

San Joaquin Valley Unified Air Pollution Control District

Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB288 Major Modifications and Federal Major Modifications

Approved By: _____ Date: _____ David Warner Director of Permit Services

I. Purpose

This policy is applicable to the requirements of Rule 2201 as amended on 12/18/08 and effective on 6/10/10.

The purpose of this policy is to provide guidance on the calculation procedures to determine if an application subject to Rule 2201 is a SB 288 Major Modification and/or a Federal Major Modification, as defined in sections 3.34 and 3.17, respectively.

Please note that nothing in this policy supersedes the requirements of Rule 2201, Federal New Source Review as codified on 40 CFR 51.165 and part D of Title I of the Federal Clean Air Act.

II. Background

The 12/18/08 amendments to Rule 2201 incorporated provisions that reflect the District's extreme ozone non attainment status. Among other changes, this rule amendment reduced the Federal major source threshold for NOx and VOC from 50,000 lb/year to 20,000 lb/year. Additionally, the Federal Major Modification thresholds for NOx and VOC were reduced from 50,000 lb/year to 0 lb/year. The Federal major source and Federal Major Modification thresholds for PM10 and SOx remain unchanged.

The methodology for determining if a project is an major modification (renamed SB288 Major Modification in the 12/18/08 rule amendments) have not been changed. The calculation procedure is codified in 40 CFR 51.165 that was in effect on 12/19/02, and relies on EPA policy memos in effect at that time (see Appendix A).

The SB 288 Major Modification calculation procedure is included in Rule 2201 to comply with the requirements of California SB288 which prohibited District's from relaxing requirements for Federal new source review (as they existed on 12/19/02) as a result of Federal NSR reform.

On 12/31/02, EPA published revisions to the Federal NSR program (40 CFR 51.165), referred to as NSR Reform, which became effective on March 3, 2003. These amendments primarily changed the calculation methodology for determining if a modification at a stationary source was a major modification.

On 3/31/10, EPA published an 18 month stay of their final rulemaking regarding the treatment of fugitive emissions (that fugitive emissions are only included in modification calculations if the stationary source is one of the specific source categories listed in 40 CFR 51.165). Therefore, the regulations implementing Federal NSR are to be applied as they existed before this rulemaking, until EPA takes a final action or the stay expires on September 30, 2011.

Consistent with the District's longstanding interpretation and implementation of the previous version of 40 CFR 51.165 (which was silent on this issue), fugitive emissions will be included to determine if a stationary source is major or a modification is an SB 288 Major Modification or a Federal Major Modification only if the stationary source is one of the specific source categories listed in 40 CFR 51.165. Prior to the end of this 18 month period on 9/30/11, these provisions may be changed.

The determination of whether various new or modified emission units are part of the same project is to be performed on a case by case basis. In general, to be part of the same project, the new and modified emission units must be part of a coordinated effort by the facility for a common purpose and occur within a reasonable amount of time. Please note that in this context, the term project has no relation to the project number assigned by the District to individual groups of applications.

Non-road engines shall not be considered in determining whether a source is major source or if a modification is a SB288 or Federal Major Modification. The Federal CAA reserves the regulation of non-road engines to Title II (National Emission Standards) of the CAA. While Title 1 (Nonattainment Areas) does not include explicit provisions to exclude non-road engine from applicability determinations, Title III (Toxics) includes a provision in the definition of stationary source that excludes "... those emissions ... from a nonroad engine or a nonroad vehicle defined in section 216".

Rule 2201 BACT requirement for SB288 and Federal Major Modifications:

Rule 2201 section 4.1.3 requires BACT for any new or modified unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification.

In determining which units are new or modified the definitions in the appropriate version of 40 CFR 51.165 shall be used, and not the definitions in Rule 2201.

In the 12/19/02 version of 40 CFR 51.165 (the criteria used to determine if a project is an SB288 Major Modification) emissions units are part of a SB288 major modification if there is a physical change in or a change in the method of operation that results in a emission increase calculated pursuant to the procedures in that version 51.165, i.e. potential to actual test for existing units and potential to emit for new units, that is significant.

In the most current version of 40 CFR 51.165 (the criteria used to determine if a project is a Federal Major Modification), emission units are part of a Federal major modification if there is a physical change in or a change in the method of operation that results in a emission increase calculated pursuant to the procedures in 51.165 that is significant. If the unit does not result in a significant emission increase, then it is not considered in the applicability determinations. Therefore, such a unit would not be required to have BACT, even if other units in the "project" were required to have BACT.

In both cases above, if a unit is not undergoing a physical change or an actual change in the method of operation, it must not be included in the applicability calculations.

II. SB 288 Major Modification Calculation

This calculation procedure, as outlined in the version of 40 CFR 51.165 that existed on 12/19/02, states that for a major source, if a project results in a net emission increase, i.e. the sum of the differences between the potential to emit and the actual emissions (AE) for all new and modified emission units are greater than the values listed in Rule 2201 Table 3-5, the project is a SB 288 major modification. This calculation is done on a pollutant by pollutant basis.

Rule 2201 Table 3-5
SB 288 Major Modification Thresholds

POLLUTANT	THRESHOLD (POUNDS PER YEAR)
VOC	50,000
NOx	50,000
PM10	30,000
SOx	80,000

Please note that calculated emission increases using the procedures below from new or modified emission units that are less than or equal to 0.5 lb/day are rounded to 0 (consistent with District Policy APR-1130 Increases Maximum Daily Permitted Emissions Less Than or Equal to 0.5 lb/day). This calculation is performed on an emission unit by emission unit basis. New or modified emission units with emission increases that round to 0 shall not constitute an SB 288 Major Modification.

The process for determining if a project will result in a SB288 Major Modification consists of a two-step test. The first step is to determine if the project results in a significant emission increase. For this determination, only emission increases are counted. Emission decreases associated with the project are not counted. The second step is to determine if the project results in a significant net emission increase.

The project's emission increase for each pollutant is equal to the sum of the differences between the potential to emit and the baseline actual emissions (BAE) (for existing emission units) or the sum of the potentials to emit (for new emission units).

Calculations for existing emission units:

- The potential to emit (PE) is the post-project potential to emit for the emission unit.
- Except for fully offset units, the actual emission are equal to the average emission rate over a two year period preceding the project unless another period is determined by the APCO to be more representative of normal operation. In selecting a more representative two year period, the same criteria as used in determining the baseline period as defined in Rule 2201 shall be used.
- For fully offset units (as defined in Rule 2201), the actual emissions are equal to the pre-project potential to emit.

Calculations for new emission units:

- The potential to emit is the post project potential to emit for the emission unit.
- The actual emissions are equal to 0.
- A replacement unit (a unit that replaces the function of an existing unit) shall be treated as an existing emission unit.

Please note that increases in fugitive emissions are only included for the source categories specified in 40 CFR 51.165.

If the project's emission increases are less than the significance thresholds, the project is not an SB 288 major modification and no further analysis is required. However, if the project's emission increases are above the significance thresholds in Table 3-5, the project results in a significant emission increase and the second step of the test must be completed.

If the project results in a significant emission increase, then the second step is to determine if all creditable emission increases and decreases within the past five years (including those projects not related to the subject project) results in a significant net emission increase. In this calculation, all creditable emission decreases and increases must be counted.

If the net emission increase is less than the significance thresholds in Table 3-5, the project is not an SB 288 Major Modification and no further analysis is required.

Alternatively, the applicant may stipulate that the project results in both a significant emission increase and significant net emission increase. In such a case, the project constitutes an SB 288 major modification and is subject to all applicable requirements.

IV. Federal Major Modification Calculation

Rule 2201 section 3.17 defines Federal Major Modification the same as “Major Modification” as defined in 40 CFR 51.165 and part D of Title I of the CAA. Section 3.17 also states that an SB 288 Major Modification is not a Federal Major Modification if the emission increase for the project or the net emission increase for the project (calculated pursuant to 40 CFR 51.165 (a)(2)(ii)(B) through (D) and (F)) does not result in a significant emission increase as defined in Rule 2201 Table 3-1 or the modification does not cause facility wide emissions to exceed a previously established plant wide applicability limit (PAL).

Rule 2201 Table 3-1
Federal Major Modification Significance Thresholds

POLLUTANT	THRESHOLD (POUNDS PER YEAR)
VOC	0
NOx	0
PM10	30,000
SOx	80,000

The remaining discussion addresses procedures to determine if a project’s emission increase or net emission increase is significant as specified in Rule 2201 section 3.17.1. This policy does not address the PAL exclusion as defined in Rule 2201 section 3.17.2.

Please note that calculated emission increases using the procedures below from new or modified emission units that are less than or equal to 0.5 lb/day are rounded to 0 (consistent with District Policy APR-1130 Increases Maximum Daily Permitted Emissions Less Than or Equal to 0.5 lb/day). This calculation is performed on an emission unit by emission unit basis. New or modified emission units with emission increases that round to 0 shall not constitute a Federal Major Modification.

The first step is to determine if the project itself results in a significant emission increase. In this determination, only emission increases are counted. Emission decreases associated with the project are not counted. The second step is to determine if the project results in a significant net emission increase.

Please note that for projects involving NOx and VOC emission increases (those pollutants for which the District is in extreme non attainment), only step 1 of the analysis is performed (as required in the Federal Clean Air Act section 182 (e) (2)). Step 2 of the analysis shall not be performed.

Notwithstanding the above, a facility with a project that has an emission increase in NOx or VOCs can elect to offset the emission increase at a ratio of 1.3:1 using emission reductions that occurred at the same stationary source. Such emission reductions must be surplus of all current Federally enforceable requirements. Such projects shall not constitute a Federal Major Modification. Offsets provided pursuant to this provision may be used to satisfy offset requirements of Rule 2201.

The project's emission increase for each pollutant is equal to the sum of the differences between the projected actual emissions or PE and the baseline actual emissions (BAE) (for existing emission units) or the sum of the potentials to emit (for new emission units).

Calculations for existing emission units:

- Where there is no increase in design capacity or potential to emit, the projected actual emissions (PAE) are equal to the annual emission rate at which the unit is projected to emit in any one year selected by the operator within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity or potential to emit).

The source must estimate the projected actual emissions based on all information relevant to the emission unit(s), e.g., expected business activity, and provide a detailed justification of the estimate in their application. If a justified estimate is not provided, the potential to emit for the existing emission units shall be used for this calculation. For projects without an increase in design capacity or potential to emit, the PAE cannot exceed the pre-project potential to emit.

- For emission units (other than electric utility steam generating units) the BAE are calculated based on any 24 month period selected by the operator within the previous 10 year period. For electric utility steam generating units the BAE are calculated based on any 24 month period selected by the operator within the previous 5 year period. BAE must be adjusted to exclude any non-compliant operation emissions and emissions no longer allowed due to lower applicable emission limits that apply at the time of application. The evaluation shall document any such adjustments or that none were required.
- If appropriate projected actual emissions are not provided by the applicant, then the emission increase is calculated by subtracting the BAE from the post-project PE ($PE - BAE$).
- In calculating the emission increase ($PAE - BAE$) the portion of the emissions after the project that the unit could have accommodated before the project (during the same period used to determine BAE) and that are unrelated to the particular project (including emissions increases due to product demand growth) are to be excluded. In other words, the difference in emissions between what the unit could have actually accommodated (legally and physically) before the project and the BAE are to be subtracted from any calculated increase, if the ability to

utilize the previously unused capacity is not related to the current project. For the discussion below, this quantity is termed “unused baseline capacity emissions”.

- Please note that to determine the unused baseline capacity emissions, the facility must provide a description of all legal and physical limitations on the emission unit’s utilization rate prior to the project. Such legal and physical limitations are not limited to requirements of the District permit.
- A replacement unit (as defined in 51.165(a)(1)(xxi) shall be treated as an existing emission unit in applicability calculations pursuant to 51.165(a)(1)(vii)(B). This applicability determination can result in a replacement unit not resulting in a Federal major modification.

Calculations for new emission units:

- The emission increase is the potential to emit. Projected actual emissions cannot be used for new emission units.
- BAE are equal to 0.

For projects involving both existing and new emission units, the emission increase for the project is calculated as the sum of the emission increases for both the existing and new emission units.

Please note that increases in fugitive emissions are only included for the source categories specified in 40 CFR 51.165.

If the project’s emission increases (Step 1) are less than the significance thresholds, the project is not a Federal major modification and no further analysis is required. However, if the project’s emission increases are above the significance thresholds in Table 3-1, the project results in a significant emission increase and further analysis is required, except as allowed below. Please note that the calculation procedure in step 2 below does not apply for projects with any emission increase of NO_x or VOC as calculated in step 1.

If the project results in a significant emission increase, the creditable emission increases and decreases at the facility occurring within the past five years (including those projects not related to the subject project) must be calculated to determine if the project results in a significant net emission increase (Step 2). In this calculation, all creditable emission decreases and increases must be counted.

If the net emission increase is less than the significance thresholds, then the project is not a Federal Major modification.

As an alternative to performing the calculation in step 2, the applicant may stipulate that the project results in both a significant emission increase and significant net emission increase. In such a case, the project constitutes a Federal major modification.

Please note that for projects that constitute a Federal major modification, the “emission increase” (calculated consistent with the requirements of 40 CFR 51.165) for such projects must be determined. Such emission increases are included in the District’s annual offset equivalency demonstration described in Rule 2201 section 7.0).

Examples of Federal Major Modification calculations

New emission units:

For new emission units, the emission increase is the potential to emit for each emission unit.

Modifications to existing emission units:

As stated above, in estimating the unused baseline capacity emissions, only those emissions that could have actually been accommodated (legally and physically) by the emission unit prior to the modification can be excluded when calculating the emission increase. Any increase in capacity utilization that is a result of the proposed modification cannot be counted when determining the unused baseline capacity emissions.

Case 1:

If the proposed modification results in an increase in design capacity or potential to emit, or impacts the ability of the emission unit to operate at a higher utilization rate, then the emission increase is calculated as follows:

$$\text{Emission increase} = \text{PAE} - \text{BAE}$$

For such cases, the presumption is that the proposed modification impacts the ability of the emission unit (pre-project) to operate at a higher utilization rate. In such cases the unused baseline capacity emissions cannot be subtracted from the emission increase.

Notwithstanding the above presumption, if the proposed modification could not have changed the ability of the emission unit to operate at a higher utilization rate (prior to the project), then the unused baseline capacity emissions may be subtracted. This determination must be made on a case by case basis and documented in the evaluation.

Case 2:

If the proposed modification does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate, then the unused baseline capacity emissions can also be excluded from the emission increase (EI). Therefore the emission increase is calculated as follows:

Emission increase = PAE – BAE – unused baseline capacity emissions

In determining if the modification does (or does not) impact the ability of the emission unit to operate at a higher utilization rate, the information supplied by the applicant and independent engineering judgment shall be used.

If the District determines that the proposed modification does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate (and there are no existing physical or legal limitations on the unit's ability to operate at a higher utilization rate), the emission increase is presumed to be 0. In such cases, no detailed calculations are required.

In either case 1 or case 2 above, if the emission increase is significant, then the project must be evaluated to determine if it results in a significant net emission increase.

Case 3:

For modifications to existing emission units solely for District, State, or Federal rule compliance, where there are no changes in the capacity of the unit, the default assumption is that the modification will not allow the emission unit to operate at a higher utilization rate. For such projects, the emission increase is presumed to be 0 for all pollutants. In such cases, no detailed calculations shall be required, but an explanation shall be documented in the evaluation.

Appendix A

40 CFR 51.165 in effect on 12/19/02

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY

PART 51--REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS--Table of Contents

Subpart I--Review of New Sources and Modifications

Sec. 51.165 Permit requirements.

(a) State Implementation Plan provisions satisfying sections 172(b)(6) and 173 of the Act shall meet the following conditions:

(1) All such plans shall use the specific definitions. Deviations from the following wording will be approved only if the State specifically demonstrates that the submitted definition is more stringent, or at least as stringent, in all respects as the corresponding definition below:

(i) Stationary source means any building, structure, facility, or installation which emits or may emit any air pollutant subject to regulation under the Act.

(ii) Building, structure, facility, or installation means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same Major Group (i.e., which have the same two-digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (U.S. Government Printing Office stock numbers 4101-0065 and 003-005-00176-0, respectively).

(iii) Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

(iv)(A) Major stationary source means:

(1) Any stationary source of air pollutants which emits, or has the potential to emit 100 tons per year or more of any pollutant subject to regulation under the Act, or

(2) Any physical change that would occur at a stationary source not qualifying under paragraph (a)(1)(iv)(A)(1) as a major stationary source, if the change would constitute a major stationary source by itself.

(B) A major stationary source that is major for volatile organic compounds shall be considered major for ozone

(C) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this paragraph whether it is a major stationary source, unless the source belongs to one of the following categories of stationary sources:

- (1) Coal cleaning plants (with thermal dryers);
- (2) Kraft pulp mills;
- (3) Portland cement plants;
- (4) Primary zinc smelters;
- (5) Iron and steel mills;
- (6) Primary aluminum ore reduction plants;
- (7) Primary copper smelters;
- (8) Municipal incinerators capable of charging more than 250 tons of refuse per day;
- (9) Hydrofluoric, sulfuric, or nitric acid plants;
- (10) Petroleum refineries;
- (11) Lime plants;
- (12) Phosphate rock processing plants;
- (13) Coke oven batteries;
- (14) Sulfur recovery plants;
- (15) Carbon black plants (furnace process);
- (16) Primary lead smelters;
- (17) Fuel conversion plants;
- (18) Sintering plants;
- (19) Secondary metal production plants;
- (20) Chemical process plants;
- (21) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- (22) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (23) Taconite ore processing plants;
- (24) Glass fiber processing plants;
- (25) Charcoal production plants;
- (26) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; and
- (27) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

(v)(A) Major modification means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.

(B) Any net emissions increase that is considered significant for volatile organic compounds shall be considered significant for ozone.

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

- (1) Routine maintenance, repair and replacement;
- (2) Use of an alternative fuel or raw material by reason of an order under sections 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;
- (3) Use of an alternative fuel by reason of an order or rule section 125 of the Act;
- (4) Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
- (5) Use of an alternative fuel or raw material by a stationary source which:
 - (i) The source was capable of accommodating before December 21, 1976, unless such change would be prohibited under any federally

enforceable permit condition which was established after December 12, 1976 pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR subpart I or Sec. 51.166, or

(ii) The source is approved to use under any permit issued under regulations approved pursuant to this section;

(6) An increase in the hours of operation or in the production rate, unless such change is prohibited under any federally enforceable permit condition which was established after December 21, 1976 pursuant to 40 CFR 52.21 or regulations approved pursuant to 40 CFR part 51 subpart I or 40 CFR 51.166.

(7) Any change in ownership at a stationary source.

(8) The addition, replacement or use of a pollution control project at an existing electric utility steam generating unit, unless the reviewing authority determines that such addition, replacement, or use renders the unit less environmentally beneficial, or except:

(i) When the reviewing authority has reason to believe that the pollution control project would result in a significant net increase in representative actual annual emissions of any criteria pollutant over levels used for that source in the most recent air quality impact analysis in the area conducted for the purpose of title I, if any, and

(ii) The reviewing authority determines that the increase will cause or contribute to a violation of any national ambient air quality standard or PSD increment, or visibility limitation.

(9) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, provided that the project complies with:

(i) The State Implementation Plan for the State in which the project is located, and

(ii) Other requirements necessary to attain and maintain the national ambient air quality standard during the project and after it is terminated.

(vi)(A) Net emissions increase means the amount by which the sum of the following exceeds zero:

(1) Any increase in actual emissions from a particular physical change or change in the method of operation at a stationary source; and

(2) Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

(B) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs before the date that the increase from the particular change occurs;

(C) An increase or decrease in actual emissions is creditable only if:

(1) It occurs within a reasonable period to be specified by the reviewing authority; and

(2) The reviewing authority has not relied on it in issuing a permit for the source under regulations approved pursuant to this section which permit is in effect when the increase in actual emissions from the particular change occurs.

(D) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

(E) A decrease in actual emissions is creditable only to the extent that:

(1) The old level of actual emission or the old level of allowable emissions whichever is lower, exceeds the new level of actual emissions;

(2) It is federally enforceable at and after the time that actual construction on the particular change begins; and

(3) The reviewing authority has not relied on it in issuing any permit under regulations approved pursuant to 40 CFR part 51 subpart I or the State has not relied on it in demonstrating attainment or reasonable further progress;

(4) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change.

(F) An increase that results from a physical change at a source occurs when the emissions unit on which construction occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires shakedown becomes operational only after a reasonable shakedown period, not to exceed 180 days.

(vii) Emissions unit means any part of a stationary source which emits or would have the potential to emit any pollutant subject to regulation under the Act.

(viii) Secondary emissions means emissions which would occur as a result of the construction or operation of a major stationary source or major modification, but do not come from the major stationary source or major modification itself. For the purpose of this section, secondary emissions must be specific, well defined, quantifiable, and impact the same general area as the stationary source or modification which causes the secondary emissions. Secondary emissions include emissions from any offsite support facility which would not be constructed or increase its emissions except as a result of the construction or operation of the major stationary source or major modification. Secondary emissions do not include any emissions which come directly from a mobile source such as emissions from the tailpipe of a motor vehicle, from a train, or from a vessel.

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

(x) Significant means, in reference to a net emissions increase the potential of a source to emit any of the following pollutants, as rate of emissions that would equal or exceed any of the following rates:

Pollutant Emission Rate

Carbon monoxide: 100 tons per year (tpy)
Nitrogen oxides: 40 tpy
Sulfur dioxide: 40 tpy
Ozone: 40 tpy of volatile organic compounds
Lead: 0.6 tpy

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

(A) The applicable standards set forth in 40 CFR part 60 or 61;

(B) Any applicable State Implementation Plan emissions limitation including those with a future compliance date; or

(C) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

(xii)(A) Actual emissions means the actual rate of emissions of a pollutant from an emissions unit as determined in accordance with paragraphs (a)(1)(xii) (B) through (D) of this section.

(B) In general, actual emissions as of a particular date shall equal

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

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

(D) For any emissions unit (other than an electric utility steam generating unit specified in paragraph (a)(1)(xii)(E) of this section) which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the unit on that date.

(E) For an electric utility steam generating unit (other than a new unit or the replacement of an existing unit) actual emissions of the unit following the physical or operational change shall equal the representative actual annual emissions of the unit, provided the source owner or operator maintains and submits to the reviewing authority, on an annual basis for a period of 5 years from the date the unit resumes regular operation, information demonstrating that the physical or operational change did not result in an emissions increase. A longer period, not to exceed 10 years, may be required by the reviewing authority if it determines such a period to be more representative of normal source post-change operations.

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

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

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

(xiv) Federally enforceable means all limitations and conditions which are enforceable by the Administrator, including those requirements developed pursuant to 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, any permit requirements established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR part 51, subpart I, including operating permits issued under an EPA-approved program that is incorporated into the State implementation plan and expressly requires adherence to any permit issued under such program.

(xv) Begin actual construction means in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipework, and construction of permanent storage structures. With respect to a change in method of operating this term refers to those on-site activities other than preparatory activities which mark the initiation

of the change.

(xvi) Commence as applied to construction of a major stationary source or major modification means that the owner or operator has all necessary preconstruction approvals or permits and either has:

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

(B) Entered into binding agreements or contractual obligations, which cannot be canceled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

(xvii) Necessary preconstruction approvals or permits means those Federal air quality control laws and regulations and those air quality control laws and regulations which are part of the applicable State Implementation Plan.

(xviii) Construction means any physical change or change in the method of operation (including fabrication, erection, installation, demolition, or modification of an emissions unit) which would result in a change in actual emissions.

(xix) Volatile organic compounds (VOC) is as defined in Sec. 51.100(s) of this part.

(xx) Electric utility steam generating unit means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

(xxi) Representative actual annual emissions means the average rate, in tons per year, at which the source is projected to emit a pollutant for the two-year period after a physical change or change in the method of operation of a unit, (or a different consecutive two-year period within 10 years after that change, where the reviewing authority determines that such period is more representative of source operations), considering the effect any such change will have on increasing or decreasing the hourly emissions rate and on projected capacity utilization. In projecting future emissions the reviewing authority shall:

(A) Consider all relevant information, including but not limited to, historical operational data, the company's own representations, filings with the State or Federal regulatory authorities, and compliance plans under title IV of the Clean Air Act; and

(B) Exclude, in calculating any increase in emissions that results from the particular physical change or change in the method of operation at an electric utility steam generating unit, that portion of the unit's emissions following the change that could have been accommodated during the representative baseline period and is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change, including any increased utilization due to the rate of electricity demand growth for the utility system as a whole.

(xxii) Temporary clean coal technology demonstration project means a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State Implementation Plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(xxiii) Clean coal technology means any technology, including technologies applied at the precombustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990.

(xxiv) Clean coal technology demonstration project means a project using funds appropriated under the heading ``Department of Energy-Clean Coal Technology,`` up to a total amount of \$2,500,000,000 for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency. The Federal contribution for a qualifying project shall be at least 20 percent of the total cost of the demonstration project.

(xxv) Pollution control project means any activity or project at an existing electric utility steam generating unit for purposes of reducing emissions from such unit. Such activities or projects are limited to:

(A) The installation of conventional or innovative pollution control technology, including but not limited to advanced flue gas desulfurization, sorbent injection for sulfur dioxide and nitrogen oxides controls and electrostatic precipitators;

(B) An activity or project to accommodate switching to a fuel which is less polluting than the fuel used prior to the activity or project, including, but not limited to natural gas or coal reburning, or the cofiring of natural gas and other fuels for the purpose of controlling emissions;

(C) A permanent clean coal technology demonstration project conducted under title II, sec. 101(d) of the Further Continuing Appropriations Act of 1985 (sec. 5903(d) of title 42 of the United States Code), or subsequent appropriations, 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; or

(D) A permanent clean coal technology demonstration project that constitutes a repowering project.

(2) Each plan shall adopt a preconstruction review program to satisfy the requirements of sections 172(b)(6) and 173 of the Act for any area designated nonattainment for any national ambient air quality standard under 40 CFR 81.300 et seq. Such a program shall apply to any new major stationary source or major modification that is major for the pollutant for which the area is designated nonattainment, if the stationary source or modification would locate anywhere in the designated nonattainment area.

(3)(i) Each plan shall provide that for sources and modifications subject to any preconstruction review program adopted pursuant to this subsection the baseline for determining credit for emissions reductions is the emissions limit under the applicable State Implementation Plan in effect at the time the application to construct is filed, except that the offset baseline shall be the actual emissions of the source from which offset credit is obtained where:

(A) The demonstration of reasonable further progress and attainment of ambient air quality standards is based upon the actual emissions of sources located within a designated nonattainment area for which the preconstruction review program was adopted; or

(B) The applicable State Implementation Plan does not contain an emissions limitation for that source or source category.

(ii) The plan shall further provide that:

(A) Where the emissions limit under the applicable State Implementation Plan allows greater emissions than the potential to emit of the source, emissions offset credit will be allowed only for control below this potential;

(B) For an existing fuel combustion source, credit shall be based on the allowable emissions under the applicable State Implementation Plan for the type of fuel being burned at the time the application to construct is filed. If the existing source commits to switch to a cleaner fuel at some future date, emissions offset credit based on the allowable (or actual) emissions for the fuels involved is not acceptable, unless the permit is conditioned to require the use of a specified alternative control measure which would achieve the same degree of emissions reduction should the source switch back to a dirtier fuel at some later date. The reviewing authority should ensure that adequate long-term supplies of the new fuel are available before granting emissions offset credit for fuel switches,

(C)(1) Emissions reductions achieved by shutting down an existing source or curtailing production or operating hours below baseline levels may be generally credited if such reductions are permanent, quantifiable, and federally enforceable, and if the area has an EPA-approved attainment plan. In addition, the shutdown or curtailment is creditable only if it occurred on or after the date specified for this purpose in the plan, and if such date is on or after the date of the most recent emissions inventory used in the plan's demonstration of attainment. Where the plan does not specify a cutoff date for shutdown credits, the date of the most recent emissions inventory or attainment demonstration, as the case may be, shall apply. However, in no event may credit be given for shutdowns which occurred prior to August 7, 1977. For purposes of this paragraph, a permitting authority may choose to consider a prior shutdown or curtailment to have occurred after the date of its most recent emissions inventory, if the inventory explicitly includes as current existing emissions the emissions from such previously shutdown or curtailed sources.

(2) Such reductions may be credited in the absence of an approved attainment demonstration only if the shutdown or curtailment occurred on or after the date the new source permit application is filed, or, if the applicant can establish that the proposed new source is a replacement for the shutdown or curtailed source, and the cutoff date provisions of Sec. 51.165(a)(3)(ii)(C)(1) are observed.

(D) No emissions credit may be allowed for replacing one hydrocarbon compound with another of lesser reactivity, except for those compounds listed in Table 1 of EPA's ``Recommended Policy on Control of Volatile Organic Compounds'' (42 FR 35314, July 8, 1977; (This document is also available from Mr. Ted Creekmore, Office of Air Quality Planning and Standards, (MD-15) Research Triangle Park, NC 27711.))

(E) All emission reductions claimed as offset credit shall be federally enforceable;

(F) Procedures relating to the permissible location of offsetting emissions shall be followed which are at least as stringent as those set out in 40 CFR part 51 appendix S section IV.D.

(G) Credit for an emissions reduction can be claimed to the extent that the reviewing authority has not relied on it in issuing any permit under regulations approved pursuant to 40 CFR part 51 subpart I or the State has not relied on it in demonstration attainment or reasonable further progress.

(4) Each plan may provide that the provisions of this paragraph do not apply to a source or modification that would be a major stationary

source or major modification only if fugitive emission to the extent quantifiable are considered in calculating the potential to emit of the stationary source or modification and the source does not belong to any of the following categories:

- (i) Coal cleaning plants (with thermal dryers);
- (ii) Kraft pulp mills;
- (iii) Portland cement plants;
- (iv) Primary zinc smelters;
- (v) Iron and steel mills;
- (vi) Primary aluminum ore reduction plants;
- (vii) Primary copper smelters;
- (viii) Municipal incinerators capable of charging more than 250 tons of refuse per day;
- (ix) Hydrofluoric, sulfuric, or citric acid plants;
- (x) Petroleum refineries;
- (xi) Lime plants;
- (xii) Phosphate rock processing plants;
- (xiii) Coke oven batteries;
- (xiv) Sulfur recovery plants;
- (xv) Carbon black plants (furnace process);
- (xvi) Primary lead smelters;
- (xvii) Fuel conversion plants;
- (xviii) Sintering plants;
- (xix) Secondary metal production plants;
- (xx) Chemical process plants;
- (xxi) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- (xxii) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (xxiii) Taconite ore processing plants;
- (xxiv) Glass fiber processing plants;
- (xxv) Charcoal production plants;
- (xxvi) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
- (xxvii) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

(5) Each plan shall include enforceable procedures to provide that:

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

(ii) At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforcement limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of regulations approved pursuant to this section shall apply to the source or modification as though construction had not yet commenced on the source or modification;

(b)(1) Each plan shall include a preconstruction review permit program or its equivalent to satisfy the requirements of section 110(a)(2)(D)(i) of the Act for any new major stationary source or major modification as defined in paragraphs (a)(1) (iv) and (v) of this section. Such a program shall apply to any such source or modification that would locate in any area designated as attainment or unclassifiable for any national ambient air quality standard pursuant to section 107 of the Act, when it would cause or contribute to a violation of any national ambient air quality standard.

(2) A major source or major modification will be considered to cause or contribute to a violation of a national ambient air quality standard when such source or modification would, at a minimum, exceed the following significance levels at any locality that does not or would not meet the applicable national standard:

Averaging time (hours)		Annual	
Pollutant			
8	3	1	24
SO ₂	1.0 g/m ³	eq>g/m ³	
PM ₁₀	1.0 g/m ³	eq>g/m ³	
NO ₂	1.0 g/m ³		
CO.....	0.5 mg/m ³		2 mg/m ³

(3) Such a program may include a provision which allows a proposed major source or major modification subject to paragraph (b) of this section to reduce the impact of its emissions upon air quality by obtaining sufficient emission reductions to, at a minimum, compensate for its adverse ambient impact where the major source or major modification would otherwise cause or contribute to a violation of any national ambient air quality standard. The plan shall require that, in the absence of such emission reductions, the State or local agency shall deny the proposed construction.

(4) The requirements of paragraph (b) of this section shall not apply to a major stationary source or major modification with respect to a particular pollutant if the owner or operator demonstrates that, as to that pollutant, the source or modification is located in an area designated as nonattainment pursuant to section 107 of the Act.

[51 FR 40669, Nov. 7, 1986, as amended at 52 FR 24713, July 1, 1987; 52 FR 29386, Aug 7, 1987; 54 FR 27285, 27299 June 28, 1989; 57 FR 3946, Feb. 3, 1992; 57 FR 32334, July 21, 1992]