

**Iowa Department of Natural Resources
Environmental Protection Commission**

ITEM

11

DECISION

TOPIC **Notice of Intended Action - Chapters 20, 22, and 33:
Air Quality Program Rules – Greenhouse Gas Rules**

The Department is requesting permission from the Commission to proceed with the rulemaking process and publish a Notice of Intended Action to amend Chapter 20, “Scope of Title—Definitions—Forms—Rules of Practice,” Chapter 22, “Controlling Pollution,” and Chapter 33, “Special Regulations and Construction Permit Requirements for Major Stationary Sources—Prevention of Significant Deterioration (PSD) of Air Quality,” of the Iowa Administrative Code. The Department provided a preliminary briefing on the need for this rulemaking to the Commission at the November Commission meeting.

The purpose of this rule is to assure that sources of greenhouse gas (GHG) emissions in Iowa are regulated in the same manner and at the same levels as specified in a federal rulemaking currently proposed and under public review. U.S. EPA proposed a rulemaking published on October 27, 2009 in the Federal Register (74 Fed Reg 55291). This rulemaking is referred to as the “Tailoring Rule” because it is attempting to establish thresholds for triggering the requirements of the Prevention of Significant Deterioration (PSD) and Title V Operating Permit Program (Title V). The public comment period on the rulemaking will close on December 28, 2009. The rule will become final in March 2010. To assure that the Department and affected facilities will be able to use these thresholds, as adopted in the final federal rule, instead of the current regulatory thresholds, the Department proposes to begin this state rulemaking in parallel with the federal rulemaking process. If the state does not adopt these changes contemporaneously with the federal rulemaking, then the Department would be in the position of regulating greenhouse gas emissions at impractically low levels and potentially in conflict with the state statute.

The Department recommends that these rules be made effective consistent with the disposition of the federal rules. The proposed federal GHG “Tailoring Rule” and accompanying fact sheet are available on-line at <http://www.epa.gov/NSR/fs20090930action.html> (fact sheet; 4 pages) and <http://www.epa.gov/fedrgstr/EPA-AIR/2009/October/Day-27/a24163.htm> (proposed rules; 75 pages).

On April 2, 2007, the Supreme Court found that GHGs, including carbon dioxide, are air pollutants covered by the CAA. *Massachusetts v. EPA*, 549 U.S. 497 (2007).

The Supreme Court found that EPA was required to determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make

a reasoned decision. In April 2009, EPA responded to the Court by proposing a finding that greenhouse gases contribute to air pollution that may endanger public health or welfare.

EPA expects soon to take final action on the finding. The agency also expects to issue regulations under the Clean Air Act to control GHG emissions from light duty vehicles (proposal signed 9/15/09). Such an action will trigger Clean Air Act permitting requirements under the New Source Review (NSR) Prevention of Significant Deterioration (PSD) and Operating Permit (Title V) programs for GHG emissions. This will be the first time GHGs would be subject to either of these Clean Air Act permitting programs.

Congress established the NSR program as part of the 1977 Clean Air Act Amendments and modified it in the 1990 Amendments. NSR is a preconstruction permitting program that serves two important purposes:

- Ensures the maintenance of air quality standards or, where there are not air quality standards, it ensures that air quality does not significantly worsen when factories, industrial boilers, and power plants are modified or added. In areas that do not meet the national ambient air quality standards, NSR assures that new emissions do not slow progress toward cleaner air. In areas that meet the standards, especially pristine areas like national parks, NSR assures that new emissions fall within air quality standards.
- Ensures that state-of-the-art control technology is installed at new plants or at existing plants that are undergoing a major modification.

New major stationary sources and major modifications at existing major stationary sources that meet emissions applicability thresholds outlined in the Clean Air Act and in existing PSD regulations must obtain a PSD permit outlining how they will control emissions. The permit requires facilities to apply best available control technology (BACT), which is determined on a case-by-case basis taking into account, among other factors, the cost and effectiveness of the control.

The Clean Air Act Amendments of 1990 required that all states develop operating permit programs. Under these programs, known as Title V operating permits programs, every major industrial source of air pollution (and some other sources) must obtain an operating permit. The permits, which are reviewed every five years, contain all air emission control requirements that apply to the facility, including the requirements established as part of the preconstruction permitting process.

The Department expects EPA to finalize its “Tailoring Rule” very quickly, at the same time or before it finalizes its light-duty vehicle greenhouse gas emissions standards in March 2010. It is imperative that the Department proceed with rules to ensure that only the facilities that EPA and the Department intended to be subject to the PSD and Title V programs are impacted.

The proposed rules encompass the definitions in EPA’s proposed “Tailoring” regulations, but do not include any of the other provisions in the proposed federal regulations. The proposed changes to state air quality rules are meant to be a “stop-gap” in the event that EPA finalizes regulations for greenhouse gases that are immediately applicable to Iowa’s air quality program. With this proposal, the Department is ensuring that its current construction and operating permit programs are not inundated with unnecessary applications and that permit processing time is not drastically reduced as a result of the federal GHG regulations.

The Department plans to bring final rules to the Environmental Protection Commission in March 2010. If approved by the Commission, the Department intends to have the Adopted & Filed rules be effective upon filing with the Administrative Code Editor as early as possible after Commission approval on or about March 16, 2010. By reducing the time between finalizing the rule and the effective date of the rule, the Department will assure that there will be a very limited delay in the issuance of permits under the new rule.

If the Commission approves the proposed rulemaking, the Notice of Intended Action will be published in the Iowa Administrative Bulletin on January 13, 2010. A public hearing will be held on February 12, 2010. The Department will accept public comments until February 12, 2010.

An administrative rule fiscal impact statement will be provided to the Commission at the December Commission meeting.

Christine Paulson
Environmental Specialist Senior
Program Development Section, Air Quality Bureau
Memo date: November 23, 2009

ENVIRONMENTAL PROTECTION COMMISSION [567]

Notice of Intended Action

Pursuant to the authority of Iowa Code sections 455B.131, 455B.133, 455B.134, and 455B.152, the Environmental Protection Commission hereby gives Notice of Intended Action to amend Chapter 20, “Scope of Title—Definitions—Forms—Rules of Practice,” Chapter 22, “Controlling Pollution,” and Chapter 33, “Special Regulations and Construction Permit Requirements for Major Stationary Sources—Prevention of Significant Deterioration (PSD) of Air Quality,” Iowa Administrative Code.

The purpose of this rule is to assure that sources of green house gas (GHG) emissions in Iowa are regulated in the same manner and at the same levels as specified in a federal rulemaking currently proposed and under public review. U.S. EPA proposed a rulemaking published on October 27, 2009 in the Federal Register (74 Fed Reg 55291). This rulemaking is referred to as the “Tailoring Rule” because it is attempting to establish thresholds for triggering the requirements of the Prevention of Significant Deterioration (PSD) and Title V Operating Permit Program (Title V). The public comment period on the rulemaking will close on December 28, 2009. The rule will become final in March 2010. To assure that the Department and affected facilities will be able to use these thresholds, as adopted in the final federal rule, instead of the current regulatory thresholds, the Department proposes to begin this state rulemaking in parallel with the federal rulemaking process. If the state does not adopt these changes contemporaneously with the federal rulemaking, then the Department would be in the position of regulating green house gas emissions at impractically low levels and potentially in conflict with

the state statute.

The Department recommends that these rules be made effective consistent with the disposition of the federal rules. The proposed federal GHG “Tailoring Rule” and accompanying fact sheet are available on-line at <http://www.epa.gov/NSR/fs20090930action.html> (fact sheet; 4 pages) and <http://www.epa.gov/fedrgstr/EPA-AIR/2009/October/Day-27/a24163.htm> (proposed rules; 75 pages).

On April 2, 2007, the Supreme Court found that GHGs, including carbon dioxide, are air pollutants covered by the CAA. *Massachusetts v. EPA*, 549 U.S. 497 (2007). The Supreme Court found that EPA was required to determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In April 2009, EPA responded to the Court by proposing a finding that greenhouse gases contribute to air pollution that may endanger public health or welfare.

EPA expects soon to take final action on the finding. The agency also expects to issue regulations under the Clean Air Act to control GHG emissions from light duty vehicles (proposal signed 9/15/09). Such an action will trigger Clean Air Act permitting requirements under the New Source Review (NSR) Prevention of Significant Deterioration (PSD) and Operating Permit (Title V) programs for GHG emissions. This will be the first time GHGs would be subject to either of these Clean Air Act permitting programs.

Congress established the NSR program as part of the 1977 Clean Air Act Amendments and modified it in the 1990 Amendments. NSR is a preconstruction permitting program that serves two important purposes:

- Ensures the maintenance of air quality standards or, where there are not air quality standards, it ensures that air quality does not significantly worsen when factories, industrial boilers, and power plants are modified or added. In areas that do not meet the national ambient air quality standards, NSR assures that new emissions do not slow progress toward cleaner air. In areas that meet the standards, especially pristine areas like national parks, NSR assures that new emissions fall within air quality standards.
- Ensures that state-of-the-art control technology is installed at new plants or at existing plants that are undergoing a major modification.

New major stationary sources and major modifications at existing major stationary sources that meet emissions applicability thresholds outlined in the Clean Air Act and in existing PSD regulations must obtain a PSD permit outlining how they will control emissions. The permit requires facilities to apply best available control technology (BACT), which is determined on a case-by-case basis taking into account, among other factors, the cost and effectiveness of the control.

The Clean Air Act Amendments of 1990 required that all states develop operating permit programs. Under these programs, known as Title V operating permits programs, every major industrial source of air pollution (and some other sources) must obtain an operating permit. The permits, which are reviewed every five years, contain all air emission control requirements that apply to the facility, including the requirements established as part of the preconstruction permitting process.

The Department expects EPA to finalize its “Tailoring Rule” very quickly, at the same time or before it finalizes its light-duty vehicle greenhouse gas emissions standards in March

2010. It is imperative that the Department proceed with rules to ensure that only the facilities that EPA and the Department intended to be subject to the PSD and Title V programs are impacted.

The proposed rules encompass the definitions in EPA's proposed "Tailoring" regulations, but do not include any of the other provisions in the proposed federal regulations. The proposed changes to state air quality rules are meant to be a "stop-gap" in the event that EPA finalizes regulations for greenhouse gases that are immediately applicable to Iowa's air quality program.

The Department plans to bring final rules to the Environmental Protection Commission in March 2010. If approved by the Commission, the Department intends to have the Adopted & Filed rules be effective upon filing with the Administrative Code Editor as early as possible after EPC approval on or about March 16, 2010.

Item 1 amends the definition of "greenhouse gas" in rule 567—20.2(455B) to include the acronyms and formulas in EPA's definition.

Item 2 amends rule 567—20.2(455B) to add the definition of "carbon dioxide equivalent" from the federal greenhouse gas "Tailoring Rule."

Item 3 amends the definition of "major stationary source" in rule 567—22.100(455B) to include EPA's proposed Title V source threshold levels for greenhouse gases. The proposed applicability threshold for a stationary source to be subject to Title V is a stationary source that directly emits or has the potential to emit 25,000 tons per year (tpy) carbon dioxide equivalent or more of greenhouse gases. Without this amendment, it is possible that the current Title V threshold of 100 tpy of any single air pollutant could apply when EPA finalizes its regulations.

Item 4 amends rule 567—22.100(455B) to add the definitions of "greenhouse gas" and "carbon dioxide equivalent" as described in Item 1 and Item 2.

Item 5 amends subrule 33.3(1), the definition of “major stationary source,” to include the new thresholds proposed by EPA for the Prevention of Significant Deterioration (PSD) program. As with the Title V program, the proposed applicability threshold for a stationary source to be subject to PSD is one that directly emits or has the potential to emit 25,000 tpy carbon dioxide equivalent or more of greenhouse gases. Without this amendment, it is possible that the current PSD threshold of 100 tpy of a regulated New Source Review pollutant for one of the 28 named sources categories, and 250 tpy of a regulated New Source Review pollutant for all other sources, could apply when EPA finalizes its regulations.

Item 6 amends subrule 33.3(1), the definition of “significant,” to include EPA’s proposed range for greenhouse gas emissions. EPA’s proposed range for a significant increase in greenhouse gases for a PSD major stationary source is between 10,000 and 25,000 tpy carbon dioxide equivalents. Because EPA is proposing a range, the Department is including this range in the proposed state rules. The Department will ultimately finalize state rules that are identical to the final, federal threshold level.

Any person may make written suggestions or comments on the proposed amendments on or before **February 12, 2010**. Written comments should be directed to Christine Paulson, Department of Natural Resources, Air Quality Bureau, 7900 Hickman Road, Suite 1, Windsor Heights, Iowa, 50324; fax (515)242-5094; or by electronic mail to christine.paulson@dnr.iowa.gov.

A public hearing will be held on **Friday, February 12, 2010**, at **1 p.m.** in the conference rooms at the Department’s Air Quality Bureau office located at 7900 Hickman Road, Urbandale, Iowa. At the public hearing, comments on the proposed amendments may be submitted orally or

in writing. All comments must be received no later than **Friday, February 12, 2010.**

Any person who intends to attend the public hearing and has special requirements, such as those related to hearing or mobility impairments, should contact Christine Paulson at (515) 242-5154 to advise of any specific needs.

These amendments are intended to implement Iowa Code sections 455B.131, 455B.133, 455B.134, and 455B.152.

The following amendments are proposed.

ITEM 1. Amend rule **567—20.2(455B)**, the definition of “greenhouse gas” as follows:

“*Greenhouse gas*” or “*GHG*” means carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆).

ITEM 2. Amend rule **567—20.2(455B)**, to add the following definition of “carbon dioxide equivalent” or “CO₂e”:

“*Carbon dioxide equivalent*” or “*CO₂e*” means a metric used to compare the emissions from various greenhouse gases (GHG) based upon their global warming potential (GWP). The CO₂e for a gas is determined by multiplying the mass of the gas by the associated GWP. The applicable GWPs and guidance on how to calculate a source’s GHG emissions in tons per year CO₂e can be found in EPA’s “Inventory of U.S. Greenhouse Gas Emissions and Sinks,” which is updated annually under existing commitment under the United Nations Framework Convention

on Climate Change (UNFCCC).

ITEM 3. Amend rule **567—22.100(455B)**, the definition of “major stationary source,” as follows:

“Major stationary source” means any stationary source (or any group of stationary sources located on one or more contiguous or adjacent properties and under common control of the same person or of persons under common control) belonging to a single major industrial grouping that is any of the following:

1. A major stationary source of air pollutants (not including greenhouse gases except as otherwise provided in this rule), as defined in Section 302 of the Act, that directly emits or has the potential to emit 100 tons per year (tpy) or more of any air pollutant (including any major source of fugitive emissions of any such pollutant). The fugitive emissions of a stationary source shall not be considered in determining whether it is a major stationary source for the purposes of Section 302(j) of the Act, unless the source belongs to one of the stationary source categories listed in this chapter.

2. A major source of hazardous air pollutants according to Section 112 of the Act as follows:

For pollutants other than radionuclides, any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, in the aggregate, 10 tpy or more of any hazardous air pollutant which has been listed pursuant to Section 112(b) of the Act and these rules or 25 tpy or more of any combination of such hazardous air pollutants. Notwithstanding the previous sentence, emissions from any oil

or gas exploration or production well (with its associated equipment) and emission from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources.

For Title V purposes, all fugitive emissions of hazardous air pollutants are to be considered in determining whether a stationary source is a major source.

For radionuclides, “major source” shall have the meaning specified by the administrator by rule.

3. A major stationary source as defined in Part D of Title I of the Act, including:

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 Act, that requirements under Section 182(f) of the Act do not apply;

For ozone transport regions established pursuant to Section 184 of the Act, sources with potential to emit 50 tpy or more of volatile organic compounds;

For carbon monoxide nonattainment areas (1) that are classified as “serious” and (2) in which stationary sources contribute significantly to carbon monoxide levels, and sources with the potential to emit 50 tpy or more of carbon monoxide;

For particulate matter (PM-10), nonattainment areas classified as “serious,” sources with the potential to emit 70 tpy or more of PM-10.

4. A stationary source that directly emits, or has the potential to emit, 25,000 tpy CO₂e or more of greenhouse gases that are subject to regulation under the Act.

For the purposes of defining “major source,” a stationary source or group of stationary sources shall be considered part of a single industrial grouping if all of the pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same major group (i.e., all have the same two-digit code) as described in the Standard Industrial Classification Manual, 1987.

ITEM 4. Amend rule **567—22.100(455B)** to add the definition of “carbon dioxide equivalent” or “CO₂e” and to add the definition “greenhouse gas” or “GHG” as follows:

“*Carbon dioxide equivalent*” or “*CO₂e*” means a metric used to compare the emissions from various greenhouse gases (GHG) based upon their global warming potential (GWP). The CO₂e for a gas is determined by multiplying the mass of the gas by the associated GWP. The applicable GWPs and guidance on how to calculate a source’s GHG emissions in tons per year CO₂e can be found in EPA’s “Inventory of U.S. Greenhouse Gas Emissions and Sinks,” which is updated annually under existing commitment under the United Nations Framework Convention on Climate Change (UNFCCC).

“*Greenhouse gas*” or “*GHG*” means carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆).

ITEM 5. Amend subrule **33.3(1)**, the definition of “major stationary source,” as follows:

“*Major stationary source*” means:

(1) (a) Any one of the following stationary sources of air pollutants which emits, or has the potential to emit, 100 tons per year or more of any regulated NSR pollutant (not including greenhouse gases except as otherwise provided under this subrule):

- Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input;
- Coal cleaning plants (with thermal dryers);
- Kraft pulp mills;
- Portland cement plants;
- Primary zinc smelters;
- Iron and steel mill plants;
- Primary aluminum ore reduction plants;
- Primary copper smelters;
- Municipal incinerators capable of charging more than 250 tons of refuse per day;
- Hydrofluoric, sulfuric, and nitric acid plants;
- Petroleum refineries;
- Lime plants;
- Phosphate rock processing plants;
- Coke oven batteries;

- Sulfur recovery plants;
- Carbon black plants (furnace process);
- Primary lead smelters;
- Fuel conversion plants;
- Sintering plants;
- Secondary metal production plants;
- Chemical process plants (which does not include ethanol production

facilities that produce ethanol by natural fermentation included in NAICS code 325193 or 312140);

- Fossil-fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input;

- Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;

- Taconite ore processing plants;
- Glass fiber processing plants; and
- Charcoal production plants.

(b) Notwithstanding the stationary source size specified in paragraph “1”(a), any stationary source which emits, or has the potential to emit, 250 tons per year or more of a regulated NSR pollutant; or

(c) Any physical change that would occur at a stationary source not otherwise qualifying under this definition as a major stationary source if the change would constitute a major stationary source by itself.

(2) A major source that is major for volatile organic compounds or NO_x shall be considered major for ozone.

(3) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this rule whether it is a major stationary source, unless the source belongs to one of the categories of stationary sources listed in paragraph “1”(a) of this definition or to any other stationary source category which, as of August 7, 1980, is being regulated under Section 111 or 112 of the Act.

(4) Any stationary source of air pollutants which emits, or has the potential to emit, 25,000 tpy CO₂e of greenhouse gases.

ITEM 6. Amend subrule **33.3(1)**, the definition of “significant,” as follows:

“*Significant*” means:

1. In reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emissions that would equal or exceed any of the following rates:

Pollutant and Emissions Rate

- Carbon monoxide: 100 tons per year (tpy)
- Nitrogen oxides: 40 tpy
- Sulfur dioxide: 40 tpy
- Particulate matter: 25 tpy of particulate matter emissions or 15 tpy of

PM₁₀ emissions

- Ozone: 40 tpy of volatile organic compounds or NO_x
- Lead: 0.6 tpy
- Fluorides: 3 tpy
- Sulfuric acid mist: 7 tpy
- Hydrogen sulfide (H₂ S): 10 tpy
- Total reduced sulfur (including H₂ S): 10 tpy
- Reduced sulfur compounds (including H₂ S): 10 tpy
- Municipal waste combustor organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans): 3.2×10^{-6} megagrams per year (3.5×10^{-6} tons per year)
- Municipal waste combustor metals (measured as particulate matter): 14 megagrams per year (15 tons per year)
- Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride): 36 megagrams per year (40 tons per year)
- Municipal solid waste landfill emissions (measured as nonmethane organic compounds): 45 megagrams per year (50 tons per year)
- Greenhouse gases: [10,000 to 25,000] tpy Co₂e

2. “Significant” means, for purposes of this rule and in reference to a net emissions increase or the potential of a source to emit a regulated NSR pollutant not listed in paragraph “1,” any emissions rate.

3. Notwithstanding paragraph “1,” “significant,” for purposes of this rule, means any emissions rate or any net emissions increase associated with a major stationary source or major modification, which would construct within ten kilometers of a Class I area, and have an impact on such area equal to or greater than 1 ug/m³ (24-hour average).

ITEM 7. Amend subrule **33.3(1)** to add the definition of carbon dioxide equivalent” or “CO₂e,” and to add the definition of “greenhouse gas” or “GHG” as follows:

“*Carbon dioxide equivalent*” or “*CO₂e*” means a metric used to compare the emissions from various greenhouse gases (GHG) based upon their global warming potential (GWP). The CO₂e for a gas is determined by multiplying the mass of the gas by the associated GWP. The applicable GWPs and guidance on how to calculate a source’s GHG emissions in tons per year CO₂e can be found in EPA’s “Inventory of U.S. Greenhouse Gas Emissions and Sinks,” which is updated annually under existing commitment under the United Nations Framework Convention on Climate Change (UNFCCC).

“*Greenhouse gas*” or “*GHG*” means carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆).

Date

Richard A. Leopold, Director