

567—22.5(455B) Special requirements for nonattainment areas.**22.5(1) Definitions.**

a. "Major stationary source" means any of the following:

- (1) Any stationary source of air contaminants which emits, or has the potential to emit, 100 tons per year or more of any regulated air contaminant;
- (2) Any physical change that would occur at a stationary source not qualifying under subparagraph (1) as a major stationary source, if the change would constitute a major stationary source by itself;
- (3) For ozone nonattainment areas, sources with the potential to emit 100 tpy or more of volatile organic compounds or oxides of nitrogen in areas classified as "marginal" or "moderate," 50 tpy or more in areas classified as "serious," 25 tpy or more in areas classified as "severe" and 10 tpy or more in areas classified as "extreme"; except that the references in this paragraph to 100, 50, 25, and 10 tpy of nitrogen oxides shall not apply with respect to any source for which the administrator has made a finding, under Section 182(f)(1) or (2) of the Clean Air Act, that requirements under Section 182(f) of the Clean Air Act do not apply;
- (4) For ozone transport regions established pursuant to Section 184 of the Clean Air Act, sources with potential to emit 50 tpy or more of volatile organic compounds;
- (5) For carbon monoxide nonattainment areas that both are classified as "serious" and in which there are stationary sources which contribute significantly to carbon monoxide levels, sources with the potential to emit 50 tpy or more of carbon monoxide; or
- (6) For particulate matter (PM-10), nonattainment areas classified as "serious," sources with the potential to emit 70 tpy or more of PM-10.

A major stationary source that is major for volatile organic compounds shall be considered major for ozone.

b. "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 emission increase of any regulated air contaminant.

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

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

Routine maintenance, repair, and replacement;

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 Co-ordination Act of 1974 (or any superseding legislation), or by reason of a natural gas curtailment plan in effect pursuant to the Federal Power Act;

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

Any change in ownership at a stationary source; or

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

Use of an alternative fuel or raw material by a stationary source which the source was capable of accommodating before December 21, 1976, unless such change would be prohibited by any enforceable permit condition.

An increase in the hours of operation or in the production rate, unless such change is prohibited under any enforceable permit condition.

c. "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.

The provisions of this paragraph do not apply to a source or modification that would be a major stationary source or major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the stationary source or modification and the source does not belong to any of the following categories:

Coal cleaning plants (with thermal dryers);
 Kraft pulp mills;
 Portland cement plants;
 Primary zinc smelters;
 Iron and steel mills;
 Primary aluminum ore reduction plants;
 Primary copper smelters;
 Municipal incinerators capable of charging more than 250 tons of refuse per day;
 Hydrofluoric, sulfuric, or 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 combination 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;
 Charcoal production plants;
 Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;

Any other stationary source category which, as of August 7, 1980, is being regulated under Section 111 or 112 of the Clean Air Act, 42 U.S.C. §§7401 et seq.

d. "Lowest achievable emission rate" means, for any source, that rate of emissions based on the following, whichever is more stringent:

- (1) The most stringent emission 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
- (2) The most stringent emission limitation which is achieved in practice by such class or category of source.

This term, applied to a modification, means the lowest achievable emission rate for the new or modified emission units within the stationary source.

This term may include a design, equipment, material, work practice or operational standard or combination thereof.

In no event shall the application of this term permit a proposed new or modified stationary source to emit any regulated air contaminant in excess of the amount allowable under applicable new source standards of performance.

e. "Secondary emissions" means emissions which occur or could occur as a result of the construction or operation of a major stationary source or major modification, but do not necessarily come from the major stationary source or major modification itself. For purposes of this rule, secondary emissions must be specific and well-defined, must be quantifiable, and must affect the same general nonattainment area as the stationary source or modification which causes the secondary emission. Secondary emissions may include, but are not limited to:

Emissions from barges or trains coming to or from the new or modified stationary source; and

Emissions from any off-site 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.

f. (1) “*Net emissions increase*” means the amount by which the sum of the following exceeds zero:

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

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

(2) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between the date five years before construction on the particular change commences and 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 in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

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

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

It is an enforceable permit condition at and after the time that actual construction on the particular change begins;

The director has not relied on it in issuing any other permit;

Such emission decreases have not been used for showing reasonable further progress; and

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

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

g. “*Emissions unit or installation*” means an identifiable piece of process equipment.

h. “*Reconstruction*” will be presumed to have taken place where the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost of a comparable entirely new stationary source. Any final decision as to whether reconstruction has occurred shall be made in accordance with the provisions of new source performance standards (see 567—subrule 23.1(2)). A reconstructed stationary source will be treated as a new stationary source for purposes of this rule. In determining lowest achievable emission rate for a reconstructed stationary source, the definitions in the new source performance standards shall be taken into account in assessing whether a new source performance standard is applicable to such stationary source.

i. “*Fixed capital cost*” means the capital needed to provide all the depreciable components.

j. “*Fugitive emissions*” means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

k. “*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

Ozone: 40 tpy of volatile organic compounds

Lead: 0.6 tpy

PM₁₀: 15 tpy

l. "Allowable emissions" means the emissions rate calculated using the maximum rated capacity of the source (unless the source is subject to an enforceable permit condition which restricts the operating rate, or hours of operation, or both) and the most stringent of the following:

- (1) Applicable standards as set forth in 567—Chapter 23;
- (2) Any applicable state implementation plan emissions limitation, including those with a future compliance date; or
- (3) The emissions rate specified as an enforceable permit condition, including those with a future compliance date.

m. "Enforceable permit condition" for the purpose of this rule means any of the following limitations and conditions: requirements developed pursuant to new source performance standards, prevention of significant deterioration standards, emission standards for hazardous air pollutants, requirements within the state implementation plan, and any permit requirements established pursuant to this rule, or under conditional, construction or Title V operating permit rules.

n. (1) "Actual emissions" means the actual rate of emissions of a pollutant from an emissions unit as determined in accordance with subparagraphs (2) to (4) below.

(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 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.

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

o. "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.

p. "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 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.

q. "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 state implementation plan.

r. "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.

s. "Building, structure, or facility" 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). Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "Major Group" (i.e., which have the same two-digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (U.S. Government Printing Office stock numbers 4101-0066 and 003-005-00176-0 respectively).

22.5(2) Applicability. Areas designated as attainment, nonattainment, or unclassified are as listed in 40 CFR §81.316 as amended through March 19, 1998.

a. The requirements contained in rule 22.5(455B) shall apply to any new major stationary source or major modification that, as of the date the permit is issued, is major for any pollutant for which the area in which the source would construct is designated as nonattainment.

b. The requirements contained in rule 22.5(455B) shall apply to each nonattainment pollutant that the source will emit or has the potential to emit in major amounts. In the case of a modification, the requirements shall apply to the significant net emissions increase of each nonattainment pollutant for which the source is major.

c. Particulate matter. If a major source or major modification is proposed to be constructed in an area designated nonattainment for particulate matter, then emission offsets must be achieved prior to startup.

If a major source or major modification is proposed to be constructed in an area designated attainment or unclassified for particulate matter, but the modeled (EPA-approved guideline model) worst case ground level particulate concentrations due to the major source or major modification in a designated particulate matter nonattainment area is equal to or greater than five micrograms per cubic meter (24-hour concentration), or one microgram per cubic meter (annual arithmetic mean), then emission offsets must be achieved prior to startup.

d. Sulfur dioxide. If a major source or major modification is proposed to be constructed in an area designated nonattainment for sulfur dioxide, then emission offsets must be achieved prior to startup.

If a major source or major modification is proposed to be constructed in an area designated attainment or unclassified for sulfur dioxide, but the modeled (EPA-approved guideline model) worst case ground level sulfur dioxide concentrations due to the major source or major modification in a designated sulfur dioxide nonattainment area is equal to or greater than 25 micrograms per cubic meter (three-hour concentration), five microgram per cubic meter (24-hour concentration), or one microgram per cubic meter (annual arithmetic mean), then emission offsets must be achieved prior to startup.

e. At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of this rule shall apply to the source or modification as though construction had not yet commenced on the source or modification.

22.5(3) Emission offsets.

a. Emission offsets shall be obtained from the same source or other sources in the same nonattainment area, except that the required emissions reductions may be obtained from a source in another nonattainment area if:

(1) The other area, which must be nonattainment for the same pollutant, has an equal or higher nonattainment classification than the nonattainment area in which the source is located, and

(2) Emissions from such other nonattainment areas contribute to a violation of a National Ambient Air Quality Standard in the nonattainment area in which the proposed new or modified source would construct.

b. Emission offsets for any regulated air contaminant in the designated nonattainment area shall provide for reasonable further progress toward attainment of the applicable National Ambient Air Quality Standards and provide a positive net air quality benefit in the nonattainment area.

c. The increased emissions of any applicable nonattainment air pollutant allowed from the proposed new or modified source shall be offset by an equal or greater reduction, as applicable, in the total tonnage and impact of actual emissions, as stated in subrule 22.5(4), of such air pollutant from the same or other sources. For purposes of subrule 22.5(3), actual emissions shall be determined in accordance with subparagraphs 22.5(1)“n” (1) and (2).

d. All emissions reductions claimed as offset credit shall be federally enforceable prior to, or upon, the issuance of the permit required under this rule and shall be in effect by the time operation of the permitted new source or modification begins.

e. Proposals for emission offsets shall be submitted with the application for a permit for the major source or major modification. All approved emission offsets shall be made a part of the permit and shall be deemed a condition of expected performance of the major source or major modification.

22.5(4) Acceptable emission offsets.

a. Equivalence. The effect of the reduction of emissions must be measured or predicted to occur in the same area as the emissions of the major source or major modification. It can be assumed that, if the emission offsets are obtained from an existing source on the same premises or in the immediate vicinity of the major source or major modification and if the air contaminant disperses from substantially the same stack height, the emissions will be equivalent and may be offset. Otherwise, an adequate dispersion model must be used to predict the effect. If the reduction accomplished at the source is as specified in subrule 22.5(3) and if the effect of the reduction is measured or predicted to occur in the same area as the emissions of the major source or major modification, the effect of the reduction at the measured or predicted point does not have to exactly offset the effect of the major source or major modification.

b. Offset ratio. Rescinded IAB 2/14/96, effective 3/20/96.

c. Control of uncontrolled existing sources. If control equipment is proposed for a presently uncontrolled existing source for which controls are not required by rules, then credit may be allowed for any reduction below the source's potential to emit. The reduction shall be proposed at the time of permit application. Any such reductions which occurred prior to January 1, 1978, shall not be accepted for offsets.

d. Greater control of existing sources. If more effective control equipment for a source already in compliance with the SIP allowable level is proposed to offset the emissions of the major source or major modification in or affecting a nonattainment area, then the difference in the emissions between the actual level on January 1, 1978, and the new level can be credited for offsets. (This does not allow credit to be granted for any reductions in actual emissions required by the SIP subsequent to January 1, 1978.)

For example, if a cyclone that is being used to meet a SIP emission standard is emitting x_1 lbs/hr and if it is to be replaced by a bag filter emitting x_2 lbs/hr, an emission offset equal to $(x_1 - x_2)$ lbs/hr may be allowed toward the total required reduction.

e. Fugitive dust offsets. Credits may be allowed for permanent control of fugitive dust. EPA's "Technical Guidance for Control of Industrial Process Fugitive Particulate Emissions" (EPA-450/3-77-010, March 1977) shall be used as a guide to estimate reduction from fugitive dust controls on traditional sources. Traditional source means a source category for which a particulate emission standard has been established in 567—subrule 23.1(2), 567—paragraph 23.3(2) "a" or "b" or 567—23.4(455B). The emission factors shall be modified to reflect realistic reductions. This would correspond to a consideration of particles in the less than 3 micron size range and the effectiveness of the fugitive dust control method.

f. Fuel switching credits. Credit may be allowed for fuel switching provided there is a demonstration by the applicant that supplies of the cleaner fuel will be available to the applicant for a minimum of five years. The demonstration must include, as a minimum, a written contract with the fuel supplier that the fuel will not be interrupted. The permit for the existing source shall be amended to provide for maintaining those offsets resulting from the fuel switching before offset credit will be granted.

g. Reduction credits. Credit for an emissions reduction can be claimed to the extent that the administrator and the department have not: (1) relied on it in issuing any permit under regulations approved pursuant to 40 CFR Parts 51 (amended through April 9, 1998), 55 (amended through August 4, 1997), 63 (amended through December 28, 1998), 70 (amended through November 26, 1997), or 71 (amended through October 22, 1997); (2) relied on it in demonstrating attainment or reasonable further progress; or (3) the reduction is not otherwise required under the Clean Air Act. Incidental emissions reductions which are not otherwise required under the Act shall be creditable as emissions reductions for such purposes if such emissions reductions meet the requirements of subrule 22.5(3).

h. Derating of equipment. If the emissions from a major source or major modification are proposed to be offset by reducing the operating capacity of another existing source, then credit may be allowed for this provided proper documentation (such as stack test results) showing the effect on emissions due to derating is submitted. The permit for the existing source must be amended to limit the operating capacity before offsets will be allowed.

i. Shutdown or curtailment.

(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 surplus, 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 or attainment demonstration. However, in no event may credit be given for shutdowns which occurred prior to January 1, 1978. For purposes of this paragraph, the director may 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. The work force shall be notified of the proposed curtailment or shutdown by the source owner or operator.

(2) The reductions described in subparagraph 22.5(4) "i"(1) may be credited in the absence of any 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 in 22.5(4) "i"(1) are observed.

j. External emission offsets. If the emissions from the major source or major modification are proposed to be offset by reduction of emissions from a source not owned or operated by the owner or operator of the major source or major modification, then credit may be allowed for such reductions provided the external source's permit is amended to require the reduced emissions or a consent order is entered into by the department and the existing source. Consent orders for external offsets must be incorporated into the SIP and be approved by EPA before offset credit may be granted.

22.5(5) Banking of offsets in nonattainment areas. If the offsets in a given situation are more than required by 22.5(3) the amount of offsets that is greater than required may be banked for the exclusive use or control of the person achieving the reduction, subject to the limitations of this subrule. If the person achieving the reduction is not an individual, an authorized representative of the person must release control of the banked emissions in writing before another person, other than the commission, can utilize the banked emissions. The banking of offsets creates no property right in those offsets. The commission may proportionally reduce or cancel banked offsets if it is determined that reduction or cancellation is necessary to demonstrate reasonable further progress or to attain the ambient air quality standards. Prior to reduction or cancellation, the commission shall notify the person who banked the offsets.

22.5(6) Control technology review.

a. Lowest achievable emission rate. A new or modified major source in a nonattainment area shall comply with the lowest achievable emission rate.

b. For phased construction projects, the determination of the lowest achievable emissions rate shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to the 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 the LAER for the source.

c. State implementation plan, new source performance standards, and emission standards for hazardous air pollutants. A major stationary source or major modification shall meet each applicable emissions limitation under the state implementation plan and each applicable emissions standard of performance under 40 CFR Parts 60 (amended through November 24, 1998), 61 (amended through October 14, 1997), and 63 (amended through December 28, 1998).

22.5(7) Compliance of existing sources. If a new major source or major modification is subject to rule 22.5(455B), then all major sources owned or operated by the applicant (or by any entity controlling, controlled by, or under common control by the applicant) in Iowa shall be either in compliance with applicable emission standards or under a compliance schedule approved by the commission.

22.5(8) Alternate site analysis. The permit application shall contain a submittal of an alternative site analysis. Such submittal shall include analysis of alternative sites, sizes, production processes and environmental control techniques for the proposed source. The analysis must demonstrate that benefits

of the proposed source significantly outweigh the environmental and social costs that would result from its location, construction or modification. Such analysis shall be completed prior to permit issuance.

22.5(9) *Additional conditions for permit approval.*

a. For the air pollution control requirements applicable to subrule 22.5(6), the permit shall require the source to monitor, keep records, and provide reports necessary to determine compliance with and deviations from applicable requirements.

b. The state shall not issue the permit if the administrator has determined that the applicable implementation plan is not being adequately implemented for the nonattainment area in which the proposed stationary source or modification is to be constructed.

22.5(10) *Public availability of information.* No permit shall be issued until notice and opportunity for public comment are made available in accordance with the procedure described in 40 CFR 51.161 (as amended through November 7, 1986).