## Clearinghouse Rule 10-144

Report to
Legislative Council Rules Clearinghouse
NR 400, 405, and 407, Wis. Adm. Code
Natural Resources Board Order No. AM-17-10

### Wisconsin Statutory Authority

Sections 227.11 (2) (a), 227.14 (1m) (b), 285.11 (1) and (16), Stats., interpreting ss. 227.11(2)(a), 227.14(1m)(b), 285.11(1) and (16), and 285.60, Stats. The State Implementation Plan developed under s. 285.11(6), Stats., is revised.

Federal Authority

None

Court Decisions Directly Relevant

None

Analysis of the Rule - Rule Effect - Reason for the Rule

Reason for and Effect of Rule

The series of events leading to this proposal began with an April, 2007 Supreme Court decision. In *Massachusetts v. EPA*, 549 US 497, the Supreme Court found that greenhouse gases (GHG) are air pollutants covered by the Clean Air Act and directed the U.S. Environmental Protection Agency (EPA) to make a finding as to whether emissions of these gases from new motor vehicles cause or contribute to air pollution which may be reasonably anticipated to endanger public health or welfare. On December 7, 2009 EPA made their official finding, referred to as the "endangerment finding" establishing the prerequisite to regulating GHG emissions from motor vehicles. Subsequent to this finding, the EPA and the U.S. Department of Transportation finalized regulations on April 1, 2010 establishing standards for GHG emissions from new light duty motor vehicles, starting with model year 2012. (Additional information on the endangerment finding and motor vehicle regulation can be found at: http://www.epa.gov/climatechange/endangerment.html &

http://www.epa.gov/oms/climate/regulations.htm). The combined effect of the Supreme Court decision and the finalized motor vehicle rule adds GHG to the list of pollutants that are regulated under the Clean Air Act. This in turn subjects stationary sources (e.g., electric utilities, factories, small business, etc.) to the prevention of significant deterioration (PSD) & Title V permitting programs if their GHG emissions exceed established threshold amounts.

Prior to the series of federal actions described above, the Title V program applied to sources that emit or have the potential to emit 100 tons per year of criteria pollutants, while the PSD program applied to sources in certain categories at a 100 tons per year level and to other sources at a 250 tons per year level. Sources regulated under the PSD program also had thresholds that established what was a significant

increase in emissions for new projects at the source that would trigger a review of control requirements. These significant increase thresholds for pollutants previously regulated under PSD ranged from 1200 pounds per year (lead) to 100 tons per year (carbon monoxide). No significance level for GHG previously existed under the PSD program.

EPA recognized it as unrealistic to apply these thresholds to sources of GHG for two primary reasons. First, carbon dioxide, a prevalent GHG, is emitted in amounts that are orders of magnitude higher than pollutants such as particulate matter and sulfur dioxide. Applying these thresholds to sources of carbon dioxide emissions would bring literally hundreds of thousands, maybe millions, of sources into the PSD program nationwide forcing state agencies to process permits in numbers that far exceed what their current administrative resources could accommodate. Second, the combined emissions from the vast majority of these sources make up a small percentage of the total. Regulating these sources under programs designed to control emissions from sources such as electric utilities, large manufactures and foundries would be highly ineffective and result in little or no environmental benefit.

In order to prevent this from happening, EPA issued on June 3, 2010, a regulation known as the GHG Tailoring Rule. This rule establishes a GHG emission applicability threshold for the PSD and Title V programs at 100,000 tons per year and establishes a threshold for what will be considered a significant increase in GHG emissions at 75,000 tons per year. In addition, this regulation phases in PSD and Title V requirements in two steps.

However, under current state statutes and administrative code, Wisconsin sources will be unaffected by this federal rule, and will still become subject to permit and emission control requirements for GHG on January 2, 2011. The proposed administrative code revisions are necessary to provide Wisconsin sources with the relief intended in the federal tailoring rule. To remedy this, an emergency order has been promulgated to prevent the unintended aplicability of the Title V and PSD program to small sources of GHG emissions in Wisconsin in the short term, and this identical permanent order has been proposed for long term consistency with the federal tailoring rule.

### Summary of the Rules

The rule proposes to:

- Define greenhouse gases as the six pollutants listed in the endangerment finding (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride);
- Define how to calculate a carbon dioxide equivalency for the six pollutants;
- Define a major source of GHG emissions at 100,000 tons per year on a carbon dioxide equivalent basis;
- Define a significance level for PSD permitting at 75,000 tons per year on a carbon dioxide equivalent basis;
- Establish a two step phased-in implementation schedule;
- Define an inclusion level for emission sources that will be included in a Title V permit; and
- Establish the global warming potential for the greenhouse gases being regulated.

The first five bullets summarize requirements identical to federal regulations. The last two however are not explicitly established in the federal tailoring regulation and warrant further explanation.

Defining an inclusion level for emission sources that will be covered by a Title V permit. It is necessary to propose an inclusion level for smaller GHG emitting units at sources subject to Title V permitting requirements as it is the sum of GHG emissions from these smaller sources that are compared to the major source threshold being proposed. Existing inclusion levels in Wisconsin's Title V rules for

other pollutants are generally set at 10 percent of a significance level applicable to the pollutant of concern. With the exception of nitrous oxides, this order proposes to establish the inclusion level for the other greenhouse gases at 10 percent of the PSD major source threshold, or 10,000 tons of carbon dioxide equivalent emissions.

An inclusion level for nitrous oxide already exists in Wisconsin's Title V rules, as it is regulated in Wisconsin as a hazardous air contaminant. The current level is lower than what would be established under this order so there is no need to revise it for greenhouse gas regulation.

Establishing the global warming potential for the greenhouse gases being regulated. It is necessary to propose the global warming potential (GWP) for the greenhouse gases being regulated as it is an essential component of how the carbon dioxide equivalency is calculated which in turn determines whether or not a source is subject to regulation. In the federal tailoring rule, EPA applies the GWP values from the Mandatory Greenhouse Gas Reporting rule, by reference to Table A-1 to Subpart A of 40 CFR Part 98, in its definition of carbon dioxide equivalency, omitting the specific GWP values themselves. This order proposes to establish GWP values directly in the rule, using the same EPA values in Table A-1 to 40 CFR Subpart 98. (See Table B in Section 4 - 405.07(9) of the proposed order and rule)

### Agency Procedures for Promulgation

Public hearings, Natural Resources Board final adoption, followed by legislative review.

Description of any Forms (attach copies if available)

None

### Name and Telephone Number of Agency Contacts

Andrew Stewart Bureau of Air Management – 266-6876 Robert Eckdale, Bureau of Air Management – 266-2856 Margaret Hoefer, Bureau of Legal Services – 266-7588

Submitted on December 10, 2010

# ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD AMENDING AND CREATING RULES

The Wisconsin Natural Resources Board proposes an order to **amend** 407.02 (4) (b) (intro.), and Table 3 in 407.05 (5) and to **create** NR 400.02 (74m), 400.03 (3) (om), and (4) (go) and (ki), 405.02 (28m), 405.07 (9), 407.02 (8m) and 407.075 relating to major source permitting thresholds for sources of greenhouse gas emissions and affecting small business.

### AM-17-10

### Analysis Prepared by the Department of Natural Resources

- 1. Statute interpreted: Sections 227.11(2)(a), 227.14(1m)(b), 285.11(1) and (16), and 285.60, Stats. The State Implementation Plan developed under s. 285.11(6), Stats., is revised.
- 2. Statutory authority: Sections 227.11 (2) (a), 227.14 (1m) (b), 285.11 (1) and (16), Stats.
- 3. Explanation of agency authority: Section 227.11(2)(a), Stats., gives state agencies general rulemaking authority. Section 227.14(1m)(b), Stats., allows the Department to use the format of federal regulations in preparing a proposed rule if it determines that all or part of a state environmental regulatory program is to be administered according to standards, requirements or methods which are similar to standards, requirements or methods specified for all or part of a federal environmental program. Section 285.11(1), Stats., gives the Department authority to promulgate rules consistent with ch. 285, Stats. Section 285.11(16), Stats., requires the Department to promulgate rules that specify the amounts of emissions that result in a stationary source being classified as a major source. This section requires the rules to be consistent with but no more restrictive than the federal Clean Air Act.

#### 4. Related statute or rule: None

**5. Plain language analysis:** On April 1, 2010, US EPA promulgated the first standard for regulating motor vehicle gases contributing to climate change, i.e., greenhouse gases or GHG. Because of the way the Clean Air Act (CAA) is structured, once GHG emissions from motor vehicles are subject to regulation, stationary sources become regulated for these gases. Without further action by EPA, this standard has the unintended affect of subjecting literally tens of thousands of sources across the country to some of the most complex air permit and emission control regulations. In order to mitigate this unintended effect, EPA promulgated on June 3, 2010 (75 FR 31514), an additional "tailoring" rule that limits the number of sources subject to the permit and emission control regulations.

Under current state statutes and administrative code, Wisconsin sources will become subject to permit and emission control requirements on January 2, 2010. However, Wisconsin sources will not benefit from the tailoring rule limiting applicability under air permit and emission control regulations until revisions can be made to Wisconsin administrative code. This order proposes to revise the administrative code to make it consistent with the new federal rule.

Specifically, this proposal will define the greenhouse gases subject to regulation, establish greenhouse gas emission thresholds, that if exceeded, will trigger permitting and emission control requirements, and establish global warming potential factors which are used to calculate individual greenhouse gas emissions on an equivalent and comparable basis.

# 6. Summary of, and comparison with, existing or proposed federal regulation:

U.S. EPA promulgated rules in 40 CFR parts 51 and 70 as revised on June 3, 2010 (75 FR 31514) to relieve overwhelming permitting burdens that would, in the absence of these rule, fall on permitting authorities and sources. They accomplished this by tailoring the applicability criteria that determine which GHG emission sources become subject to the PSD and Title V programs of the CAA. In particular, EPA established with this rulemaking a phase-in approach for PSD and Title V applicability, and established the first two steps of the phase-in for the largest emitters of GHG.

Under these federal rules, the first step, which will begin on January 2, 2011, PSD or Title V requirements will apply to sources' GHG emissions only if the sources are subject to PSD or Title V anyway due to their non-GHG pollutants. Therefore, EPA will not require source owners or operators to evaluate whether they are subject to PSD or Title V requirements solely on account of their GHG emissions. Specifically, for PSD, Step 1 requires that as of January 2, 2011, the applicable requirements of PSD, most notably, the best available control technology (BACT) requirement, will apply to projects that increase net GHG emissions by at least 75,000 tpy carbon dioxide equivalent emissions, but only if the project also significantly increases emissions of at least one non-GHG pollutant. For the Title V program, only owners or operators of existing sources with, or new sources obtaining, Title V permits for non-GHG pollutants will be required to address GHG during this first step.

The second step of the federal rules, beginning on July 1, 2011, will phase in additional large sources of GHG emissions. New sources as well as existing sources not already subject to Title V that emit, or have the potential to emit, at least 100,000 tpy carbon dioxide equivalent emissions will become subject to the PSD and Title V requirements. In addition, sources that emit or have the potential to emit at least 100,000 tpy carbon dioxide equivalent emissions and that undertake a modification that increases net emissions of GHG by at least 75,000 tpy carbon dioxide equivalent emissions will also be subject to PSD requirements.

An important provision of these federal rules is that PSD and Title V permitting is only triggered when both the appropriate traditional mass-based applicability threshold, i.e., 100 tpy or 250 tpy, and the GHG carbon dioxide equivalent emission threshold are exceeded.

U.S. EPA also makes certain commitments to conduct studies related to potential regulatory burdens which could result from lowering the applicability threshold from what is contained in the current rule. Except for these federal commitments, the rules proposed here are consistent with the federal rules.

- 7. Comparison with similar rules in adjacent states (Illinois, Iowa, Michigan, and Minnesota): The states of Illinois and Minnesota are US EPA delegated states so they do not need to amend their state rules to implement the provision of the federal tailoring rule. Michigan and Iowa are SIP approved states like Wisconsin, so they will need to implement rules similar to what are being proposed here in order to modify their permit program and implement the provisions of the federal rule.
- 8. Summary of factual data and analytical methodologies used and how any related findings support the regulatory approach chosen: The proposed rule is based on the federal rule changes.

Information on the federal rule changes can be obtained from federal registers published on October 27, 2009 (74 FR 55292), October 30, 2009 (74 FR 56260), and June 3, 2010 (75 FR 31514).

- 9. Analysis and supporting documents used to determine the effect on small business or in preparation of an economic impact report: The Department did not conduct an independent analysis of the effect on small business, but is relying on the analysis performed by the US EPA. This analysis can be found in US EPA's rule docket for Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule; Proposed Rule [EPA-HQ-OAR-2009-0517; FRL-8966-7], October 27, 2009 (74 FR 55292).
- **10.** Effect on small business: This proposal will prevent unintended impacts to small businesses resulting from promulgation by U.S. EPA of emission standards for GHG, by limiting the number that may become subject to the Title V and PSD permitting programs.
- 11. Agency contact person: Andrew Stewart, 608-266-6876, andrew.stewart@wisconsin.gov
- 12. Place where comments are to be submitted and deadline for submission:

A public hearing has been scheduled for:

<u>Date and Time</u>

<u>Location</u>

Friday, January 21, 2011 at 10:00 AM

Natural Resources State Office Building Room G09 101 S Webster Street Madison, WI

Comments on the proposed rule must be submitted on or before **Friday, January 28, 2011**. Written comments may be submitted at the public hearing, by U.S. mail, fax, email, or through the Internet, and will have the same weight and effect as oral statements presented at the public hearing. Written comments and any questions on the proposed rule should be submitted to:

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E-mail: Andrew.Stewart@wisconsin.gov

Internet: Use the Administrative Rules System Web site accessible through the link provided on the Proposed Air Pollution Control Rules Calendar at http://dnr.wi.gov/air/rules/calendar.htm .

SECTION 1. NR 400.02 (74m) is created to read:

NR 400.02 (74m) "Greenhouse gases" or "GHG" means an air pollutant that is the aggregate of carbon dioxide ( $CO_2$ ), methane ( $CH_4$ ), nitrous oxide ( $N_2O$ ), sulfur hexafluoride ( $SF_6$ ), hydrofluorocarbons

(HFCs), and perfluorocarbons (PFCs).

SECTION 2. NR 400.03(3) (om) and (4) (go) and (ki) are created to read:

NR 400.03 (3) (om) " $SF_6$ " – sulfur hexafluoride

- (4) (go) "GHG" greenhouse gases
- (ki) "PFC" perfluorocarbon

SECTION 3. NR 405.02 (28m) is created to read:

NR 405.02 (28m) "Subject to regulation under the Act" means, for any air contaminant, that the contaminant is subject to either a provision of the Act, or a nationally applicable regulation codified by the administrator in title 40, Chapter I, subchapter C of the CFR, that requires actual control of the quantity of air emissions of the contaminant, and that the control requirement has taken effect and is operative to control, limit, or restrict the quantity of emissions of the contaminant released from the regulated activity.

SECTION 4. NR 405.07 (9) is created to read:

NR 405.07 (9) (a) Emissions of greenhouse gases at a stationary source shall only be subject to regulation under the Act as follows:

- 1. Beginning January 2, 2011, if the stationary source is any of the following:
- a. A new major stationary source for a regulated NSR contaminant other than GHG, which will emit or will have the potential to emit 75,000 tpy or more of GHG on a carbon dioxide equivalent basis.

b. An existing major stationary source for a regulated NSR contaminant other than GHG, which will have an emissions increase of a regulated NSR contaminant other than GHG, and an emissions increase of 75,000 tpy or more of GHG on a carbon dioxide equivalent basis.

- 2. Beginning July 1, 2011, in addition to the provisions in par. (a), if the stationary source is any of the following:
- a. A new stationary source that will emit or have the potential to emit 100,000 tpy or more of GHG on a carbon dioxide equivalent basis.

b. An existing stationary source that emits or has the potential to emit 100,000 tpy or more of GHG on a carbon dioxide equivalent basis, and the source undertakes a physical change or change in the method of operation that will result in an emissions increase of 75,000 tpy or more of GHG on a carbon dioxide equivalent basis.

**Note**: The Department intends to regulate GHG consistent with the 40 CFR 51.166 (June 3, 2010). In the event of litigation or congressional action which impacts the federal regulations, the Department will commence rulemaking to remain consistent with the resulting federal regulations.

(b) For purposes of this subsection, emissions of GHG on a carbon dioxide equivalent basis shall be determined by multiplying the mass amount of emissions, in tons per year, for each of the constituent gases in the pollutant GHG by the associated global warming potential for the gas in Table B, and then summing the products obtained.

Table B
Global Warming Potentials (GWP)

|    | Greenhouse Gas | Chemical                                       | Chemical Formula | GWP          |
|----|----------------|--|------------------|--------------|
|    | <b>(a)</b>     | Abstract Service<br>Number <sup>1</sup><br>(b) | (c)              | ( <b>d</b> ) |
| 1. | Carbon dioxide | 124-38-9                                       | $CO_2$           | 1            |
| 2. | Methane        | 74-82-8  | CH <sub>4</sub>  | 21           |

Table B
Global Warming Potentials (GWP)

|          | Greenhouse Gas                        | Chemical            | Chemical Formula   | GWP              |
|----------|---------------------------------------|---------------------|--|------------------|
|          |                                       | Abstract Service    |  | ( <del>-</del> ) |
|          | (a)                                   | Number <sup>1</sup> | (c)  | <b>(d)</b>       |
| 3.       | Nitrous oxide                         | (b)<br>10024-97-2   | N <sub>2</sub> O   | 310              |
| 4.       | HFC-23                                | 75-46-7             | <del>-</del>   | 11,700           |
| 5.       | HFC-32                                | 75-10-5             | CHF <sub>3</sub> CH <sub>2</sub> F <sub>2</sub>                                    | 650              |
| 6.       | HFC-41                                | 593-53-3            |  | 150              |
|          | HFC-125                               | 354-33-6            | CH₃F   | 2,800            |
| 7.<br>8. |                                       | 359-35-3            | C <sub>2</sub> HF <sub>5</sub>   |                  |
|          | HFC-134                               | 811-97-2            | CH FCF   | 1,000            |
| 9.       | HFC-134a                              |                     | CH <sub>2</sub> FCF <sub>3</sub>   | 1,300            |
| 10.      | HFC-143                               | 430-66-0            | $C_2H_3F_3$  | 300              |
| 11.      | HFC-143a                              | 420-46-2            | CH FCH F   | 3,800            |
| 12.      | HFC-152                               | 624-72-6            | CH <sub>2</sub> FCH <sub>2</sub> F   | 53               |
| 13.      | HFC-152a                              | 75-37-6             | CH <sub>3</sub> CHF <sub>2</sub>   | 140              |
| 14.      | HFC-161                               | 353-36-6            | CH <sub>3</sub> CH <sub>2</sub> F  | 12               |
| 15.      | HFC-227ea                             | 431-89-0            | C <sub>3</sub> HF <sub>7</sub>   | 2,900            |
| 16.      | HFC-236cb                             | 677-56-5            | CH <sub>2</sub> FCF <sub>2</sub> CF <sub>3</sub>                                   | 1,340            |
| 17.      | HFC-236ea                             | 431-63-0            | CHF <sub>2</sub> CHFCF <sub>3</sub>  | 1,370            |
| 18.      | HFC-236fa                             | 690-39-1            | $C_3H_2F_6$  | 6,300            |
| 19.      | HFC-245ca                             | 679-86-7            | C <sub>3</sub> H <sub>3</sub> F <sub>5</sub>                                       | 560              |
| 20.      | HFC-245fa                             | 460-73-1            | CHF <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>                                   | 1,030            |
| 21.      | HFC-365mfc                            | 406-58-6            | CH <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> CF <sub>3</sub>                    | 794              |
| 22.      | HFC-43-10mee                          | 138495-42-8         | CF <sub>3</sub> CFHCFHCF <sub>2</sub> CF <sub>3</sub>                              | 1,300            |
| 23.      | Sulfur hexafluoride                   | 2551-62-4           | SF <sub>6</sub>  | 23,900           |
| 24.      | Trifluoromethyl sulphur pentafluoride | 373-80-8            | SF <sub>5</sub> CF <sub>3</sub>  | 17,700           |
| 25.      | Nitrogen trifluoride                  | 7783-54-2           | NF <sub>3</sub>  | 17,200           |
| 26.      | PFC-14 (Perfluoromethane)             | 75-73-0             | CF <sub>4</sub>  | 6,500            |
| 27.      | PFC-116 (Perfluoroethane)             | 76-16-4             | $C_2F_6$   | 9,200            |
| 28.      | PFC-218 (Perfluoropropane)            | 76-19-7             | $C_3F_8$   | 7,000            |
| 29.      | Perfluorocyclopropane                 | 931-91-9            | C-C <sub>3</sub> F <sub>6</sub>  | 17,340           |
| 30.      | PFC-3-1-10 (Perfluorobutane)          | 355-25-9            | $C_4F_{10}$  | 7,000            |
| 31.      | Perfluorocyclobutane                  | 115-25-3            | $C-C_4F_8$   | 8,700            |
| 32.      | PFC-4-1-12 (Perfluoropentane)         | 678-26-2            | $C_5F_{12}$  | 7,500            |
| 33.      | PFC-5-1-14 (Perfluorohexane)          | 355-42-0            | $C_6F_{14}$  | 7,400            |
| 34.      | PFC-9-1-18                            | 306-94-5            | $C_{10}F_{18}$   | 7,500            |
| 35.      | HCFE-235da2 (Isoflurane)              | 26675-46-7          | CHF <sub>2</sub> OCHClCF <sub>3</sub>  | 350              |
| 36.      | HFE-43-10pccc (H-Galden               | E1730133            | CHF <sub>2</sub> OCF <sub>2</sub> OC <sub>2</sub> F <sub>4</sub> OCHF <sub>2</sub> | 1,870            |
|          | 1040x)                                |                     | · =  |                  |

Table B
Global Warming Potentials (GWP)

|     |                                |                     |   | GWP        |
|-----|--------------------------------|---------------------|---|------------|
|     |                                | Abstract Service    |   |            |
|     | (a)                            | Number <sup>1</sup> | (c)   | <b>(d)</b> |
|     |                                | (b)                 |   |            |
| 37. | HFE-125                        | 3822-68-2           | CHF <sub>2</sub> OCF <sub>3</sub>                                   | 14,900     |
| 38. | HFE-134                        | 1691–17–4           | CHF <sub>2</sub> OCHF <sub>2</sub>                                  | 6,320      |
| 39. | HFE-143a                       | 421–14–7            | CH <sub>3</sub> OCF <sub>3</sub>                                    | 756        |
| 40. | HFE-227ea                      | 2356-62-9           | CF <sub>3</sub> CHFOCF <sub>3</sub>                                 | 1,540      |
| 41. | HFE-236ca12 (HG-10)            | 78522-47-1          | CHF <sub>2</sub> OCF <sub>2</sub> OCHF <sub>2</sub>                 | 2,800      |
| 42. | HFE-236ea2 (Desflurane)        | 57041-67-5          | CHF <sub>2</sub> OCHFCF <sub>3</sub>                                | 989        |
| 43. | HFE-236fa                      | 20193-67-3          | CF <sub>3</sub> CH <sub>2</sub> OCF <sub>3</sub>                    | 487        |
| 44. | HFE-245cb2                     | 22410-44-2          | CH <sub>3</sub> OCF <sub>2</sub> CF <sub>3</sub>                    | 708        |
| 45. | HFE-245fa1                     | 84011-15-4          | CHF <sub>2</sub> CH <sub>2</sub> OCF <sub>3</sub>                   | 286        |
| 46. | HFE-245fa2                     | 1885-48-9           | CHF <sub>2</sub> OCH <sub>2</sub> CF <sub>3</sub>                   | 659        |
| 47. | HFE-254cb2                     | 425-88-7            | CH <sub>3</sub> OCF <sub>2</sub> CHF <sub>2</sub>                   | 359        |
| 48. | HFE-263fb2                     | 460-43-5            | CF <sub>3</sub> CH <sub>2</sub> OCH <sub>3</sub>                    | 11         |
| 49. | HFE-329mcc2                    | 67490-36-2          | CF <sub>3</sub> CF <sub>2</sub> OCF <sub>2</sub> CHF <sub>2</sub>   | 919        |
| 50. | HFE-338mcf2                    | 156053-88-2         | CF <sub>3</sub> CF <sub>2</sub> OCH <sub>2</sub> CF <sub>3</sub>    | 552        |
| 51  | HFE-338pcc13 (HG-01)           | 188690-78-0         | CHF <sub>2</sub> OCF <sub>2</sub> CF <sub>2</sub> OCHF <sub>2</sub> | 1,500      |
| 52. | HFE-347mcc3                    | 28523-86-6          | CH <sub>3</sub> OCF <sub>2</sub> CF <sub>2</sub> CF <sub>3</sub>    | 575        |
| 53. | HFE-347mcf2                    | E1730135            | CF <sub>3</sub> CF <sub>2</sub> OCH <sub>2</sub> CHF <sub>2</sub>   | 374        |
| 54. | HFE-347pcf2                    | 406-78-0            | CHF <sub>2</sub> CF <sub>2</sub> OCH <sub>2</sub> CF <sub>3</sub>   | 580        |
| 55. | HFE-356mec3                    | 382-34-3            | CH <sub>3</sub> OCF <sub>2</sub> CHFCF <sub>3</sub>                 | 101        |
| 56. | HFE-356pcc3                    | 160620-20-2         | CH <sub>3</sub> OCF <sub>2</sub> CF <sub>2</sub> CHF <sub>2</sub>   | 110        |
| 57. | HFE-356pcf2                    | E1730137            | CHF <sub>2</sub> CH <sub>2</sub> OCF <sub>2</sub> CHF <sub>2</sub>  | 265        |
| 58. | HFE-356pcf3                    | 35042-99-0          | CHF <sub>2</sub> OCH <sub>2</sub> CF <sub>2</sub> CHF <sub>2</sub>  | 502        |
| 59. | HFE-365mcf3                    | 378-16-5            | CF <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> OCH <sub>3</sub>    | 11         |
| 60. | HFE-374pc2                     | 512-51-6            | CH <sub>3</sub> CH <sub>2</sub> OCF <sub>2</sub> CHF <sub>2</sub>   | 557        |
| 61. | HFE-449sl (HFE-7100)           | 163702-07-6         | C <sub>4</sub> F <sub>9</sub> OCH <sub>3</sub>                      | 297        |
|     | Chemical blend                 | 163702-08-7         | (CF <sub>3</sub> ) <sub>2</sub> CFCF <sub>2</sub> OCH <sub>3</sub>  |            |
| 62. | HFE-569sf2 (HFE-7200)          | 163702-05-4         | $C_4F_9OC_2H_5$   | 59         |
|     | Chemical blend                 | 163702-06-5         | $(CF_3)_2CFCF_2OC_2H_5$   |            |
| 63. | Sevoflurane                    | 28523-86-6          | CH <sub>2</sub> FOCH(CF <sub>3</sub> ) <sub>2</sub>                 | 345        |
| 64. | HFE-356mm1                     | 13171-18-1          | (CF <sub>3</sub> ) <sub>2</sub> CHOCH <sub>3</sub>                  | 27         |
| 65. | HFE-338mmz1                    | 26103-08-2          | CHF <sub>2</sub> OCH(CF <sub>3</sub> ) <sub>2</sub>                 | 380        |
| 66. | (Octafluorotetramethylene)     | NA                  | X-(CF <sub>2</sub> ) <sub>4</sub> CH(OH)-X                          | 73         |
|     | hydroxymethyl group            |                     |   |            |
| 67. | HFE-347mmy1                    | 22052-84-2          | CH <sub>3</sub> OCF(CF <sub>3</sub> ) <sub>2</sub>                  | 343        |
| 68. | Bis (trifluoromethyl)-methanol | 920-66-1            | (CF <sub>3</sub> ) <sub>2</sub> CHOH                                | 195        |
| 69. | 2,2,3,3,3-pentafluoropropanol  | 422-05-9            | CF <sub>3</sub> CF <sub>2</sub> CH <sub>2</sub> OH                  | 42         |

Table B
Global Warming Potentials (GWP)

| _   |                | O  | ` '  |        |
|-----|----------------|--|--|--------|
|     | Greenhouse Gas | Chemical                                       | Chemical Formula   | GWP    |
|     | (a)            | Abstract Service<br>Number <sup>1</sup><br>(b) | (c)  | (d)    |
|     |                | (D)  |  |        |
| 70. | PFPMIE         | NA   | CF <sub>3</sub> OCF(CF <sub>3</sub> )CF <sub>2</sub> OCF <sub>2</sub> OCF <sub>3</sub> | 10.300 |

<sup>&</sup>lt;sup>1</sup> The Chemical Abstract Service or CAS numbers refer to the unique chemical abstracts service registry number assigned to a specific chemical, isomer or mixture of chemicals or isomers and recorded in the CAS chemical registry system by the Chemical Abstracts Service, PO Box 3012, Columbus OH 42310, phone: 1–614–447–3600.

Note: The GWPs in Table B are based upon the GWPs codified by the EPA at 40 CFR part 98, Subpart A, Table A-1, as of October 22, 2010.

SECTION 5. NR 407.02 (4) (b) (intro.) is amended to read:

NR 407.02 (4) (b) (intro.) A stationary source that directly emits, or has the potential to emit, 100 tpy or more of any air contaminant subject to regulation under the Act other than particulate matter emissions. For particulate matter emissions, a stationary source is a major source if it has emits, or has the potential to emit, 100 tpy of PM<sub>10</sub> emissions. The fugitive emissions of a stationary source may not be considered in determining whether it is a major source for the purposes of this definition, unless the source belongs to one of the following categories of stationary sources:

SECTION 6. NR 407.02 (8m) is created to read:

NR 407.02(8m) "Subject to regulation under the Act" has the meaning given in s. NR 405.02 (28m).

SECTION 7. A column heading in Table 3 of NR 407.05 is amended, a new table entry added in alphabetical order, and footnotes added to read:

NR 407.05 (5) Table 3

| Air Contaminant Name | Sources of<br>Regulation (See<br>Footnotes<br>Below) | Chemical  Abstract Service  Number <sup>7</sup> | Inclusion Level<br>(lbs/yr <u>unless</u><br>otherwise noted) |
|----------------------|--|---|--|
| Greenhouse gases     | 10   | *   | 10,000 tpy on a carbon dioxide                               |

<sup>&</sup>lt;sup>9</sup> Emissions of GHG on a carbon dioxide equivalent basis shall be determined according to s. NR 405.07 (9) (b).

SECTION 8. NR 407.075 is created to read:

NR 407.075 **Greenhouse gases**. Emissions of greenhouse gases at a stationary source shall only be subject to regulation under the Act if, on or after July 1, 2011, the source emits or has the potential to emit 100,000 tpy or more of GHG on a carbon dioxide equivalent basis. For purposes of this section, emissions of GHG on a carbon dioxide equivalent basis shall be determined according to s. NR 405.07 (9) (b).

SECTION 9. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22 (2) (intro.), Stats.

<sup>&</sup>lt;sup>10</sup>Federal greenhouse gases listed under 40 CFR Part 70.

| SECTION 10. BOARD ADOPTION. T | his rule was approved and adopted by the State of Wisconsin |
|-------------------------------|---|
| Natural Resources Board on    | ·   |
| Dated at Madison Wisconsin    |   |
| Dated at Wadison, Wisconsin   | ·   |
|                               | STATE OF WISCONSIN  |
|                               | DEPARTMENT OF NATURAL RESOURCES                             |
|                               | By  |
|                               | Matthew J. Frank, Secretary                                 |
| (SEAL)                        |   |