

PART D CONCERNING MAJOR STATIONARY SOURCE NEW SOURCE REVIEW AND PREVENTION OF SIGNIFICANT DETERIORATION

I. Applicability

I.A. General Applicability

I.A.1. This Part D shall apply to any new or existing major stationary source.

Any new major stationary source or major modification, to which the requirements of this Part D apply, shall not begin actual construction in a nonattainment, attainment, or unclassifiable area unless a permit has been issued containing all applicable state and federal requirements.

I.A.2. *Except as otherwise provided in Section XV. of this Part D, and consistent with the definition of major modification (Section II.A.22. of this part), 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 Section II.A.43. of this part), and a significant net emissions increase (as defined in Sections II.A.26. and II.A.42. of this part). 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.*

I.A.3. *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 constructed or modified, according to Sections I.B.1. through I.B.3. of this part. 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 of Net Emissions Increase (Section II.A.26. of this part). Regardless of any such preconstruction projections, a major modification results if the project causes a significant emissions increase and a significant net emissions increase.*

I.B. Applicability Tests

I.B.1. *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 Section II.A.36. of this part) and the baseline actual emissions (as defined in Sections II.A.4.a. and II.A.4.b. of this part, as applicable), for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in Section II.A.42. of this part).

I.B.2. *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 Section I.B.35. of Part A of this regulation) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in Section II.A.4. of this part) of these units before the project equals or exceeds the significant amount for that pollutant (as defined in Section II.A.42. of this part).

I.B.3. Hybrid test for projects that involve multiple types of emissions units.

A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the emissions increases for each emissions unit, using the methods specified in Sections I.B.1. through I.B.3. of this part as applicable with respect to each type of emissions unit, equals or exceeds the significant amount for that pollutant (as defined in Section I.A.42. of this part).

I.B.4. An owner or operator of a major stationary source who conducts the actual-to-projected-actual test for a project that requires a minor permit modification in accordance with Section X. of Part C, requires a significant permit modification in accordance with Section I.A.3. of Part C, a modification as defined in Section I.B.26. of Part A or that requires a minor source permit under Part B shall submit a permit application including:

- I.B.4.a. All calculations and supporting documentation used to determine baseline actual emissions of each emissions unit affected by the project;*
- I.B.4.b. All calculations and supporting documentation used to determine projected actual emissions of each existing emissions unit affected by the project;*
- I.B.4.c. A determination of that portion of each existing unit's emissions following the project that the unit could have accommodated during the consecutive twenty-four month period used to establish the baseline actual emissions and that are unrelated to the project, including any increased utilization due to product demand growth; and.*
- I.B.4.d. Any other information requested by the Division that may be needed to determine if a major modification will occur at each emissions unit affected by the project.*

The information submitted in accordance with Section I.B.4.a. through I.B.4.d., above, shall be incorporated into an appendix to the major stationary source's Title V Operating permit or as a permit note in the construction permit.

The requirement that the owner or operator of a major stationary source who conducts the actual-to-projected-actual test for a project that requires a minor permit modification submit information in accordance with Sections I.B.4.a. through I.B.4.d., as set out in this Subsection I.B.4., shall not be federally enforceable and shall not be incorporated into the state implementation plan.

I.C. For any major stationary source requesting, or operating under, a Plant-wide Applicability Limitation (as defined in Section II.A.32.) for a regulated NSR pollutant, the major stationary source shall comply with the requirements of Section XV. of this part.

II. Definitions

II.A. The following definitions apply specifically to the provisions contained in this Part D.

II.A.1 Actual Emissions

The actual rate of emission of a regulated NSR pollutant from an emissions unit, determined as follows:

~~II.A.6.a. The actual emissions representative of sources in existence on the applicable minor source baseline date, except as otherwise provided in this definition; and~~

~~II.A.6.b. The allowable emissions from major stationary sources that commenced construction before the major source baseline date, but were not in operation by the applicable minor source baseline date.~~

~~II.A.6.c. The following will not be included in the baseline concentration and will affect the applicable maximum allowable increase(s):~~

~~II.A.6.c.(i) Actual emissions from any major stationary source on which construction commenced after the major source baseline date; and~~

~~II.A.6.c.(ii) Actual emission increases and decreases at any stationary source occurring after the minor source baseline date.~~

~~II.A.7. *Begin Actual Construction*~~

~~*Initiation of physical on-site construction activities on an emissions unit that are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying of underground pipe work, and construction of permanent storage structures. With respect to a change in the method of operation, this term refers to those on-site activities other than preparatory activities that mark the initiation of the change.*~~

II.A.8. Best Available Control Technology (BACT)

An emission limitation (including a visible emissions standard) based on the maximum degree of reduction of each regulated NSR pollutant that would be emitted from any proposed major stationary source or major modification that the Division or Commission, 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 the best available control technology result in emissions of any pollutant that would exceed emissions allowed by the applicable standards in the Code of Federal Regulations, Title 40, Parts 60 and 61 (Regulation Number 6, Part A, and Regulation Number 8, Part A) as in effect on the effective date of this clause, but not including later amendments, unless such amendments are specifically incorporated by reference in accordance with the provisions of Colorado Revised Statutes Section 24-4-103 (12.5). Information as to the availability of such standards may be obtained from the Director, Air Pollution Control Division, Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver. Colorado 80246-1530.

If the Division or Commission 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, it may instead prescribe designs, equipment, work practices, operational standards or combination thereof, 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 that achieve equivalent results.

II.A.9. Clean Coal Technology

Any technology, including technologies applied at the pre-combustion, combustion, or post-combustion stage, at a new or existing facility that 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.

II.A.10. Clean Coal Technology Demonstration Project

A project using funds appropriated under the heading "Department of Energy-Clean Coal Technology," up to a total amount of \$2.5 billion for commercial demonstration of clean coal technology, or similar projects funded through appropriations for the U.S. EPA. The federal contribution for a qualifying project shall be at least twenty percent of the total cost of the demonstration project.

II.A.11. Complete

In reference to an application for a major NSR permit, an application that contains all the information necessary for processing the application. Designating an application complete for purposes of permit processing does not preclude the Division from requesting or accepting any additional information.

II.A.11.a. At a minimum, a complete application for a permit to construct a major source or major modification subject to the requirements of this Part D shall include:

II.A.11.a.(i) All monitoring data required pursuant to this regulation and an analysis of ambient air quality in accordance with Section VI.A.3. of this part;

II.A.11.a.(ii) The impact analysis required by Section VI.A.2. of this part, a written summary of the data inputs to the model, and a topographic presentation of the resultant concentrations of each pollutant modeled for each applicable ambient standard or Prevention of Significant Deterioration increment within the impact area of the source;

II.A.11.a.(iii) A report of the regulatory status of the model pursuant to Section VIII.A.1. of Part A;

II.A.11.a.(iv) A demonstration that the proposed technological system of continuous emission reduction that is to be used will enable such source to comply continuously with the standards of performance that are to apply to such source and that the emission inputs to the model for the impact analysis are equivalent to the emissions allowed by such standards of performance;

II.A.11.a.(v) A description of the devices or systems that will be installed to monitor the emissions of each pollutant that will be emitted in significant amounts, maintaining such devices or systems, and the schedule and format for reporting the results of such emission monitoring to the Division;

II.A.11.a.(vi) The additional impact analysis required by Section VI.A.6. of this part, any demonstration of facts needed to establish a claim by the applicant to qualify for any exemption or exclusion under Section VI.B. of this part;

II.A.11.a.(vii) A schedule of construction in accordance with Section III.G.2. of Part B;

II.A.18. Innovative Control Technology

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 non-air quality environmental impacts.

II.A.19. *Low Terrain*

Any area other than high terrain.

II.A.20. Lowest Achievable Emissions Rate (LAER)

For any source, the more stringent rate of emissions based on the following:

II.A.20.a. The most stringent emission limit contained in any state implementation plan for such class or category of stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limits are not achievable; or

II.A.20.b. The most stringent emission limitation that is achieved in practice or can reasonably be expected to occur in practice by such class or category of source, taking into consideration the pollutant that must be controlled. In no event shall *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 performance standard (Regulation Number 6)*.

II.A.21. *Major Emissions Unit*

II.A.21.a. *Any emissions unit that emits or has the potential to emit one hundred tons per year or more of the PAL pollutant in an attainment area; or*

II.A.21.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 stationary source threshold (as defined in Section II.A.24. of this part) for the PAL pollutant for nonattainment areas. For example, in accordance with the definition of a major stationary source (as defined in Section II.A.24. of this part), an emissions unit would be a major emissions unit for volatile organic compounds if the emissions unit is located in an ozone nonattainment area and emits or has the potential to emit one hundred or more tons of voc per year.*

II.A.22. Major Modification

Any physical change in or change in the method of operation of or addition to, a major stationary source that would result in a significant net emissions increase of a regulated NSR pollutant (taking into account all emissions decreases and increases at the source that would accompany the modification) and a significant net emissions increase of that pollutant from the major stationary source.

II.A.22.a. Any significant emissions increase from any emissions units or net emissions increase at a major stationary source that is significant for volatile organic compounds or NOx shall be considered significant for ozone.

- II.A.22.b. In the Denver Metropolitan PM10 nonattainment area, any net emission increase that is significant for sulfur dioxide or nitrogen oxides shall be considered significant for PM10.
- II.A.22.c. A physical change or change in the method of operation shall not include routine maintenance, repair, and replacement.
- II.A.22.d. A physical change or change in the method of operation, unless previously limited by any enforceable or federally enforceable permit condition that was established after January 6, 1975 for sources in attainment or unclassifiable areas and after December 21, 1976 for sources in nonattainment areas, shall not include:
 - II.A.22.d.(i) Use of an alternative fuel or raw material by reason of an order in effect under Sections 2(a) and (b) of the Federal Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation), a prohibition under the Power Plant and Industrial Fuel Use Act of 1978 (or any superseding legislation) or by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act;
 - II.A.22.d.(ii) Use of an alternative fuel because of an order or rule under Section 125 of the Federal Act;
 - II.A.22.d.(iii) *Use of an alternative fuel at a steam-generating unit to the extent that the fuel is generated from municipal solid waste*
 - II.A.22.d.(iv) Use of an alternative fuel or raw material that:
 - II.A.22.d.(iv)(A) the stationary source in a nonattainment area was capable of accommodating prior to December 21, 1976, unless such change would be prohibited under a federally enforceable permit condition, or
 - II.A.22.d.(iv)(B) the stationary source in an attainment or unclassifiable area was capable of accommodating prior to January 6, 1975 unless such change would be prohibited under a federally enforceable permit condition, or
 - II.A.22.d.(iv)(C) the source is approved to use under any permit issued under this Regulation Number 3.
 - II.A.22.d.(v) An increase in the production rate, unless such change would be prohibited under a federally enforceable permit condition;
 - II.A.22.d.(vi) An increase in the hours of operation, unless such increase would be prohibited under a federally enforceable permit condition;
or
 - II.A.22.d.(vii) Any change in ownership of a stationary source.
 - II.A.22.d.(viii) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project, if the project complies with:

II.A.22.d.(viii)(A) The Colorado State Implementation Plan, and

II.A.22.d.(viii)(B) Other requirements necessary to attain and maintain the National Ambient Air Quality Standards during the project and after it is terminated.

II.A.22.d.(ix) For major stationary sources in attainment areas:

II.A.22.d.(ix)(A) The installation or operation of a permanent clean coal technology demonstration project that constitutes re-powering, provided that the project does not result in an increase in the potential to emit of any regulated pollutant emitted by the unit. The exemption shall apply on a pollutant-by-pollutant basis.

II.A.22.d.(ix)(B) the reactivation of a very clean coal fired electric utility steam generating unit.

II.A.22.d.(x) The reactivation of a very clean coal fired electric utility steam generating unit.

II.A.22.e. This definition shall not apply with respect to a particular regulated NSR pollutant when the major stationary source is complying with the requirements under Section XV. of this Part D for a PAL for that pollutant. Instead, the definition in Section II.A.30. of this part shall apply.

II.A.22.f. Emissions caused by indirect sources of pollution, emissions from internal combustion engines on any vehicle, and emissions resulting from temporary construction or exploration activities shall be excluded in determining whether a major modification will occur.

Emissions from on-going construction are not considered to be temporary emissions, and are included in determining whether a major modification will occur.

Fugitive emissions from the listed sources in Section II.A.24.a. and any other stationary source category that, as of August 7, 1980 was regulated under Sections 111 or 112 of the Federal Act (as adopted in Regulations Nos. 6, Part A, and 8, Parts A and E) shall, to the extent quantifiable, be considered in calculating the potential to emit of the modification.

~~II.A.23. Major Source Baseline Date~~

~~II.A.23.a. In the case of particulate matter and sulfur dioxide, January 6, 1975; and~~

~~II.A.23.b. In the case of nitrogen dioxide, February 8, 1988.~~

II.A.24. Major Stationary Source

II.A.24.a. For the purpose of determining whether a source in an attainment or unclassifiable area is subject to the requirements of this Part D, major stationary source means:

- II.A.24.a.(i) Any of the following stationary sources of air pollutants that emits, or has the potential to emit, one hundred tons per year or more of any regulated NSR pollutant:
- II.A.24.a.(i)(A) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input
 - II.A.24.a.(i)(B) Coal cleaning plants (with thermal dryers)
 - II.A.24.a.(i)(C) Kraft pulp mills
 - II.A.24.a.(i)(D) Portland cement plants
 - II.A.24.a.(i)(E) Primary zinc smelters
 - II.A.24.a.(i)(F) Iron and steel mill plants
 - II.A.24.a.(i)(G) Primary aluminum ore reduction plants
 - II.A.24.a.(i)(H) Primary copper smelters
 - II.A.24.a.(i)(I) Municipal incinerators capable of charging more than 250 tons of refuse per day
 - II.A.24.a.(i)(J) Hydrofluoric, sulfuric, and nitric acid plants
 - II.A.24.a.(i)(K) Petroleum refineries
 - II.A.24.a.(i)(L) Lime plants
 - II.A.24.a.(i)(M) Phosphate rock processing plants
 - II.A.24.a.(i)(N) Coke oven batteries
 - II.A.24.a.(i)(O) Sulfur recovery plants
 - II.A.24.a.(i)(P) Carbon black plants (furnace process)
 - II.A.24.a.(i)(Q) Primary lead smelters
 - II.A.24.a.(i)(R) Fuel conversion plants
 - II.A.24.a.(i)(S) Sintering plants
 - II.A.24.a.(i)(T) Secondary metal production plants
 - II.A.24.a.(i)(U) Chemical process plants
 - II.A.24.a.(i)(V) Fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input
 - II.A.24.a.(i)(W) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels

~~II.A.24.a.(i)(X) Taconite ore processing plants
II.A.24.a.(i)(Y) Glass fiber processing plants
II.A.24.a.(i)(Z) Charcoal production plants~~

II.A.24.a.(ii) Notwithstanding the stationary source size specified in Section II.A.24.a.(i), any stationary source that emits, or has the potential to emit, two hundred and fifty tons per year or more of any regulated NSR pollutant.

II.A.24.b. For the purpose of determining whether a source in a nonattainment area is subject to the requirements of Section V. of this part, and whether a source in an attainment area affecting a nonattainment area is subject to the requirements of Section VI.D. of this part, major stationary source means any stationary source of air pollutants that emits, or has the potential to emit 100 tons per year or more of any regulated NSR pollutant for which the area is nonattainment. Additionally, a source causing or contributing to a violation of a national ambient air quality standard for any pollutant regulated under Section 110 of the Federal Act shall be considered a major stationary source when it has the potential to emit one hundred tons per year or more of that pollutant. The source will be considered to cause or contribute to a violation where the source exceeds the significance levels in the table under Section VI.D.2. of this Part D. Such source is subject to the requirements of Section VI. of this Part D.

~~II.A.24.c. Major stationary source includes any physical change that would occur at a stationary source not otherwise qualifying as a major stationary source under Sections II.A.24.a and II.A.24.b. of this part, if the change would constitute a major stationary source by itself.~~

~~II.A.24.d. A major stationary source that is major for volatile organic compounds or NOx shall be considered major for ozone, except that emissions of negligibly reactive volatile organic compounds, as defined in the Common Provisions, shall not be included in the determination of major stationary source status for ozone.~~

~~II.A.24.e. The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the categories of stationary sources listed in Section II.A.24.a.(i) or any other stationary source category which, as of August 7, 1980, is regulated under Section 111 or 112 of the Federal Act.~~

~~II.A.24.f. Emissions caused by indirect air pollution sources (as defined in Section I.B.24. of Part A of this regulation), emissions from internal combustion engines on any vehicle, and emissions resulting from temporary activities, such as construction or exploration, shall be excluded in determining whether a source is a major stationary source. Emissions from on going construction are not considered to be temporary emissions and are included in determining whether a major modification will occur.~~

~~II.A.24.g. A major stationary source in the Denver Metro PM10 attainment/maintenance area that is major for sulfur dioxide or nitrogen oxides shall be considered major for PM10.~~

II.A.36.b.(iv) In lieu of using the method set out in Sections II.A.36.b.(i) through II.A.36.b.(iii), may elect to use the emissions unit's potential to emit, in tons per year, as defined in Section I.B.37. of Part A of this regulation.

II.A.37. Reactivation of Very Clean Coal-fired Electric Utility Steam Generating Unit

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:

II.A.37.a. Has not been in operation for the two year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of the enactment;

II.A.37.b. 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 eighty-five percent and a removal efficiency for particulates of no less than ninety-eight percent;

II.A.37.c. Is equipped with low-nitrogen oxide burners prior to the time of commencement of operations following reactivation; and

II.A.37.d. Is otherwise in compliance with the requirements of the Federal Act.

II.A.38. Regulated NSR Pollutant

II.A.38.a. Nitrogen oxides or any volatile organic compound;

II.A.38.b. Any pollutant for which a national ambient air quality standard has been promulgated;

II.A.38.c. Any pollutant that is a constituent or precursor of a general pollutant listed under Sections II.A.38.a. or II.A.38.b., above, (e.g. volatile organic compounds and oxides of nitrogen are precursors for ozone) provided that a constituent or precursor pollutant may only be regulated under NSR as part of regulation of the general pollutant;

II.A.38.d. Any pollutant that is subject to any standard promulgated under Section 111 of the Federal Act;

II.A.38.e. Any pollutant that otherwise is subject to regulation under the Federal Act as defined in Section I.B.44. or Part A;

II.A.38.f. Notwithstanding Sections II.A.38.a. through e. of this Part D, the term regulated NSR pollutant shall not include any or all hazardous air pollutants either listed in Section 112 of the Federal Act (that have not been delisted pursuant to Section 112(b)(3) of the Federal Act) or Appendix B of this regulation, 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 Act.

II.A.39. Replacement Unit

An emissions unit for which all the criteria listed in Sections II.A.39.a. through II.A.39.d. are met. No creditable emission reductions shall be generated from shutting down the existing emissions unit that is replaced.

II.A.39.a. The emissions unit is a reconstructed unit within the meaning of Code of Federal Regulations Title 40, Section 60.15(b)(1), or the emissions unit completely takes the place of an existing emissions unit.

II.A.39.b. The emissions unit is identical to or functionally equivalent to the replaced emissions unit.

II.A.39.c. The replacement does not alter the basic design parameters of the process unit.

II.A.39.d. The replaced emissions unit is permanently removed from the major stationary source, otherwise permanently disabled, or permanently barred from operation by a permit that is enforceable as a practical matter. If the replaced emissions unit is brought back into operation, it shall constitute a new emissions unit.

II.A.40. Repowering

II.A.40.a. Replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990.

II.A.40.b. Repowering shall also include any oil and/or gas-fired unit that have been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

II.A.40.5 Representative Actual Annual Emissions

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 ten years after the change, where the Division determines that such period is more representative of normal 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 Division shall:

II.A.40.5(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 Federal Act; and

II.A.40.5(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