The plan shall provide that:

- (1) A major stationary source or major modification shall meet each applicable emissions limitation under the State implementation plan and each applicable emission standard and standard of performance under 40 CFR part 60, 61, or 63.
- (2) A new major stationary source shall apply best available control technology for each regulated NSR pollutant that it would have the potential to emit in significant amounts.
- (3) A major modification shall apply best available control technology for each a regulated NSR pollutant for which it would be a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.
- (4) For phased construction projects, the determination of best available control technology shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of each independent phase of the project. At such time, the owner or operator of the applicable stationary source may be required to demonstrate the adequacy of any previous determination of best available control technology for the source.

(k) **Source impact analysis —**

- (1) **Required demonstration.** The plan shall provide that the owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of:
 - (i) Any national ambient air quality standard in any air quality control region; or
 - (ii) Any applicable maximum allowable increase over the baseline concentration in any area.

(2) [Reserved]

(l) **Air quality models.** The plan shall provide for procedures which specify that—

- (1) All applications of air quality modeling involved in this subpart shall be based on the applicable models, data bases, and other requirements specified in appendix W of this part (Guideline on Air Quality Models).
- (2) Where an air quality model specified in appendix W of this part (Guideline on Air Quality Models) is inappropriate, the model may be modified or another model substituted. Such a modification or substitution of a model may be made on a case-by-case basis or, where appropriate, on a generic basis for a specific State program. Written approval of the Administrator must be obtained for any modification or substitution. In addition, use of a modified or substituted model must be subject to notice and opportunity for public comment under procedures set forth in § 51.102.

(m) *Air quality analysis –*

(1) *Preapplication analysis.*

- (i) The plan shall provide that any application for a permit under regulations approved pursuant to this section shall contain an analysis of ambient air quality in the area that the major stationary source or major modification would affect for each of the following pollutants:
 - (a) For the source, each pollutant that it would have the potential to emit in a significant amount;
 - (b) For the modification, each pollutant for which it would result in a significant net emissions increase.
- (ii) The plan shall provide that, with respect to any such pollutant for which no National Ambient Air Quality Standard exists, the analysis shall contain such air quality monitoring data as the reviewing authority determines is necessary to assess ambient air quality for that pollutant in any area that the emissions of that pollutant would affect.
- (iii) The plan shall provide that with respect to any such pollutant (other than nonmethane hydrocarbons) for which such a standard does exist, the analysis shall contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of the standard or any maximum allowable increase.
- (iv) The plan shall provide that, in general, the continuous air monitoring data that is required shall have been gathered over a period of one year and shall represent the year preceding receipt of the application, except that, if the reviewing authority determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one year (but not to be less than four months), the data that is required shall have been gathered over at least that shorter period.
- (v) The plan may provide that the owner or operator of a proposed major stationary source or major modification of volatile organic compounds who satisfies all conditions of 40 CFR part 51 appendix S, section IV may provide postapproval monitoring data for ozone in lieu of providing preconstruction data as required under paragraph (m)(1) of this section.

(2) *Post-construction monitoring.* The plan shall provide that the owner or operator of a major stationary source or major modification shall, after construction of the stationary source or modification, conduct such ambient monitoring as the reviewing authority determines is necessary to determine the effect emissions from the stationary source or modification may have, or are having, on air quality in any area.

(3) *Operation of monitoring stations.* The plan shall provide that the owner or operator of a major stationary source or major modification shall meet the requirements of appendix B to part 58 of this chapter during the operation of monitoring stations for purposes of satisfying paragraph (m) of this section.

(n) *Source information.*

- (1) The plan shall provide that the owner or operator of a proposed source or modification shall submit all information necessary to perform any analysis or make any determination required under procedures established in accordance with this section.

(2) The plan may provide that such information shall include:

- (i) A description of the nature, location, design capacity, and typical operating schedule of the source or modification, including specifications and drawings showing its design and plant layout;
- (ii) A detailed schedule for construction of the source or modification;
- (iii) A detailed description as to what system of continuous emission reduction is planned by the source or modification, emission estimates, and any other information as necessary to determine that best available control technology as applicable would be applied;

(3) The plan shall provide that upon request of the State, the owner or operator shall also provide information on:

- (i) The air quality impact of the source or modification, including meteorological and topographical data necessary to estimate such impact; and
- (ii) The air quality impacts and the nature and extent of any or all general commercial, residential, industrial, and other growth which has occurred since August 7, 1977, in the area the source or modification would affect.

(o) **Additional impact analyses.** The plan shall provide that—

- (1) The owner or operator shall provide an analysis of the impairment to visibility, soils, and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial, and other growth associated with the source or modification. The owner or operator need not provide an analysis of the impact on vegetation having no significant commercial or recreational value.
- (2) The owner or operator shall provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial, and other growth associated with the source or modification.

(p) **Sources impacting Federal Class I areas—additional requirements —**

- (1) **Notice to EPA.** The plan shall provide that the reviewing authority shall transmit to the Administrator a copy of each permit application relating to a major stationary source or major modification and provide notice to the Administrator of every action related to the consideration of such permit.
- (2) **Federal Land Manager.** The Federal Land Manager and the Federal official charged with direct responsibility for management of Class I lands have an affirmative responsibility to protect the air quality related values (including visibility) of any such lands and to consider, in consultation with the Administrator, whether a proposed source or modification would have an adverse impact on such values.
- (3) **Denial—impact on air quality related values.** The plan shall provide a mechanism whereby a Federal Land Manager of any such lands may present to the State, after the reviewing authority's preliminary determination required under procedures developed in accordance with paragraph (q) of this section, a demonstration that the emissions from the proposed source or modification would have an adverse impact on the air quality-related values (including visibility) of any Federal mandatory Class I lands, notwithstanding that the change in air quality resulting from emissions from such source or

modification would not cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the State concurs with such demonstration, the reviewing authority shall not issue the permit.

- (4) ***Class I variances.*** The plan may provide that the owner or operator of a proposed source or modification may demonstrate to the Federal Land Manager that the emissions from such source would have no adverse impact on the air quality related values of such lands (including visibility), notwithstanding that the change in air quality resulting from emissions from such source or modification would cause or contribute to concentrations which would exceed the maximum allowable increases for a Class I area. If the Federal land manager concurs with such demonstration and so certifies to the State, the reviewing authority may, provided that the applicable requirements are otherwise met, issue the permit with such emission limitations as may be necessary to assure that emissions of sulfur dioxide, PM_{2.5}, PM₁₀, and nitrogen oxides would not exceed the following maximum allowable increases over minor source baseline concentration for such pollutants:

Pollutant	Maximum allowable increase (micrograms per cubic meter)
PM _{2.5} :	
Annual arithmetic mean	4
24-hr maximum	9
PM ₁₀ :	
Annual arithmetic mean	17
24-hr maximum	30
Sulfur dioxide:	
Annual arithmetic mean	20
24-hr maximum	91
3-hr maximum	325
Nitrogen dioxide:	
Annual arithmetic mean	25

- (5) ***Sulfur dioxide variance by Governor with Federal Land Manager's concurrence.*** The plan may provide that—
- (i) The owner or operator of a proposed source or modification which cannot be approved under procedures developed pursuant to paragraph (p)(4) of this section may demonstrate to the Governor that the source or modification cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for periods of twenty-four hours or less applicable to any Class I area and, in the case of Federal mandatory Class I areas, that a variance under this clause would not adversely affect the air quality related values of the area (including visibility);

- (ii) The Governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may grant, after notice and an opportunity for a public hearing, a variance from such maximum allowable increase; and
 - (iii) If such variance is granted, the reviewing authority may issue a permit to such source or modification in accordance with provisions developed pursuant to paragraph (p)(7) of this section provided that the applicable requirements of the plan are otherwise met.
- (6) **Variance by the Governor with the President's concurrence.** The plan may provide that—
 - (i) The recommendations of the Governor and the Federal Land Manager shall be transferred to the President in any case where the Governor recommends a variance in which the Federal Land Manager does not concur;
 - (ii) The President may approve the Governor's recommendation if he finds that such variance is in the national interest; and
 - (iii) If such a variance is approved, the reviewing authority may issue a permit in accordance with provisions developed pursuant to the requirements of paragraph (p)(7) of this section provided that the applicable requirements of the plan are otherwise met.
- (7) **Emission limitations for Presidential or gubernatorial variance.** The plan shall provide that, in the case of a permit issued under procedures developed pursuant to paragraph (p)(5) or (6) of this section, the source or modification shall comply with emission limitations as may be necessary to assure that emissions of sulfur dioxide from the source or modification would not (during any day on which the otherwise applicable maximum allowable increases are exceeded) cause or contribute to concentrations which would exceed the following maximum allowable increases over the baseline concentration and to assure that such emissions would not cause or contribute to concentrations which exceed the otherwise applicable maximum allowable increases for periods of exposure of 24 hours or less for more than 18 days, not necessarily consecutive, during any annual period:

**MAXIMUM ALLOWABLE INCREASE
[MICROGRAMS PER CUBIC METER]**

Period of exposure	Terrain areas	
	Low	High
24-hr maximum	36	62
3-hr maximum	130	221

- (q) **Public participation.** The plan shall provide that—
 - (1) The reviewing authority shall notify all applicants within a specified time period as to the completeness of the application or any deficiency in the application or information submitted. In the event of such a deficiency, the date of receipt of the application shall be the date on which the reviewing authority received all required information.

- (2) Within one year after receipt of a complete application, the reviewing authority shall:
- (i) Make a preliminary determination whether construction should be approved, approved with conditions, or disapproved.
 - (ii) Make available in at least one location in each region in which the proposed source would be constructed, a copy of all materials the applicant submitted, a copy of the preliminary determination, and a copy or summary of other materials, if any, considered in making the preliminary determination. This requirement may be met by making these materials available at a physical location or on a public Web site identified by the reviewing authority.
 - (iii) Notify the public, by advertisement in a newspaper of general circulation in each region in which the proposed source would be constructed, of the application, the preliminary determination, the degree of increment consumption that is expected from the source or modification, and of the opportunity for comment at a public hearing as well as through written public comment. Alternatively, these notifications may be made on a public Web site identified by the reviewing authority. However, the reviewing authority's selected notification method (*i.e.*, either newspaper or Web site), known as the "consistent noticing method," shall be used for all permits subject to notice under this section and may, when appropriate, be supplemented by other noticing methods on individual permits. If the reviewing authority selects Web site notice as its consistent noticing method, the notice shall be available for the duration of the public comment period and shall include the notice of public comment, the draft permit, information on how to access the administrative record for the draft permit and how to request and/or attend a public hearing on the draft permit.
 - (iv) Send a copy of the notice of public comment to the applicant, the Administrator and to officials and agencies having cognizance over the location where the proposed construction would occur as follows: Any other State or local air pollution control agencies, the chief executives of the city and county where the source would be located; any comprehensive regional land use planning agency, and any State, Federal Land Manager, or Indian Governing body whose lands may be affected by emissions from the source or modification.
 - (v) Provide opportunity for a public hearing for interested persons to appear and submit written or oral comments on the air quality impact of the source, alternatives to it, the control technology required, and other appropriate considerations.
 - (vi) Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing in making a final decision on the approvability of the application. The reviewing authority shall make all comments available for public inspection at the same physical location or on the same Web site where the reviewing authority made available preconstruction information relating to the proposed source or modification.
 - (vii) Make a final determination whether construction should be approved, approved with conditions, or disapproved.
 - (viii) Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location or on the same Web site where the reviewing authority made available preconstruction information and public comments relating to the proposed source or modification.

(r) *Source obligation.*

- (1) The plan shall include enforceable procedures to provide that approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the plan and any other requirements under local, State or Federal law.
- (2) The plan shall provide that at such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of paragraphs (j) through (r) of this section shall apply to the source or modification as though construction had not yet commenced on the source or modification.
- (3)-(5) [Reserved]
- (6) Each plan shall provide that, except as otherwise provided in paragraph (r)(6)(vi) of this section, the following specific provisions apply with respect to any regulated NSR pollutant emitted from projects at existing emissions units at a major stationary source (other than projects at a source with a PAL) in circumstances where there is a reasonable possibility, within the meaning of paragraph (r)(6)(vi) of this section, that a project that is not a part of a major modification may result in a significant emissions increase of such pollutant, and the owner or operator elects to use the method specified in paragraphs (b)(40)(ii)(a) through (c) of this section for calculating projected actual emissions. Deviations from these provisions will be approved only if the State specifically demonstrates that the submitted provisions are more stringent than or at least as stringent in all respects as the corresponding provisions in paragraphs (r)(6)(i) through (vi) of this section.
 - (i) Before beginning actual construction of the project, the owner or operator shall document and maintain a record of the following information:
 - (a) A description of the project;
 - (b) Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
 - (c) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (b)(40)(ii)(c) of this section and an explanation for why such amount was excluded, and any netting calculations, if applicable.
 - (ii) If the emissions unit is an existing electric utility steam generating unit, before beginning actual construction, the owner or operator shall provide a copy of the information set out in paragraph (r)(6)(i) of this section to the reviewing authority. Nothing in this paragraph (r)(6)(ii) shall be construed to require the owner or operator of such a unit to obtain any determination from the reviewing authority before beginning actual construction.
 - (iii) The owner or operator shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in paragraph (r)(6)(i)(b) of this section; and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential to emit of that regulated NSR pollutant at such emissions unit.

- (iv) If the unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the reviewing authority within 60 days after the end of each year during which records must be generated under paragraph (r)(6)(iii) of this section setting out the unit's annual emissions during the calendar year that preceded submission of the report.
- (v) If the unit is an existing unit other than an electric utility steam generating unit, the owner or operator shall submit a report to the reviewing authority if the annual emissions, in tons per year, from the project identified in paragraph (r)(6)(i) of this section, exceed the baseline actual emissions (as documented and maintained pursuant to paragraph (r)(6)(i)(c) of this section) by a significant amount (as defined in paragraph (b)(23) of this section) for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to paragraph (r)(6)(i)(c) of this section. Such report shall be submitted to the reviewing authority within 60 days after the end of such year. The report shall contain the following:
 - (a) The name, address and telephone number of the major stationary source;
 - (b) The annual emissions as calculated pursuant to paragraph (r)(6)(iii) of this section; and
 - (c) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).
- (vi) A "reasonable possibility" under paragraph (r)(6) of this section occurs when the owner or operator calculates the project to result in either:
 - (a) A projected actual emissions increase of at least 50 percent of the amount that is a "significant emissions increase," as defined under paragraph (b)(39) of this section (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant; or
 - (b) A projected actual emissions increase that, added to the amount of emissions excluded under paragraph (b)(40)(ii)(c) of this section, sums to at least 50 percent of the amount that is a "significant emissions increase," as defined under paragraph (b)(39) of this section (without reference to the amount that is a significant net emissions increase), for the regulated NSR pollutant. For a project for which a reasonable possibility occurs only within the meaning of this paragraph (r)(6)(vi)(b), and not also within the meaning of paragraph (r)(6)(vi)(a) of this section, then the provisions under paragraphs (r)(6)(ii) through (v) of this section do not apply to the project.

- (7) Each plan shall provide that the owner or operator of the source shall make the information required to be documented and maintained pursuant to paragraph (r)(6) of this section available for review upon request for inspection by the reviewing authority or the general public pursuant to the requirements contained in § 70.4(b)(3)(viii) of this chapter.

(s) ***Innovative control technology.***

- (1) The plan may provide that an owner or operator of a proposed major stationary source or major modification may request the reviewing authority to approve a system of innovative control technology.
- (2) The plan may provide that the reviewing authority may, with the consent of the Governor(s) of other affected State(s), determine that the source or modification may employ a system of innovative control technology, if:

- (i) The proposed control system would not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation or function;
 - (ii) The owner or operator agrees to achieve a level of continuous emissions reduction equivalent to that which would have been required under paragraph (j)(2) of this section, by a date specified by the reviewing authority. Such date shall not be later than 4 years from the time of startup or 7 years from permit issuance;
 - (iii) The source or modification would meet the requirements equivalent to those in paragraphs (j) and (k) of this section, based on the emissions rate that the stationary source employing the system of innovative control technology would be required to meet on the date specified by the reviewing authority;
 - (iv) The source or modification would not before the date specified by the reviewing authority:
 - (a) Cause or contribute to any violation of an applicable national ambient air quality standard; or
 - (b) Impact any area where an applicable increment is known to be violated;
 - (v) All other applicable requirements including those for public participation have been met.
 - (vi) The provisions of paragraph (p) of this section (relating to Class I areas) have been satisfied with respect to all periods during the life of the source or modification.
- (3) The plan shall provide that the reviewing authority shall withdraw any approval to employ a system of innovative control technology made under this section, if:
- (i) The proposed system fails by the specified date to achieve the required continuous emissions reduction rate; or
 - (ii) The proposed system fails before the specified date so as to contribute to an unreasonable risk to public health, welfare, or safety; or
 - (iii) The reviewing authority decides at any time that the proposed system is unlikely to achieve the required level of control or to protect the public health, welfare, or safety.
- (4) The plan may provide that if a source or modification fails to meet the required level of continuous emissions reduction within the specified time period, or if the approval is withdrawn in accordance with paragraph (s)(3) of this section, the reviewing authority may allow the source or modification up to an additional 3 years to meet the requirement for the application of best available control technology through use of a demonstrated system of control.

(t)-(v) [Reserved]

(w) **Actuals PALs.** The plan shall provide for PALs according to the provisions in paragraphs (w)(1) through (15) of this section.

(1) **Applicability.**

- (i) The reviewing authority may approve the use of an actuals PAL for any existing major stationary source if the PAL meets the requirements in paragraphs (w)(1) through (15) of this section. The term "PAL" shall mean "actuals PAL" throughout paragraph (w) of this section.

- (ii) Any physical change in or change in the method of operation of a major stationary source that maintains its total source-wide emissions below the PAL level, meets the requirements in paragraphs (w)(1) through (15) of this section, and complies with the PAL permit:
 - (a) Is not a major modification for the PAL pollutant;
 - (b) Does not have to be approved through the plan's major NSR program; and
 - (c) Is not subject to the provisions in paragraph (r)(2) of this section (restrictions on relaxing enforceable emission limitations that the major stationary source used to avoid applicability of the major NSR program).
- (iii) Except as provided under paragraph (w)(1)(ii)(c) of this section, a major stationary source shall continue to comply with all applicable Federal or State requirements, emission limitations, and work practice requirements that were established prior to the effective date of the PAL.
- (2) **Definitions.** The plan shall use the definitions in paragraphs (w)(2)(i) through (xi) of this section for the purpose of developing and implementing regulations that authorize the use of actuals PALs consistent with paragraphs (w)(1) through (15) of this section. When a term is not defined in these paragraphs, it shall have the meaning given in paragraph (b) of this section or in the Act.
 - (i) **Actuals PAL** for a major stationary source means a PAL based on the baseline actual emissions (as defined in paragraph (b)(47) of this section) of all emissions units (as defined in paragraph (b)(7) of this section) at the source, that emit or have the potential to emit the PAL pollutant.
 - (ii) **Allowable emissions** means "allowable emissions" as defined in paragraph (b)(16) of this section, except as this definition is modified according to paragraphs (w)(2)(ii)(a) and (b) of this section.
 - (a) The allowable emissions for any emissions unit shall be calculated considering any emission limitations that are enforceable as a practical matter on the emissions unit's potential to emit.
 - (b) An emissions unit's potential to emit shall be determined using the definition in paragraph (b)(4) of this section, except that the words "or enforceable as a practical matter" should be added after "federally enforceable."
 - (iii) **Small emissions unit** means an emissions unit that emits or has the potential to emit the PAL pollutant in an amount less than the significant level for that PAL pollutant, as defined in paragraph (b)(23) of this section or in the Act, whichever is lower.
 - (iv) **Major emissions unit** means:
 - (a) Any emissions unit that emits or has the potential to emit 100 tons per year or more of the PAL pollutant in an attainment area; or
 - (b) Any emissions unit that emits or has the potential to emit the PAL pollutant in an amount that is equal to or greater than the major source threshold for the PAL pollutant as defined by the Act for nonattainment areas. For example, in accordance with the definition of major stationary source in section 182(c) of the Act, an emissions unit would be a major emissions unit for VOC if the emissions unit is located in a serious ozone nonattainment area and it emits or has the potential to emit 50 or more tons of VOC per year.

- (v) **Plantwide applicability limitation (PAL)** means an emission limitation expressed in tons per year, for a pollutant at a major stationary source, that is enforceable as a practical matter and established source-wide in accordance with paragraphs (w)(1) through (15) of this section.
 - (vi) **PAL effective date** generally means the date of issuance of the PAL permit. However, the PAL effective date for an increased PAL is the date any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.
 - (vii) **PAL effective period** means the period beginning with the PAL effective date and ending 10 years later.
 - (viii) **PAL major modification** means, notwithstanding paragraphs (b)(2) and (b)(3) of this section (the definitions for major modification and net emissions increase), any physical change in or change in the method of operation of the PAL source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL.
 - (ix) **PAL permit** means the major NSR permit, the minor NSR permit, or the State operating permit under a program that is approved into the plan, or the title V permit issued by the reviewing authority that establishes a PAL for a major stationary source.
 - (x) **PAL pollutant** means the pollutant for which a PAL is established at a major stationary source.
 - (xi) **Significant emissions unit** means an emissions unit that emits or has the potential to emit a PAL pollutant in an amount that is equal to or greater than the significant level (as defined in paragraph (b)(23) of this section or in the Act, whichever is lower) for that PAL pollutant, but less than the amount that would qualify the unit as a major emissions unit as defined in paragraph (w)(2)(iv) of this section.
- (3) **Permit application requirements.** As part of a permit application requesting a PAL, the owner or operator of a major stationary source shall submit the following information in paragraphs (w)(3)(i) through (iii) of this section to the reviewing authority for approval.
- (i) A list of all emissions units at the source designated as small, significant or major based on their potential to emit. In addition, the owner or operator of the source shall indicate which, if any, Federal or State applicable requirements, emission limitations, or work practices apply to each unit.
 - (ii) Calculations of the baseline actual emissions (with supporting documentation). Baseline actual emissions are to include emissions associated not only with operation of the unit, but also emissions associated with startup, shutdown, and malfunction.
 - (iii) The calculation procedures that the major stationary source owner or operator proposes to use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by paragraph (w)(13)(i) of this section.
- (4) **General requirements for establishing PALs.**
- (i) The plan allows the reviewing authority to establish a PAL at a major stationary source, provided that at a minimum, the requirements in paragraphs (w)(4)(i)(a) through (g) of this section are met.
 - (a) The PAL shall impose an annual emission limitation in tons per year, that is enforceable as a practical matter, for the entire major stationary source. For each month during the PAL effective period after the first 12 months of establishing a PAL, the major stationary

source owner or operator shall show that the sum of the monthly emissions from each emissions unit under the PAL for the previous 12 consecutive months is less than the PAL (a 12-month average, rolled monthly). For each month during the first 11 months from the PAL effective date, the major stationary source owner or operator shall show that the sum of the preceding monthly emissions from the PAL effective date for each emissions unit under the PAL is less than the PAL.

- (b) The PAL shall be established in a PAL permit that meets the public participation requirements in paragraph (w)(5) of this section.
 - (c) The PAL permit shall contain all the requirements of paragraph (w)(7) of this section.
 - (d) The PAL shall include fugitive emissions, to the extent quantifiable, from all emissions units that emit or have the potential to emit the PAL pollutant at the major stationary source.
 - (e) Each PAL shall regulate emissions of only one pollutant.
 - (f) Each PAL shall have a PAL effective period of 10 years.
 - (g) The owner or operator of the major stationary source with a PAL shall comply with the monitoring, recordkeeping, and reporting requirements provided in paragraphs (w)(12) through (14) of this section for each emissions unit under the PAL through the PAL effective period.
 - (ii) At no time (during or after the PAL effective period) are emissions reductions of a PAL pollutant that occur during the PAL effective period creditable as decreases for purposes of offsets under § 51.165(a)(3)(ii) of this chapter unless the level of the PAL is reduced by the amount of such emissions reductions and such reductions would be creditable in the absence of the PAL.
- (5) **Public participation requirements for PALs.** PALs for existing major stationary sources shall be established, renewed, or increased, through a procedure that is consistent with §§ 51.160 and 51.161 of this chapter. This includes the requirement that the reviewing authority provide the public with notice of the proposed approval of a PAL permit and at least a 30-day period for submittal of public comment. The reviewing authority must address all material comments before taking final action on the permit.
- (6) **Setting the 10-year actuals PAL level.**
- (i) Except as provided in paragraph (w)(6)(ii) of this section, the plan shall provide that the actuals PAL level for a major stationary source shall be established as the sum of the baseline actual emissions (as defined in paragraph (b)(47) of this section) of the PAL pollutant for each emissions unit at the source; plus an amount equal to the applicable significant level for the PAL pollutant under paragraph (b)(23) of this section or under the Act, whichever is lower. When establishing the actuals PAL level, for a PAL pollutant, only one consecutive 24-month period must be used to determine the baseline actual emissions for all existing emissions units. However, a different consecutive 24-month period may be used for each different PAL pollutant. Emissions associated with units that were permanently shut down after this 24-month period must be subtracted from the PAL level. The reviewing authority shall specify a reduced PAL level(s) (in tons/yr) in the PAL permit to become effective on the future compliance date(s) of any applicable Federal or State regulatory requirement(s) that the reviewing authority is aware of prior to issuance of the PAL permit. For instance, if the source owner or operator will be

required to reduce emissions from industrial boilers in half from baseline emissions of 60 ppm NO_x to a new rule limit of 30 ppm, then the permit shall contain a future effective PAL level that is equal to the current PAL level reduced by half of the original baseline emissions of such unit(s).

- (ii) For newly constructed units (which do not include modifications to existing units) on which actual construction began after the 24-month period, in lieu of adding the baseline actual emissions as specified in paragraph (w)(6)(i) of this section, the emissions must be added to the PAL level in an amount equal to the potential to emit of the units.

(7) **Contents of the PAL permit.** The plan shall require that the PAL permit contain, at a minimum, the information in paragraphs (w)(7)(i) through (x) of this section.

- (i) The PAL pollutant and the applicable source-wide emission limitation in tons per year.
- (ii) The PAL permit effective date and the expiration date of the PAL (PAL effective period).
- (iii) Specification in the PAL permit that if a major stationary source owner or operator applies to renew a PAL in accordance with paragraph (w)(10) of this section before the end of the PAL effective period, then the PAL shall not expire at the end of the PAL effective period. It shall remain in effect until a revised PAL permit is issued by the reviewing authority.
- (iv) A requirement that emission calculations for compliance purposes include emissions from startups, shutdowns and malfunctions.
- (v) A requirement that, once the PAL expires, the major stationary source is subject to the requirements of paragraph (w)(9) of this section.
- (vi) The calculation procedures that the major stationary source owner or operator shall use to convert the monitoring system data to monthly emissions and annual emissions based on a 12-month rolling total for each month as required by paragraph (w)(3)(i) of this section.
- (vii) A requirement that the major stationary source owner or operator monitor all emissions units in accordance with the provisions under paragraph (w)(12) of this section.
- (viii) A requirement to retain the records required under paragraph (w)(13) of this section on site. Such records may be retained in an electronic format.
- (ix) A requirement to submit the reports required under paragraph (w)(14) of this section by the required deadlines.
- (x) Any other requirements that the reviewing authority deems necessary to implement and enforce the PAL.

(8) **PAL effective period and reopening of the PAL permit.** The plan shall require the information in paragraphs (w)(8)(i) and (ii) of this section.

- (i) **PAL effective period.** The reviewing authority shall specify a PAL effective period of 10 years.
- (ii) **Reopening of the PAL permit.**
 - (a) During the PAL effective period, the plan shall require the reviewing authority to reopen the PAL permit to:
 - (1) Correct typographical/calculation errors made in setting the PAL or reflect a more accurate determination of emissions used to establish the PAL;

- (2) Reduce the PAL if the owner or operator of the major stationary source creates creditable emissions reductions for use as offsets under § 51.165(a)(3)(ii) of this chapter; and
 - (3) Revise the PAL to reflect an increase in the PAL as provided under paragraph (w)(11) of this section.
 - (b) The plan shall provide the reviewing authority discretion to reopen the PAL permit for the following:
 - (1) Reduce the PAL to reflect newly applicable Federal requirements (for example, NSPS) with compliance dates after the PAL effective date;
 - (2) Reduce the PAL consistent with any other requirement, that is enforceable as a practical matter, and that the State may impose on the major stationary source under the plan; and
 - (3) Reduce the PAL if the reviewing authority determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an AQRV that has been identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public.
 - (c) Except for the permit reopening in paragraph (w)(8)(ii)(a)(1) of this section for the correction of typographical/calculation errors that do not increase the PAL level, all reopenings shall be carried out in accordance with the public participation requirements of paragraph (w)(5) of this section.
- (9) **Expiration of a PAL.** Any PAL that is not renewed in accordance with the procedures in paragraph (w)(10) of this section shall expire at the end of the PAL effective period, and the requirements in paragraphs (w)(9)(i) through (v) of this section shall apply.
 - (i) Each emissions unit (or each group of emissions units) that existed under the PAL shall comply with an allowable emission limitation under a revised permit established according to the procedures in paragraphs (w)(9)(i)(a) and (b) of this section.
 - (a) Within the time frame specified for PAL renewals in paragraph (w)(10)(ii) of this section, the major stationary source shall submit a proposed allowable emission limitation for each emissions unit (or each group of emissions units, if such a distribution is more appropriate as decided by the reviewing authority) by distributing the PAL allowable emissions for the major stationary source among each of the emissions units that existed under the PAL. If the PAL had not yet been adjusted for an applicable requirement that became effective during the PAL effective period, as required under paragraph (w)(10)(v) of this section, such distribution shall be made as if the PAL had been adjusted.
 - (b) The reviewing authority shall decide whether and how the PAL allowable emissions will be distributed and issue a revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as the reviewing authority determines is appropriate.
 - (ii) Each emissions unit(s) shall comply with the allowable emission limitation on a 12-month rolling basis. The reviewing authority may approve the use of monitoring systems (source testing, emission factors, etc.) other than CEMS, CERMS, PEMS, or CPMS to demonstrate compliance with the allowable emission limitation.

- (iii) Until the reviewing authority issues the revised permit incorporating allowable limits for each emissions unit, or each group of emissions units, as required under paragraph (w)(9)(i)(b) of this section, the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the PAL emission limitation.
- (iv) Any physical change or change in the method of operation at the major stationary source will be subject to major NSR requirements if such change meets the definition of major modification in paragraph (b)(2) of this section.
- (v) The major stationary source owner or operator shall continue to comply with any State or Federal applicable requirements (BACT, RACT, NSPS, etc.) that may have applied either during the PAL effective period or prior to the PAL effective period except for those emission limitations that had been established pursuant to paragraph (r)(2) of this section, but were eliminated by the PAL in accordance with the provisions in paragraph (w)(1)(ii)(c) of this section.

(10) **Renewal of a PAL.**

- (i) The reviewing authority shall follow the procedures specified in paragraph (w)(5) of this section in approving any request to renew a PAL for a major stationary source, and shall provide both the proposed PAL level and a written rationale for the proposed PAL level to the public for review and comment. During such public review, any person may propose a PAL level for the source for consideration by the reviewing authority.
- (ii) **Application deadline.** The plan shall require that a major stationary source owner or operator shall submit a timely application to the reviewing authority to request renewal of a PAL. A timely application is one that is submitted at least 6 months prior to, but not earlier than 18 months from, the date of permit expiration. This deadline for application submittal is to ensure that the permit will not expire before the permit is renewed. If the owner or operator of a major stationary source submits a complete application to renew the PAL within this time period, then the PAL shall continue to be effective until the revised permit with the renewed PAL is issued.
- (iii) **Application requirements.** The application to renew a PAL permit shall contain the information required in paragraphs (w)(10)(iii) (a) through (d) of this section.
 - (a) The information required in paragraphs (w)(3)(i) through (iii) of this section.
 - (b) A proposed PAL level.
 - (c) The sum of the potential to emit of all emissions units under the PAL (with supporting documentation).
 - (d) Any other information the owner or operator wishes the reviewing authority to consider in determining the appropriate level for renewing the PAL.
- (iv) **PAL adjustment.** In determining whether and how to adjust the PAL, the reviewing authority shall consider the options outlined in paragraphs (w)(10)(iv) (a) and (b) of this section. However, in no case may any such adjustment fail to comply with paragraph (w)(10)(iv)(c) of this section.
 - (a) If the emissions level calculated in accordance with paragraph (w)(6) of this section is equal to or greater than 80 percent of the PAL level, the reviewing authority may renew the PAL at the same level without considering the factors set forth in paragraph (w)(10)(iv)(b) of this section; or

- (b) The reviewing authority may set the PAL at a level that it determines to be more representative of the source's baseline actual emissions, or that it determines to be appropriate considering air quality needs, advances in control technology, anticipated economic growth in the area, desire to reward or encourage the source's voluntary emissions reductions, or other factors as specifically identified by the reviewing authority in its written rationale.
- (c) Notwithstanding paragraphs (w)(10)(iv) (a) and (b) of this section:
 - (1) If the potential to emit of the major stationary source is less than the PAL, the reviewing authority shall adjust the PAL to a level no greater than the potential to emit of the source; and
 - (2) The reviewing authority shall not approve a renewed PAL level higher than the current PAL, unless the major stationary source has complied with the provisions of paragraph (w)(11) of this section (increasing a PAL).
- (v) If the compliance date for a State or Federal requirement that applies to the PAL source occurs during the PAL effective period, and if the reviewing authority has not already adjusted for such requirement, the PAL shall be adjusted at the time of PAL permit renewal or title V permit renewal, whichever occurs first.

(11) *Increasing a PAL during the PAL effective period.*

- (i) The plan shall require that the reviewing authority may increase a PAL emission limitation only if the major stationary source complies with the provisions in paragraphs (w)(11)(i) (a) through (d) of this section.
 - (a) The owner or operator of the major stationary source shall submit a complete application to request an increase in the PAL limit for a PAL major modification. Such application shall identify the emissions unit(s) contributing to the increase in emissions so as to cause the major stationary source's emissions to equal or exceed its PAL.
 - (b) As part of this application, the major stationary source owner or operator shall demonstrate that the sum of the baseline actual emissions of the small emissions units, plus the sum of the baseline actual emissions of the significant and major emissions units assuming application of BACT equivalent controls, plus the sum of the allowable emissions of the new or modified emissions unit(s), exceeds the PAL. The level of control that would result from BACT equivalent controls on each significant or major emissions unit shall be determined by conducting a new BACT analysis at the time the application is submitted, unless the emissions unit is currently required to comply with a BACT or LAER requirement that was established within the preceding 10 years. In such a case, the assumed control level for that emissions unit shall be equal to the level of BACT or LAER with which that emissions unit must currently comply.
 - (c) The owner or operator obtains a major NSR permit for all emissions unit(s) identified in paragraph (w)(11)(i)(a) of this section, regardless of the magnitude of the emissions increase resulting from them (that is, no significant levels apply). These emissions unit(s) shall comply with any emissions requirements resulting from the major NSR process (for example, BACT), even though they have also become subject to the PAL or continue to be subject to the PAL.

- (d) The PAL permit shall require that the increased PAL level shall be effective on the day any emissions unit that is part of the PAL major modification becomes operational and begins to emit the PAL pollutant.
 - (ii) The reviewing authority shall calculate the new PAL as the sum of the allowable emissions for each modified or new emissions unit, plus the sum of the baseline actual emissions of the significant and major emissions units (assuming application of BACT equivalent controls as determined in accordance with paragraph (w)(11)(i)(b) of this section), plus the sum of the baseline actual emissions of the small emissions units.
 - (iii) The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of paragraph (w)(5) of this section.
- (12) **Monitoring requirements for PALs –**
 - (i) **General requirements.**
 - (a) Each PAL permit must contain enforceable requirements for the monitoring system that accurately determines plantwide emissions of the PAL pollutant in terms of mass per unit of time. Any monitoring system authorized for use in the PAL permit must be based on sound science and meet generally acceptable scientific procedures for data quality and manipulation. Additionally, the information generated by such system must meet minimum legal requirements for admissibility in a judicial proceeding to enforce the PAL permit.
 - (b) The PAL monitoring system must employ one or more of the four general monitoring approaches meeting the minimum requirements set forth in paragraphs (w)(12)(ii) (a) through (d) of this section and must be approved by the reviewing authority.
 - (c) Notwithstanding paragraph (w)(12)(i)(b) of this section, you may also employ an alternative monitoring approach that meets paragraph (w)(12)(i)(a) of this section if approved by the reviewing authority.
 - (d) Failure to use a monitoring system that meets the requirements of this section renders the PAL invalid.
 - (ii) Minimum performance requirements for approved monitoring approaches. The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in paragraphs (w)(12)(iii) through (ix) of this section:
 - (a) Mass balance calculations for activities using coatings or solvents;
 - (b) CEMS;
 - (c) CPMS or PEMS; and
 - (d) Emission factors.
 - (iii) Mass balance calculations. An owner or operator using mass balance calculations to monitor PAL pollutant emissions from activities using coating or solvents shall meet the following requirements:
 - (a) Provide a demonstrated means of validating the published content of the PAL pollutant that is contained in or created by all materials used in or at the emissions unit;

- (b) Assume that the emissions unit emits all of the PAL pollutant that is contained in or created by any raw material or fuel used in or at the emissions unit, if it cannot otherwise be accounted for in the process; and
 - (c) Where the vendor of a material or fuel, which is used in or at the emissions unit, publishes a range of pollutant content from such material, the owner or operator must use the highest value of the range to calculate the PAL pollutant emissions unless the reviewing authority determines there is site-specific data or a site-specific monitoring program to support another content within the range.
- (iv) CEMS. An owner or operator using CEMS to monitor PAL pollutant emissions shall meet the following requirements:
 - (a) CEMS must comply with applicable Performance Specifications found in 40 CFR part 60, appendix B; and
 - (b) CEMS must sample, analyze, and record data at least every 15 minutes while the emissions unit is operating.
- (v) CPMS or PEMS. An owner or operator using CPMS or PEMS to monitor PAL pollutant emissions shall meet the following requirements:
 - (a) The CPMS or the PEMS must be based on current site-specific data demonstrating a correlation between the monitored parameter(s) and the PAL pollutant emissions across the range of operation of the emissions unit; and
 - (b) Each CPMS or PEMS must sample, analyze, and record data at least every 15 minutes, or at another less frequent interval approved by the reviewing authority, while the emissions unit is operating.
- (vi) Emission factors. An owner or operator using emission factors to monitor PAL pollutant emissions shall meet the following requirements:
 - (a) All emission factors shall be adjusted, if appropriate, to account for the degree of uncertainty or limitations in the factors' development;
 - (b) The emissions unit shall operate within the designated range of use for the emission factor, if applicable; and
 - (c) If technically practicable, the owner or operator of a significant emissions unit that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within 6 months of PAL permit issuance, unless the reviewing authority determines that testing is not required.
- (vii) A source owner or operator must record and report maximum potential emissions without considering enforceable emission limitations or operational restrictions for an emissions unit during any period of time that there is no monitoring data, unless another method for determining emissions during such periods is specified in the PAL permit.
- (viii) Notwithstanding the requirements in paragraphs (w)(12)(iii) through (vii) of this section, where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of the emissions unit, the reviewing authority shall, at the time of permit issuance:

- (a) Establish default value(s) for determining compliance with the PAL based on the highest potential emissions reasonably estimated at such operating point(s); or
- (b) Determine that operation of the emissions unit during operating conditions when there is no correlation between monitored parameter(s) and the PAL pollutant emissions is a violation of the PAL.
- (ix) Re-validation. All data used to establish the PAL pollutant must be re-validated through performance testing or other scientifically valid means approved by the reviewing authority. Such testing must occur at least once every 5 years after issuance of the PAL.

(13) **Recordkeeping requirements.**

- (i) The PAL permit shall require an owner or operator to retain a copy of all records necessary to determine compliance with any requirement of paragraph (w) of this section and of the PAL, including a determination of each emissions unit's 12-month rolling total emissions, for 5 years from the date of such record.
- (ii) The PAL permit shall require an owner or operator to retain a copy of the following records, for the duration of the PAL effective period plus 5 years:
 - (a) A copy of the PAL permit application and any applications for revisions to the PAL; and
 - (b) Each annual certification of compliance pursuant to title V and the data relied on in certifying the compliance.

(14) **Reporting and notification requirements.** The owner or operator shall submit semi-annual monitoring reports and prompt deviation reports to the reviewing authority in accordance with the applicable title V operating permit program. The reports shall meet the requirements in paragraphs (w)(14)(i) through (iii) of this section.

- (i) **Semi-annual report.** The semi-annual report shall be submitted to the reviewing authority within 30 days of the end of each reporting period. This report shall contain the information required in paragraphs (w)(14)(i)(a) through (g) of this section.
 - (a) The identification of owner and operator and the permit number.
 - (b) Total annual emissions (tons/year) based on a 12-month rolling total for each month in the reporting period recorded pursuant to paragraph (w)(13)(i) of this section.
 - (c) All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual PAL pollutant emissions.
 - (d) A list of any emissions units modified or added to the major stationary source during the preceding 6-month period.
 - (e) The number, duration, and cause of any deviations or monitoring malfunctions (other than the time associated with zero and span calibration checks), and any corrective action taken.
 - (f) A notification of a shutdown of any monitoring system, whether the shutdown was permanent or temporary, the reason for the shutdown, the anticipated date that the monitoring system will be fully operational or replaced with another monitoring system,

and whether the emissions unit monitored by the monitoring system continued to operate, and the calculation of the emissions of the pollutant or the number determined by method included in the permit, as provided by paragraph (w)(12)(vii) of this section.

(g) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.

(ii) **Deviation report.** The major stationary source owner or operator shall promptly submit reports of any deviations or exceedance of the PAL requirements, including periods where no monitoring is available. A report submitted pursuant to § 70.6(a)(3)(iii)(B) of this chapter shall satisfy this reporting requirement. The deviation reports shall be submitted within the time limits prescribed by the applicable program implementing § 70.6(a)(3)(iii)(B) of this chapter. The reports shall contain the following information:

(a) The identification of owner and operator and the permit number;

(b) The PAL requirement that experienced the deviation or that was exceeded;

(c) Emissions resulting from the deviation or the exceedance; and

(d) A signed statement by the responsible official (as defined by the applicable title V operating permit program) certifying the truth, accuracy, and completeness of the information provided in the report.

(iii) Re-validation results. The owner or operator shall submit to the reviewing authority the results of any re-validation test or method within three months after completion of such test or method.

(15) **Transition requirements.**

(i) No reviewing authority may issue a PAL that does not comply with the requirements in paragraphs (w)(1) through (15) of this section after the Administrator has approved regulations incorporating these requirements into a plan.

(ii) The reviewing authority may supersede any PAL which was established prior to the date of approval of the plan by the Administrator with a PAL that complies with the requirements of paragraphs (w)(1) through (15) of this section.

(x) If any provision of this section, or the application of such provision to any person or circumstance, is held invalid, the remainder of this section, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

(Secs. 101(b)(1), 110, 160-169, 171-178, and 301(a), Clean Air Act, as amended (42 U.S.C. 7401(b)(1), 7410, 7470-7479, 7501-7508, and 7601(a)); sec. 129(a), Clean Air Act Amendments of 1977 (Pub. L. 95-95, 91 Stat. 685 (Aug. 7, 1977)))

[43 FR 26382, June 19, 1978]

Editorial Note: For FEDERAL REGISTER citations affecting § 51.166, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

Effective Date Note: At 76 FR 17553, Mar. 30, 2011, § 51.166 paragraphs (b)(2)(v) and (b)(3)(iii)(d) are stayed

indefinitely.