

Rule 18. Prevention of Significant Deterioration of Air Quality.

Rule 18.1. General Provisions.

(a) The requirements of this Rule apply to the construction of any new major stationary source [as defined in Rule 18.2(hh)] 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 federal Clean Air Act. No major stationary source or major modification will be subject to this rule with respect to a particular pollutant if the owner or operator demonstrates that the major source or major modification is located in an area designated nonattainment with respect to that pollutant, in which event other rules in this chapter would apply.

(b) The requirements of Rule 18.9 through 18.17 apply to the construction of any new major stationary source or the major modification of any existing major stationary source, except as this Rule otherwise provides.

(c) No new major stationary source or major modification to which the requirements of Rules 18.9 through 18.17(d) apply shall begin actual construction without a permit that states that the major stationary source or major modification will meet those requirements. The Director has authority to issue any such permit.

(d) The requirements of this Rule will be applied in accordance with the principles set out in paragraphs d(1) through d(4) below:

- (1) Except as otherwise provided in Rule 18.1(e), and consistent with the definition of major modification contained in Rule 18.2(ff), 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 Rule 18.2(aaa)], and a significant net emissions increase [as defined in Rule 18.2(jj) and Rule 18.2(zz)]. 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.
- (2) 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 Rule 18.1(d)(3) and (4). 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 Rule 18.2(jj). Regardless of any such preconstruction projections, a major modification results if the project causes a significant emissions increase and a significant net emissions increase.
- (3) *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 Rule 18.2(rr)) and the baseline actual emissions [as defined

in Rule 18.2(d)(1) and (2)], for each existing emissions unit, equals or exceeds the significant amount for that pollutant [as defined in Rule 18.2(zz)].

- (4) *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 Rule 18.2(mm)] from each new emissions unit following completion of the project and the baseline actual emissions [as defined in Rule 18.2(d)(3)] of these units before the project equals or exceeds the significant amount for that pollutant [as defined in Rule 18.2(zz)].

(e) For any major stationary source for a "plantwide applicability limitation (PAL)" [as defined in Rule 18.21(b)(5)] or a regulated New Source Review (NSR) pollutant [as defined in Rule 18.2(uu)], the major stationary source shall comply with the requirements under Rule 18.21.

Rule 18. 2. Definitions. For the purposes of this Rule:

(a) Actual emissions

- (1) Actual emissions means the actual rate of emissions of a regulated NSR pollutant from an emissions unit, as determined in accordance with Rule 18.2 (a)(2) through (a)(4) except that this definition shall not apply for calculating whether a significant emissions increase has occurred, or for establishing a plantwide applicability limitation (PAL) under Rule 18.21. Instead, Rule 18.2(rr) and Rule 18.2(d) shall apply for those purposes.
- (2) 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 Director 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.
- (3) The Director may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the unit.
- (4) 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.

(b) Adverse impact on visibility means visibility impairment which interferes with the management, protection, preservation or enjoyment of the visitor's visual experience of the Federal Class I area. This determination must be made on a case-by case basis taking into account the

geographic extent, intensity, duration, frequency and time of visibility impairment, and how these factors correlate with (1) times of visitor use of the Federal Class I area, and (2) the frequency and timing of natural conditions that reduce visibility.

(c) ***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:

- (1) The applicable standards as set forth in 40 CFR Parts 60 and 61;
- (2) The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or
- (3) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

(d) ***Baseline actual emissions*** means the rate of emissions, in tons per year, of a regulated NSR pollutant, as determined in accordance Rule 18.2(d)(1) through (d)(4).

- (1) 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 Director 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 any 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 Rule 18.2.(d)(1)b.

- (2) 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 Director for a permit required under this Rule, 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 noncompliant 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 U.S. EPA Administrator proposed or promulgated under 40 CFR Part 63, 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 40 CFR §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 all 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 Rule 18.2(d)(2)b. and (2)c.
- (3) 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.
- (4) For a 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 Rule 18.2(d)(1), for other existing emissions units in accordance with the procedures contained in Rule 18.2(d)(2), and for a new emissions unit in accordance with the procedures contained in Rule 18.2(d)(3).

(e) *Baseline area*

- (1) Baseline area means any intrastate area (and every part thereof) designated as attainment or unclassifiable under Section 107(d)(1) (D) or (E) of the federal Clean Air Act in which the major source or major modification establishing the minor source baseline date would construct or would have an air quality impact equal to or greater than $1 \mu\text{g}/\text{m}^3$ (annual average) of the pollutant for which the minor source baseline date is established.
- (2) Area redesignations under Section 107(d)(1) (D) or (E) of the federal Clean Air 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 this Rule and would be constructed in the same state as the state proposing the redesignation.
- (3) 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 Director rescinds the corresponding minor source baseline date in accordance with Rule 18.2(gg)(4).

(f) *Baseline concentration*

- (1) 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 Rule 18.2(a), representative of sources in existence on the applicable minor source baseline date, except as provided in 18.2(f)(1)b. below ; and
 - 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.
- (2) 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 Rule 18.2(a), 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 Rule 18.2(a), at any stationary source occurring after the minor source baseline date.

(g) ***Begin actual construction*** means, in general, initiation of physical onsite 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 underground pipework and construction of permanent storage structures. With respect to a change in method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change.

(h) ***Best available control technology*** means an emissions limitation (including a visible emission 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 Rules 15 and 16 (or 40 CFR Parts 60 and 61). 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.

(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 first 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).

(j) ***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.

(k) **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.

(l) **(Reserved)**

(m) **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:

- (1) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or
- (2) 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.

(n) **Complete** means, in reference to an application for a permit, that the application contains all of 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.

(o) **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.

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

(q) **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).

(r) **Continuous parameter monitoring system (CPMS)** means all of the equipment necessary to meet the data acquisition and availability requirements of this Rule, 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.

(s) **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.

(t) *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 Rule 18.2(s). For purposes of this Rule, there are two types of emissions units as described in this Rule 18.2(t) as follows:

- (1) 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.
- (2) An existing emissions unit is any emissions unit that does not meet the requirements in Rule 18.2(t)(1) above. A replacement unit, as defined in Rule 18.2(vv), is an existing emissions unit.

(u) *Federal Land Manager* means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.

(v) *Federally enforceable* means all limitations and conditions which are enforceable by the U.S. EPA 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 this Rule, 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.

(w) **(Reserved)**

(x) *Fugitive emissions* means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(y) **(Reserved)**

(z) *High terrain* means any area having an elevation 900 feet or more above the base of the stack of a source.

(aa) *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.

(bb) *Indian Reservation* means any federally recognized reservation established by Treaty, Agreement, executive order, or act of Congress.

(cc) ***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.

(dd) ***Low terrain*** means any area other than high terrain.

(ee) ***Lowest achievable emission rate (LAER)*** is as defined in Section 4-2 of this chapter.

(ff) ***Major Modification***

(1) 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 Rule 18.2(aaa)] of a regulated NSR pollutant [as defined in Rule 18.2(uu)]; and a significant net emissions increase of that pollutant from the major stationary source.

(2) Any significant emissions increase [as defined in Rule 18.2(aaa)] from any emissions units or net emissions increase [as defined in Rule 18.2(jj)] at a major stationary source that is significant for volatile organic compounds or NO_x shall be considered significant for ozone.

(3) A physical change or change in the method of operation shall not include:

a. 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 plant pursuant to the Federal Power Act;

b. Use of an alternative fuel by reason of an order or rule under Section 125 of the federal Clean Air Act;

c. Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;

d. 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 this Rule; or

2. The source is approved to use under any permit issued under this Rule or under regulations approved pursuant to 40 CFR §51.166;

- e. 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 this Rule or under regulations approved pursuant to 40 CFR Part 51, Subpart I, or 40 CFR §51.166.
- f. Any change in ownership at a stationary source.
- g. 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.
- h. 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.
- i. The reactivation of a very clean coal-fired electric utility steam generating unit.
- J. This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under Rule 18.21 for a plantwide applicability limitation (PAL) for that pollutant. Instead, the definition in Rule 18.21(b)(8) shall apply.

(gg) *Major source baseline date and minor source baseline date*

- (1) Major source baseline date means:
 - a. In the case of particulate matter and sulfur dioxide, January 6, 1975, and
 - b. In the case of nitrogen dioxide, February 8, 1988.
- (2) "Minor source baseline date" means the earliest date after the trigger date on which a major stationary source or a major modification subject to this rule 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 particulate matter and sulfur dioxide, August 7, 1977, and
 - b. In the case of nitrogen dioxide, February 8, 1988.
- (3) 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)(i) (D) or (E) of the federal Clean Air Act for the pollutant on the date of its complete application under this Rule or 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 emission increase of the pollutant.
- (4) 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 PM10 increments, except that the Director shall rescind a minor source baseline date where it can be shown, to the satisfaction of the Director, that the emissions increase from the major stationary source, or net emissions increase from the major modification, responsible for triggering that date did not result in a significant amount of PM10 emissions.

(hh) *Major stationary source*

- (1) 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, primary copper smelters, municipal incinerators capable of charging more than 250 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, 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 Rule 18.2(h)(1), 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 Rule 18.2(h) as a major stationary source, if the changes would constitute a major stationary source by itself.
- (2) A major stationary source that is major for volatile organic compounds shall be considered major for ozone.
- (3) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this Rule 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 250 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;
 - 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 federal Clean Air Act.

(ii) ***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.

(jj) ***Net emissions increase***

- (1) 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:
 - 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 Rule 18.1 (d); 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 Rule 18.2(jj)(1)b. shall be determined as provided in Rule 18.2 (d), except that Rule 18.2(d)(1)(c) and (d)(2)(d) shall not apply.
- (2) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between:
 - a. The date five years before construction on the particular change commences; and
 - b. The date that the increase from the particular change occurs.
- (3) An increase or decrease in actual emissions is creditable only if the Director has not relied on it in issuing a permit for the source under this Rule, which permit is in effect when the increase in actual emissions from the particular change occurs;
- (4) 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.
- (5) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.
- (6) 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; and
 - c. It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.
- (7) (Reserved)
- (8) 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.
- (9) Rule 18.2(a)(2) shall not apply for determining creditable increases and decreases.
- (kk) (Reserved)**

(ll) *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.

(mm) *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.

(nn) *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.

(oo) *Prevention of Significant Deterioration (PSD) program* means the EPA-implemented major source preconstruction permit programs under this Rule or a major source preconstruction permit program that has been approved by the U.S. EPA Administrator and incorporated into the State Implementation Plan pursuant to 40 CFR §51.166 to implement the requirements of that section. Any permit issued under such a program is a major NSR (new source review) permit.

(pp) (Reserved)

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

(rr) *Projected actual emissions*

(1) 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.

(2) In determining the projected actual emissions in accordance with Rule 18.2(rr)(1) above and 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 State Implementation 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 Rule 18.2 (d) 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 a. through c. above, may elect to use the emissions unit's potential to emit, in tons per year, as defined in Rule 18.2(mm).

(ss) *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:

- (1) Has not been in operation for the two-year period prior to the enactment of the federal 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;
 - (2) Was equipped prior to shut-down 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;
 - (3) Is equipped with low-NO_x burners prior to the time of commencement of operations following reactivation; and
 - (4) Is otherwise in compliance with the requirements of the federal Clean Air Act.
- (tt) Reasonably available control technology (RACT)** is as defined in Section 4-2 of this chapter.
- (uu) Regulated NSR pollutant**, for purposes of this Rule, means the following:
- (1) Any pollutant for which a national ambient air quality standard has been promulgated and any constituents or precursors for such pollutants identified by the U.S. EPA Administrator (*e.g.*, volatile organic compounds are precursors for ozone);
 - (2) Any pollutant that is subject to any standard promulgated under Section 111 of the federal Clean Air Act;
 - (3) Any Class I or II substance subject to a standard promulgated under or established by Title VI of the federal Clean Air Act; or
 - (4) Any pollutant that otherwise is subject to regulation under the federal Clean Air Act; except that any or all hazardous air pollutants either listed in Section 112 of the federal Clean Air Act or added to the list pursuant to Section 112(b)(2) of the federal Clean Air Act, which have not been delisted pursuant to Section 112(b)(3) of the federal Clean Air Act, are not regulated NSR pollutants unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under Section 108 of the federal Clean Air Act.
- (vv) Replacement unit** means an emissions unit for which all the criteria listed in Rule 18.2(vv) (1) through (4) below are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.
- (1) The emissions unit is a reconstructed unit within the meaning of 40 CFR §60.15(b)(1), or the emissions unit completely takes the place of an existing emissions unit.

- (2) The emissions unit is identical to or functionally equivalent to the replaced emissions unit.
- (3) The replacement does not alter the basic design parameters [as discussed in Rule 18.22] of the process unit.
- (4) 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.

(ww) Repowering

- (1) 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 U.S. EPA 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.
- (2) 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.
- (3) The Director 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 federal Clean Air Act. (xx) Reviewing authority means the Chattanooga-Hamilton County Air Pollution Control Bureau.

(xx) Reviewing authority means the Chattanooga-Hamilton County Air Pollution Control Bureau.

(yy) 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. 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.

- (1) Emissions from ships or trains coming to or from the new or modified stationary source; and

- (2) Emissions from any offsite support facility which would not otherwise be constructed or increase its emissions as a result of the construction or operation of the major stationary source or major modification.

(zz) **Significant**

- (1) 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

Ozone: 40 tpy of volatile organic compounds or NO_x

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 X 10⁻⁶ megagrams per year (3.5 x 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 landfills emissions (measured as nonmethane organic compounds): 45 megagrams per year (50 tons per year)

- (2) Significant means, in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant that Rule 18.2(zz)(1) does not list, any emissions rate.

- (3) Notwithstanding Rule 18.2(zz)(1), *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).

(aaa) Significant emissions increase means, for a regulated NSR pollutant, an increase in emissions that is significant (as defined in Rule 18.2(zz)] for that

pollutant.

(bbb) Stationary source means any building, structure, facility, or installation which emits or may emit a regulated NSR pollutant.

(ccc) 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 plans 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.

(ddd) (Reserved)

(eee) Volatile organic compounds (VOC) is as defined in Section 4-2 of this chapter.

Rule 18.3. Ambient air increments. In areas designated as Class I, II or 111, increases in pollutant concentration over the baseline concentration shall be limited to the following:

Pollutant	Maximum Allowable Increase (micrograms per cubic meter)
Class I Areas	
Particulate matter	
PM ₁₀ , annual arithmetic mean	4
PM ₁₀ , 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 Areas	
Particulate matter	
PM ₁₀ , annual arithmetic mean	17
PM ₁₀ , 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 Areas	
Particulate matter	
PM10, annual arithmetic mean	34
PM10, 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.

For the purposes of this Rule, the following classifications shall apply:

Area Classification	Designated Area
Class I Areas	<ul style="list-style-type: none"> • Great Smoky Mountains National Park • Joyce Kilmer Slickrock National Wilderness Area • Cohutta Wilderness Area
Class II Areas	Remainder of State
Class III Areas	None

Rule 18.4. Ambient air ceilings. No concentration of a pollutant shall exceed:

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

Rule 18.5. Restrictions on area classifications.

- (a) All of the following areas which were in existence on August 7, 1977, shall be Class I areas and may not be redesignated:

- (1) International parks,
- (2) National wilderness areas which exceed 5,000 acres in size,
- (3) National memorial parks which exceed 5,000 acres in size, and
- (4) National parks which exceed 6,000 acres in size.

(b) 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 Rule.

(c) 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 Rule.

(d) The following areas may be redesignated only as Class I or II:

- (1) 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
- (2) A national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres in size.

Rule 18.6. (Reserved)

Rule 18.7. Stack heights.

(a) The degree of emission limitation required for control of any air pollutant under this Rule shall not be affected in any manner by:

- (1) So much of the stack height of any source as exceeds good engineering practice, or
- (2) Any other dispersion technique.

(b) Rule 18.7 shall not apply with respect to stack heights in existence before December 31, 1970, or to dispersion techniques implemented before then.

Rule 18.8. Exemptions.

(a) The requirements of Rules 18.9 through 18.17 shall not apply to a particular major stationary source or major modification, if:

- (1) (Reserved)
- (2) (Reserved)

- (3) (Reserved)
- (4) (Reserved)
- (5) (Reserved)
- (6) The source or modification would be a nonprofit health or nonprofit educational institution, or a major modification would occur at such an institution, and the governor of the state in which the source or modification would be located requests that it be exempt from those requirements; or
- (7) 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 the 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 250 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;
 - 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 Sections 111 or 112 of the federal Clean Air Act; or
- (8) The source is a portable stationary source which has previously received a permit under this Rule, and
- a. The owner or operator proposes to relocate the source 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 Director 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 Director not less than 10 days in advance of the proposed relocation unless a different time duration is previously approved by the Director.

(9) (Reserved)

(10) (Reserved)

(b) The requirements of Rules 18.9 through 18.17 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 under Section 107 of the federal Clean Air Act.

(c) The requirements of Rules 18.10, 18.12 and 18.14 shall not apply to a major stationary source or major modification with respect to a particular pollutant, if the allowable emissions of that pollutant from the source, or the net emissions increase of that pollutant from the modification:

- (1) Would impact no Class I area and no area where an applicable increment is known to be violated, and
- (2) Would be temporary.

(d) The requirements of Rules 18.10, 18.12 and 18.14 as they relate to any maximum allowable increase for a Class II area shall not apply to a major modification at a stationary source that was in existence on March 1, 1978, if the net increase in allowable emissions of each regulated NSR pollutant from the modification after the application of best available control technology

would be less than 50 tons per year.

(e) The Director may exempt a stationary source or modification from the requirements of Rule 18.12, with respect to monitoring for a particular pollutant if:

- (1) The emissions increase of the pollutant from the new source or the net emissions increase of the pollutant from the modification would cause, in any area, air quality impacts less than the following amounts:

Carbon monoxide.....575 $\mu\text{g}/\text{m}^3$, 8-hour average;
Nitrogen dioxide.....14 $\mu\text{g}/\text{m}^3$, annual average;
Particulate matter.....10 $\mu\text{g}/\text{m}^3$ of PM10, 24-hour average;
Sulfur dioxide.....13 $\mu\text{g}/\text{m}^3$, 24-hour average;
Lead0.1 $\mu\text{g}/\text{m}^3$, 3-month average;
Fluorides0.25 $\mu\text{g}/\text{m}^3$, 24-hour average;
Total reduced sulfur.....10 $\mu\text{g}/\text{m}^3$, 1-hour average;
Hydrogen sulfide.....0.2 $\mu\text{g}/\text{m}^3$, 1-hour average;
Reduced sulfur compounds.....10 $\mu\text{g}/\text{m}^3$, 1-hour average;
OzoneNo *de minimis* air quality level is provided for ozone. However, any net increase of 100 tons per year or more of volatile organic compounds subject to PSD would be required to perform an ambient impact analysis including the gathering of ambient air quality data); or

- (2) The concentrations of the pollutant in the area that the source or modification would affect are less than the concentrations in Rule 18.8 (e)(1) above, or the pollutant is not listed.

(f) (Reserved)

(g) (Reserved)

(h) (Reserved)

(i) (Reserved)

(j) (Reserved)

- (k) The requirements of Rule 18.10(b) shall not apply to a stationary source or modification with respect to any maximum allowable increase for nitrogen oxides if the owner or operator of the source or modification submitted an application for a permit under this Rule before the provisions embodying the maximum allowable increase took effect as part of the applicable implementation plan and the Director subsequently determined that the application as submitted before that date was complete.

- (l) The requirements in Rule 18.10(b) shall not apply to a stationary source or modification with respect to any maximum allowable increase for PM₁₀ if (i) the owner or operator of the source or modification submitted an application for a permit under this Rule before the provisions embodying the maximum allowable increases for PM₁₀ took effect in an implementation plan to which this Rule applies, and (ii) the Director subsequently determined that the application as submitted before that date was otherwise complete. Instead, the requirements of Rule 18.10(b) shall apply with respect to the maximum allowable increases for TSP as in effect on the date the application was submitted.

Rule 18.9. Control technology review.

- (a) A major stationary source or major modification shall meet each applicable emissions limitation under the State Implementation Plan and each applicable emissions standard and standard of performance under 40 CFR Parts 60 and 61.
- (b) 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.
- (c) A major modification shall apply best available control technology for each regulated NSR pollutant for which it would result in a significant net emission increase at the source. This requirement applies to each proposed emissions unit at which a net emission increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.
- (d) 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.

Rule 18.10. Source impact analysis. 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:

- (a) Any national ambient air quality standard in any air quality control region;
or
- (b) Any applicable maximum allowable increase over the baseline concentration in any area.

Rule 18.11. Air quality models.

(a) All estimates of ambient concentrations required under this Rule shall be based on applicable air quality models, data bases, and other requirements specified in appendix W of 40 CFR Part 51 (Guideline on Air Quality Models).

(b) Where an air quality model specified in appendix W of 40 CFR Part 51 (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 U.S. EPA 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 developed in accordance with Rule 18.16.

Rule 18.12. Air quality analysis.

(a) Preapplication analysis.

(1) Any application for a permit under this Rule 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.

(2) 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 Director determines is necessary to assess ambient air quality for that pollutant in any area that the emissions of that pollutant would affect.

(3) 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.

(4) In general, the continuous air quality monitoring data that is required shall have been gathered over a period of at least one year and shall represent at least the year preceding receipt of the application, except that, if the Director 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.

(5) (Reserved)

(6) The owner or operator of a proposed stationary source or modification of volatile

organic compounds who satisfies all conditions of 40 CFR Part 51 Appendix S, Section IV may provide post-approval monitoring data for ozone in lieu of providing preconstruction data as required under Rule 18.12 (a).

(7) (Reserved)

(8) With respect to any requirements for air quality monitoring of PM₁₀ the owner or operator of the source or modification shall use a monitoring method approved by the Director and shall estimate the ambient concentrations of PM₁₀ using the data collected by such approved monitoring method in accordance with estimating procedures approved by the Director.

(b) Post-construction monitoring. 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 Director 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.

(c) Operations of monitoring stations. The owner or operator of a major stationary source or major modification shall meet the requirements of 40 CFR Part 58 during the operation of monitoring stations for purposes of satisfying Rule 18.12.

Rule 18.13. Source information. 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 this Rule.

(a) With respect to a source or modification to which Rules 18.9, 18.11, 18.13 and 18.15 apply, such information shall include:

(1) 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;

(2) A detailed schedule for construction of the source or modification;

(3) A detailed description as to what system of continuous emission reduction is planned for the source or modification, emission estimates, and any other information necessary to determine that best available control technology would be applied.

(b) Upon request of the Director, the owner or operator shall also provide information on:

(1) The air quality impact of the source or modification, including meteorological and topographical data necessary to estimate such impact; and

(2) 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.

Rule 18.14. Additional impact analyses.

(a) 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.

(b) 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.

(c) *Visibility monitoring.* The Director may require monitoring of visibility in any Federal class I area near the proposed new stationary source for major modification for such purposes and by such means as the Director deems necessary and appropriate.

Rule 18.15. Sources impacting Federal Class I areas - additional requirements

(a) *Notice to Federal land managers.* The Director shall provide written notice of any permit application for a proposed major stationary source or major modification, the emissions from which may affect a Class I area, to the Federal land manager and the Federal official charged with direct responsibility for management of any lands within any such area. Such notification shall include a copy of all information relevant to the permit application and shall be given within 30 days of receipt and at least 60 days prior to any public hearing on the application for a permit to construct. Such notification shall include an analysis of the proposed source's anticipated impacts on visibility in the Federal Class I area. The Director shall also provide the Federal land manager and such Federal officials with a copy of the preliminary determination required under Rule 18.16, and shall make available to them any materials used in making that determination, promptly after the Director makes such determination. Finally, the Director shall also notify all affected Federal land managers within 30 days of receipt of any advance notification of any such permit application.

(b) *Federal Land Manager.* The Federal Land Manager and the Federal official charged with direct responsibility for management of such lands have an affirmative responsibility to protect the air quality related values (including visibility) of such lands and to consider, in consultation with the Director, whether a proposed source or modification will have an adverse impact on such values.

(c) *Visibility analysis.* The Director shall consider any analysis performed by the Federal land manager, provided within 30 days of the notification required by Rule 18.15(a), that shows that a proposed new major stationary source or major modification may have an adverse impact on visibility in any Federal Class I area. Where the Director finds that such an analysis does not demonstrate to the satisfaction of the Director that an adverse impact on visibility will result in the Federal Class I area, the Director must, in the notice of public hearing on the permit application, either explain his decision or give notice as to where the explanation can be obtained.

(d) *Denial-impact on air quality related values.* The Federal Land Manager of any such lands may demonstrate to the Director that the emissions from a proposed source or modification would have an adverse impact on the air quality-related values (including visibility) of those 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 Director concurs with such demonstration, then he shall not issue the permit.

(e) *Class I variances.* The owner or operator of a proposed source or modification may demonstrate to the Federal Land Manager that the emissions from such source or modification would have no adverse impact on the air quality related values of any 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 he so certifies, the Director may: *Provided*, That the applicable requirements of this Rule are otherwise met, issue the

permit with such emission limitations as may be necessary to assure that emissions of sulfur dioxide, particulate matter, 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)
Particulate matter	
PM10, annual arithmetic mean	17
PM10, 24-hr maximum	30
Sulfur dioxide	
Annual arithmetic mean	20
24-hr maximum	91
3-hr maximum	325
Nitrogen dioxide	
Annual arithmetic mean	25

(f) *Sulfur dioxide variance by Governor with Federal Land Manager's concurrence.* The owner or operator of a proposed source or modification which cannot be approved under Rule 18.15(e) may demonstrate to the Governor that the source cannot be constructed by reason of any maximum allowable increase for sulfur dioxide for a period 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). The Governor, after consideration of the Federal Land Manager's recommendation (if any) and subject to his concurrence, may, after notice and public hearing, grant a variance from such maximum allowable increase. If such variance is granted, the Director shall issue a permit to such source or modification pursuant to Rule 18.15(h), provided that the applicable requirements of this Rule are otherwise met.

(g) *Variance by the Governor with the President's concurrence.* In any case where the Governor recommends a variance in which the Federal Land Manager does not concur, the recommendations of the Governor and the Federal Land Manager shall be transmitted to the President. The President may approve the Governor's recommendation if he finds that the variance is in the national interest. If the variance is approved, the Director shall issue a permit pursuant to the requirements of Rule 18.17(f), provided that the applicable requirements of this Rule are otherwise met.

(h) *Emission limitations for Presidential or gubernatorial variance.* In the case of a permit issued pursuant to Rule 18.17(f) the source or modification shall comply with such 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:

Period of Exposure	Maximum Allowable Increase	
	(micrograms per cubic meter)	
	Terrain Areas	
	Low	High
24-hr maximum	36	62
3-hr maximum	130	221

Rule 18.16. *Public participation.*

(a) The Director shall notify any applicant under the PSD rule within 30 days after receipt of an application as to the completeness 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 Director received all required information.

- (b) Within one year after receipt of a complete application, the Director shall:
- (1) Make a preliminary determination whether construction should be approved, approved with conditions, or disapproved.
 - (2) Make available in at least one location in the jurisdiction of the permitting authority 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.
 - (3) Notify the public, by advertisement in a newspaper of general circulation in the jurisdiction of the permitting authority 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 written public comment.
 - (4) Send a copy of the notice of public comment to the applicant, the U.S. EPA Administrator, the State of Tennessee, the State of Alabama, the State of Georgia, the chief executives of the city and county where the source would be located; the 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.
 - (5) 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.

- (6) Consider all written comments submitted within a time specified in the notice of public comment and all comments received at any public hearing(s) in making a final decision on the approvability of the application. The director shall make all comments available for public inspection at the same location where preconstruction information relating to the proposed source or modification was available.
- (7) Make a final determination whether construction should be approved, approved with conditions, or disapproved.
- (8) Notify the applicant in writing of the final determination and make such notification available for public inspection at the same location where the reviewing authority made available preconstruction information and public comments relating to the source.

Rule 18.17. Source obligation.

(a) Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to this Rule or with the terms of any approval to construct, or any owner or operator of a source or modification subject to this Rule who commences construction after the effective date of these regulations without applying for and receiving approval hereunder, shall be subject to appropriate enforcement action.

(b) Approval to construct shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Director may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

(c) Approval to construct shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the State implementation plan and any other requirements under local, State, or Federal law.

(d) 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 Rule 18.9 through 18.18 shall apply to the source or modification as though construction had not yet commenced on the source or modification.

(e) (Reserved)

(f) The provisions of this Rule 18.17(f) apply to projects at an existing emissions unit at a major stationary source (other than at a source with a plantwide applicability limitation (PAL) in circumstances where there is a reasonable possibility that a project that is not a part of a major modification may result in a significant emissions increase and the owner or operator elects to use the method specified in Rule 18.2(rr)(2)(a) through (rr)(2)(c) for calculating projected actual emissions.

- (1) 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 Rule 18.2(rr)(2)(c) and an explanation for why such amount was excluded, and any netting calculations, if applicable.
- (2) 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 Rule 18.17(f)(1) to the Director. Nothing in this Rule 18.17(f)(2) shall be construed to require the owner or operator of such a unit to obtain any determination from the Director before beginning actual construction. However the source remains subject to Section 4-58 of this chapter requiring the appropriate modification of the Part 70 operating permit.
- (3) 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 Rule 18.17(f)(1)b.; 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 of or potential to emit that regulated NSR pollutant at such emissions unit.
- (4) If the unit is an existing electric utility steam generating unit, the owner or operator shall submit a report to the Director within 60 days after the end of each year during which records must be generated under Rule 18.17(f)(3) setting out the unit's annual emissions during the calendar year that preceded submission of the report.

- (5) If the unit is an existing unit other than an electric utility steam generation unit, the owner or operator shall submit a report to the Director if the annual emissions, in tons per year, from the project identified in Rule 18.17(f)(1) exceed the baseline actual emissions (as documented and maintained pursuant to Rule 18.17(f)(1)c.), by a significant amount [as defined in Rule 18.2(zz)] for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained pursuant to Rule 18.17(f)(1)c. Such report shall be submitted to the Director 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 Rule 18.17(f)(3) 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).

(g) The owner or operator of the source shall make the information required to be documented and maintained pursuant to Rule 18.17(e) available for review upon a request for inspection by the Director or the general public pursuant to the requirements contained in 40 CFR §70.4(b)(3)(viii).

Rule 18.18. Environmental impact statements. Whenever any proposed source or modification is subject to action by a Federal Agency which might necessitate preparation of an environmental impact statement pursuant to the National Environmental Policy Act (42 U.S.C. §4321), review by the Director conducted pursuant to this Rule shall be coordinated with the broad environmental reviews under that Act and under Section 309 of the federal Clean Air Act to the maximum extent feasible and reasonable.

Rule 18.19. Innovative control technology.

(a) An owner or operator of a proposed major stationary source or major modification may request the Director in writing no later than the close of the comment period under Rule 18.16 to approve a system of innovative control technology.

(b) The Director with the consent of the governor(s) of the affected state(s) may determine that the source or modification may employ a system of innovative control technology, if:

- (1) The proposed control system would not cause or contribute to an unreasonable risk

to public health, welfare, or safety in its operation or function;

- (2) The owner or operator agrees to achieve a level of continuous emissions reduction equivalent to that which would have been required under Rule 18.9(b) by a date specified by the Director. Such date shall not be later than 4 years from the time of startup or 7 years from permit issuance;
 - (3) The source or modification would meet the requirements of Rule 18.9 and 18.10 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 Director;
 - (4) The source or modification would not before the date specified by the Director:
 - a. Cause or contribute to a violation of an applicable national ambient air quality standard; or
 - b. Impact any area where an applicable increment is known to be violated; and
 - (5) All other applicable requirements including those for public participation have been met.
 - (6) The provisions of Rule 18.15 (relating to Class I areas) have been satisfied with respect to all periods during the life of the source or modification.
- (c) The Director shall withdraw any approval to employ a system of innovative control technology made under this Rule, if:
- (1) The proposed system fails by the specified date to achieve the required continuous emissions reduction rate; or
 - (2) The proposed system fails before the specified date so as to contribute to an unreasonable risk to public health, welfare, or safety; or
 - (3) The Director 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.
- (d) If a source or modification fails to meet the required level of continuous emission reduction within the specified time period or the approval is withdrawn in accordance with Rule 18.19(c), the Director 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.

Rule 18.20. Permit rescission.

- (a) Any permit issued pursuant to this rule or a prior version of this rule shall remain in effect, unless and until it expires or is rescinded.
- (b) Any owner or operator of a stationary source or modification who holds a permit for the source or modification which was issued pursuant to this Rule as in effect on July 30, 1987, or any earlier version, may request that the Director rescind the permit or a particular portion of the permit.
- (c) The Director shall grant an application for rescission if the application shows that this Rule would not apply to the source or modification.
- (d) If the Director rescinds a permit under this Rule, the public shall be given adequate notice of the rescission. Publication of an announcement of rescission in a newspaper of general circulation in the affected region within 60 days of the rescission shall be considered adequate notice.

Rule 18.21. Actuals Plantwide Applicability Limitations (PALs). The provisions in Rule 18.21 (a) through (o) shall govern actuals Plantwide Applicability Limitations (PALs):

- (a) *Applicability.*
 - (1) The Director may approve the use of an actuals plantwide applicability limitation (PAL) for any existing major stationary source if the PAL meets the requirements of Rule 18.21. The term "PAL" shall mean "actuals PAL" [as defined in Rule 18.21(b)(1)] throughout Rule 18.21.
 - (2) 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 plantwide applicability limitation (PAL) level, meets the requirements in Rule 18.21, and complies with the PAL permit:
 - a. Is not a major modification for the plantwide applicability limitation (PAL) pollutant;
 - b. Does not have to be approved through the PSD program; and
 - c. Is not subject to the provisions in Rule 18.17(d) (restrictions on relaxing enforceable emission limitations that the major stationary source used to avoid applicability of the major New Source Review program).

- (3) Except as provided under Rule 18.21(a)(2)c., a major stationary source shall continue to comply with all applicable local, state, or federal requirements, emission limitations, and work practice requirements that were established prior to the effective date of the plantwide applicability limitation (PAL).

(b) *Definitions.* For the purposes of Rule 18.21, the definitions in this Rule 18.21 apply. When a term is not defined in this rule, it shall have the meaning given in Rule 18.2 or in the federal Clean Air Act.

- (1) *Actuals PAL* for a major stationary source means a plantwide applicability limitation (PAL) based on the baseline actual emissions [as defined in Rule 18.2(d)] of all emissions units [as defined in Rule 18.2(t)] that emit or have the potential to emit the PAL pollutant.
- (2) *Allowable emissions* means "allowable emissions" as defined in Rule 18.2(c), except as this definition is modified according to Rule 18.21(b)(2)a. and b. below:
 - 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 Rule 18.2(mm), except that the words "or enforceable as a practical matter" should be added after "federally enforceable."
- (3) *Small emissions unit* means an emissions unit that emits or has the potential to emit the plantwide applicability limitation (PAL) pollutant in an amount less than the significant level for that PAL pollutant, as defined in Rule 18.2(zz) or in the federal Clean Air Act, whichever is lower.
- (4) *Major emissions unit* means:
 - a. Any emissions unit that emits or has the potential to emit 100 tons per year or more of the plantwide applicability limitation (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 federal Clean Air Act for nonattainment areas. For example, in accordance with the definition of major stationary source in Section 182(c) of the federal Clean Air 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.

- (5) *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 Rule 18.21.
- (6) *PAL effective date* generally means the date of issuance of the plantwide applicability limitation (PAL) permit. However, the PAL effective date for an increased PAL is the date any emissions unit that is part of the plantwide applicability limitation (PAL) major modification becomes operational and begins to emit the PAL pollutant.
- (7) *PAL effective period* means the period beginning with the plantwide applicability limitation (PAL) effective date and ending 10 years later.
- (8) *PAL major modification* means, notwithstanding Rule 18.2(ff) and (jj) (the definitions for major modification and net emissions increase), any physical change in or change in the method of operation of the plantwide applicability limitation (PAL) source that causes it to emit the PAL pollutant at a level equal to or greater than the PAL.
- (9) *PAL permit* means the major New Source Review permit, the minor New Source Review permit, or the State or local operating permit under a program that is approved into the State Implementation Plan, or the Part 70 operating permit issued by the Director that establishes a plantwide applicability limitation (PAL) for a major stationary source.
- (10) *PAL pollutant* means the pollutant for which a plantwide applicability limitation (PAL) is established at a major stationary source.
- (11) *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 Rule 18.2(zz) or in the federal Clean Air 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 Rule 18.21(b)(4).

(c) *Permit application requirements.* As part of a permit application requesting a plantwide applicability limitation (PAL), the owner or operator of a major stationary source shall submit the following information to the Director for approval:

(1) 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, local, state, or federal applicable requirements, emission limitations, or work practices apply to each unit.

(2) 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.

(3) 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 Rule 18.22(m)(1).

(d) *General requirements for establishing plantwide applicability limitations (PALs).*

(1) The Director is allowed to establish a plantwide applicability limitation (PAL) at a major stationary source, provided that at a minimum, the requirements Rule 18.21 are met.

- a. The plantwide applicability limitation (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 Rule 18.21 (e).
- c. The PAL permit shall contain all the requirements in Rule 18.21(g).
- 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 Rule 18.21 (I), (m), and (n) for each emissions unit under the PAL through the PAL effective period.
- (2) 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 40 CFR §51.165(a)(3)(ii) 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
- (e) *Public participation requirements for plantwide applicability limitations (PALs).* Plantwide applicability limitations (PALs) for existing major stationary sources shall be established, renewed, or increased through a procedure that is consistent with 40 CFR §51.160, 40 CFR §51.161, and this chapter. This includes the requirement that the Director 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 Director must address all material comments before taking final action on the permit.
- (f) *Setting the 10-year actuals PAL level.*
- (1) Except as provided in Rule 18.21(9), 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 Rule 18.2(d) 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 Rule 18.2(zz) or under the federal Clean Air 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 plantwide applicability limitation (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 local, state, or federal 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).

- (2) 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 Rule 18.21(g)(1) through Rule 18.21(g)(10), the emissions must be added to the PAL level in an amount equal to the potential to emit of the units.

(g) *Contents of the plantwide applicability limitation (PAL) permit.* The PAL permit must contain, at a minimum, the information in (1) through (10) below:

- (1) The PAL pollutant and the applicable source-wide emission limitation in tons per year.
- (2) The PAL permit effective date and the expiration date of the plantwide applicability limitation (PAL) [PAL effective period].
- (3) Specification in the PAL permit that if a major stationary source owner or operator applies to renew a PAL in accordance with Rule 18.21U) 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 a reviewing authority.
- (4) A requirement that emission calculations for compliance purposes must include emissions from startups, shutdowns, and malfunctions.
- (5) A requirement that, once the PAL expires, the major stationary source is subject to the requirements of Rule 18.21(i).
- (6) 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 as required by Rule 18.21(m)(1).
- (7) A requirement that the major stationary source owner or operator monitor all emissions units in accordance with the provisions of Rule 18.21(I).
- (8) A requirement to retain the records required by Rule 18.21(m) on site. Such records may be retained in an electronic format.
- (9) A requirement to submit the reports required under Rule 18.21(1) by the required deadlines.
- (10) Any other requirements that the Director deems necessary to implement and

enforce the PAL.

(h) *Plantwide applicability limitation (PAL) effective period and reopening of the PAL permit.* The requirements in Rule 18.22(h)(1) and Rule 18.22(h)(2) apply to actuals PALs.

- (1) *PAL effective period.* The Director shall specify a plantwide applicability limitation (PAL) effective period of 10 years.
- (2) *Reopening of the plantwide applicability limitation (PAL) permit.*
 - a. During the plantwide applicability limitation (PAL) effective period, the Director must 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 40 CFR §51.165(a)(3)(ii);and
 3. Revise the PAL to reflect an increase in the PAL as provided under Rule 18.21(k).
 - b. The Director shall have discretion to reopen the PAL permit for the following:
 1. Reduce the PAL to reflect newly applicable Federal requirements (for example, New Source Performance Standards) 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 State Implementation Plan; and
 3. Reduce the PAL if the reviewing authority determines that a reduction is necessary to avoid causing or contributing to a National Ambient Air Quality Standard (NAAQS) or Prevention of Significant Deterioration of Air Quality (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 Rule 18.22(h)(2)a.1 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 Rule 18.21(e).

(i) *Expiration of a plantwide applicability limitation (PAL).* Any plantwide applicability limitation (PAL) that is not renewed in accordance with the procedures in Rule 18.21U shall expire at the end of the PAL effective period, and the requirements in Rule 18.21(i)(1) through (5) shall apply.

- (1) 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 Rule 18.21(i)(1)a. and b.
 - a. Within the time frame specified for PAL renewals in Rule 18.21U(2), 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 Director) 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 by Rule 18.22(j)(5) such distribution shall be made as if the PAL had been adjusted.
 - b. The Director 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 Director determines is appropriate.
- (2) Each emissions unit(s) shall comply with the allowable emission limitation on a 12-month rolling basis. The Director may approve the use of monitoring systems (source testing, emission factors, etc.) other than continuous emissions monitoring system (CEMS) [as defined in Rule 18.2(p)]; continuous emissions rate monitoring system (CERMS) [as defined in Rule 18.2(q)]; predictive emissions monitoring system (PEMS) [as defined in Rule 18.2(nn)]; or continuous parameter monitoring system (CPMS) [as defined in Rule 18.2(r)]; to demonstrate compliance with the allowable emission limitation.
- (3) Until the Director issues the revised permit incorporating allowable limits for each

emissions unit, or each group of emissions units, as required by Rule 18.21(i)(3) the source shall continue to comply with a source-wide, multi-unit emissions cap equivalent to the level of the plantwide applicability limitation (PAL) emission limitation.

- (4) Any physical change or change in the method of operation at the major stationary source will be subject to major New Source Review requirements if such change meets the definition of major modification Rule 18.2(ff).
- (5) The major stationary source owner or operator shall continue to comply with any local, state, or federal applicable requirements (Best Available Control Technology, Reasonably Available Control Technology, New Source Performance Standards, etc.) that may have applied either during the plantwide applicability limitation (PAL) effective period or prior to the PAL effective period except for those emission limitations that had been established pursuant to Rule 18.1(d), but were eliminated by the PAL in accordance with the provisions in Rule 18.21(a)(2)c..

(j) *Renewal of a plantwide applicability limitation (PAL).*

- (1) The Director shall follow the procedures specified in Rule 18.12(e) in approving any request to renew a plantwide applicability limitation (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 Director.
- (2) *Application deadline.* A major stationary source owner or operator shall submit a timely application to the Director to request renewal of a plantwide applicability limitation (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.
- (3) *Application requirements.* The application to renew a plantwide applicability limitation (PAL) permit shall contain the information required by a. through d. below.
 - a. The information required in Rule 18.12(c)(1) through (3).

- 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 Director to consider in determining the appropriate level for renewing the PAL.
- (4) *PAL adjustment.* In determining whether and how to adjust the plantwide applicability limitation (PAL), the Director shall consider the options outlined in Rule 18.21U(4)a. and b. below. However, in no case may any such adjustment fail to comply with Rule 18.210(4)c.
- a. If the emissions level calculated in accordance with Rule 18.21(f) is equal to or greater than 80 percent of the PAL level, the Director may renew the PAL at the same level without considering the factors set forth in Rule 18.210(4)b. below; or
 - b. The Director may set the PAL at a level that he or she determines to be more representative of the source's baseline actual emissions, or that he or she determines to be more 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 Director in his or her written rationale.
 - c. Notwithstanding Rule 18.21(j)(4)a. and b. above:
 - 1. If the potential to emit of the major stationary source is less than the PAL, the Director shall adjust the PAL to a level no greater than the potential to emit of the source; and
 - 2. The Director shall not approve a renewed PAL level higher than the current PAL, unless the major stationary source has complied with the provisions of Rule 18.21(k) (increasing a PAL).
- (5) 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 Director has not already adjusted for such requirement, the PAL shall be adjusted at the time of PAL permit renewal or Part 70 operating permit renewal, whichever occurs first.
- (k) *Increasing a plantwide applicability limitation (PAL) during the PAL effective period.*

- (1) The Director may increase a plantwide applicability limitation (PAL) emission limitation only if the major stationary source complies with the provisions in a. through d. below.
 - 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 Best Available Control Technology (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 Lowest Achievable Emissions Rate (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 New Source Review (NSR) permit for all emissions unit(s) identified in Rule 18.21(k)(1)a., 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.
- (2) The Director shall calculate the new PAL level 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 Rule 18.21(k)(2) plus the sum of the baseline actual emissions of the small emissions units.

- (3) The PAL permit shall be revised to reflect the increased PAL level pursuant to the public notice requirements of Rule 18.21(e).

(1) *Monitoring requirements for plantwide applicability limitations (PALs).*

(1) *General requirements.*

- a. Each plantwide applicability limitation (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 Rule 18.21(I)(2)a. through d. and must be approved by the Director.
- c. Notwithstanding Rule 18.21(1)(1)b. an alternative monitoring approach that meets the requirements of Rule 18.21(I)(1)a. can be employed if approved by the Director.
- d. Failure to use a monitoring system that meets the requirements of this Rule renders the PAL invalid.

(2) Minimum performance requirements for approved monitoring approaches. The following are acceptable general monitoring approaches when conducted in accordance with the minimum requirements in Rule 18.21(1)(3) through Rule 18.21(1)(9):

- a. Mass balance calculations for activities using coatings or solvents;
- b. Continuous emissions monitoring system (CEMS) [as defined in Rule 18.2(p)];
- c. Continuous parameter monitoring system (CMPS) [as defined in Rule 18.2(r)]

or predictive emissions monitoring system (PEMS) [as defined in Rule 18.2(nn)]; and

d. Emission factors.

(3) *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 Director determines there is site-specific data or a site-specific monitoring program to support another content within the range.

(4) *Continuous Emissions Monitoring System (CEMS).* An owner or operator using a continuous emissions monitoring system (CEMS) [as defined in Rule 18.2(p)] to monitor plantwide applicability limitation (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.

(5) *Continuous Parameter Monitoring System (CPMS) or Predictive Emissions Monitoring System (PEMS).* An owner or operator using a continuous parameter monitoring system (CPMS) [as defined in Rule 18.2(r)] or a predictive emissions monitoring system (PEMS) [as defined in Rule 18.2(nn)] to monitor plantwide applicability limitation (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 Director, while the emissions unit is operating.
- (6) *Emission factors.* An owner or operator using emission factors to monitor plantwide applicability limitation (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 Director determines that testing is not required.
- (7) 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 plantwide applicability limitation (PAL) permit.
- (8) Notwithstanding the requirements in Rule 18.21(1)(3) through (7), where an owner or operator of an emissions unit cannot demonstrate a correlation between the monitored parameter(s) and the plantwide applicability limitation (PAL) pollutant emissions rate at all operating points of the emissions unit, the Director 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.

(9) *Re-validation.* All data used to establish the plantwide applicability limitation (PAL) pollutant must be re-validated through performance testing or other scientifically valid means approved by the Director. Such testing must occur at least once every 5 years after issuance of the PAL.

(m) *Recordkeeping requirements.*

(1) The plantwide applicability limitation (PAL) permit shall require an owner or operator to retain a copy of all records necessary to determine compliance with any requirement of Rule 18.21 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.

(2) The plantwide applicability limitation (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 the requirements for the Part 70 operating permit program and the data relied on in certifying the compliance.

(n) *Reporting and notification requirements.* The owner or operator shall submit semi-annual monitoring reports and prompt deviation reports to the Director in accordance with the applicable Part 70 operating permit program. The reports shall meet the requirements in Rule 18.21(n)(1) below:

(1) *Semi-annual report.* The semi-annual report shall be submitted to the Director within 30 days of the end of each reporting period. This report shall contain the information required by a. through g. below:

- 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 Rule 18.21(m).
- c. All data relied upon, including, but not limited to, any Quality Assurance or Quality Control data, in calculating the monthly and annual plantwide applicability limitation (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 required by Rule 18.21(I).
 - g. A signed statement under oath by the responsible official (as defined in Section 4-53 of this chapter) certifying the truth, accuracy, and completeness of the information provided in the report. It shall constitute a certification under T.C.A. § 68-201-112.
- (2) *Deviation report.* The major stationary source owner or operator shall promptly submit reports of any deviations or exceedance of the plantwide applicability limitation (PAL) requirements, including periods where no monitoring is available. The report shall be submitted according to the requirements of Section 4-12 of this chapter. The deviation report will be certified by the responsible official as required in Rule 18.21(n)(1)g. 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 statement by the responsible official meeting the requirements of Rule 18.21(n)(1)g.
- (3) *Re-validation results.* The owner or operator shall submit to the Director the results of any re-validation test or method within 3 months after completion of such test or method.

- (o) *Transition requirements.*
- (1) The Director may not issue a plantwide applicability limitation (PAL) that does not comply with the requirements in Rule 18.21 after March 3, 2003.
- (2) The Director may supersede any PAL that was established prior to March 3, 2003 with a PAL that complies with the requirements of Rule 18.21.

Rule 18.22. Basic design parameters are determined as follows:

(a) Except as provided in Rule 18.22(c) for a process unit at a steam electric generating facility, the owner or operator may select as its basic design parameters either maximum hourly heat input and maximum hourly fuel consumption rate or maximum hourly electric output rate and maximum steam flow rate. When establishing fuel consumption specifications in terms of weight or volume, the minimum fuel quality based on British Thermal Units content shall be used for determining the basic design parameter(s) for a coal-fired electric utility steam generating unit.

(b) Except as provided in Rule 18.22(c), the basic design parameter(s) for any process unit that is not at a steam electric generating facility are maximum rate of fuel or heat input, maximum rate of material input, or maximum rate of product output. Combustion process units will typically use maximum rate of fuel input. For sources having multiple end products and raw materials, the owner or operator should consider the primary product or primary raw material when selecting a basic design parameter.

(c) If the owner or operator believes the basic design parameter(s) in Rule 18.22(a) and (b) are not appropriate for a specific industry or type of process unit, the owner or operator may propose to the director an alternative basic design parameter(s) for the source's process unit(s). If the Director approves of the use of an alternative basic design parameter(s), the Director shall issue a permit that is legally enforceable that records such basic design parameter(s) and requires the owner or operator to comply with such parameter(s).

(d) The owner or operator shall use credible information, such as results of historic maximum capability tests, design information from the manufacturer, or engineering calculations, in establishing the magnitude of the basic design parameter(s) specified in Rule 18.22(a) and (b).

(e) If design information is not available for a process unit, then the owner or operator shall determine the process unit's basic design parameter(s) using the maximum value achieved by the process unit in the five-year period immediately preceding the planned activity.

- (f) Efficiency of a process unit is not a basic design parameter

THIS IS THE FEDERALLY APPROVED REGULATION AS OF OCTOBER 1, 2020

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