

**NATURAL RESOURCES BOARD AGENDA ITEM**

**SUBJECT:**

Request adoption of Board Order AM-20-08, proposed rules affecting NR 428 pertaining to modification of Reasonably Available Control Technology for NOx sources.

**FOR: APRIL 2009, BOARD MEETING**

**TO BE PRESENTED BY:** Larry Bruss, Regional Pollutant and Mobile Source Section Chief

**SUMMARY:**

The proposed rule revisions address US EPA concerns related to the NO<sub>x</sub> Reasonably Available Control Technology (RACT) requirements adopted by the Natural Resources Board into ch. NR 428 in April and May 2007. The proposed revisions also address implementation issues identified since the creation of ch. NR 428 in January 2001.

The Department is proposing to define the term "maximum theoretical emissions" (MTE) for use in identifying major sources subject to NOx RACT. Incorporating this revision is appropriate for three reasons:

- MTE was required in Wisconsin's VOC RACT rules in order to gain US EPA approval of those rules. The proposed rule change is therefore consistent with our existing RACT rules.
- The use of MTE to define sources subject to RACT is consistent with the original intent of the applicability threshold for NOx RACT in NR 428, and
- Incorporating the MTE definition will not affect which emissions units are subject to NOx RACT emission limitations.

The Department is also proposing revisions to ch. NR 428 to incorporate miscellaneous corrections, simplify rule requirements and address consistency and duplication of requirements between the adopted RACT program and previously existing requirements of NR 428. These proposed revisions do not change emission requirements nor the sources subject to NOx RACT emission limits.

The existing rules in ch. NR 428 apply to stationary sources in the ozone non-attainment counties of Kenosha, Manitowoc, Milwaukee, Ozaukee, Racine, Sheybogan, Washington, and Waukesha and affect electric utility generators and industrial combustion sources in those counties.

**RECOMMENDATION:** That the Board adopt Order AM-20-08.

**LIST OF ATTACHED MATERIALS:**

- No  Fiscal Estimate Required  
 No  Environmental Assessment or Impact Statement Required  
 No  Background Memo

- Yes  Attached  
 Yes  Attached  
 Yes  Attached

**APPROVED:**

\_\_\_\_\_/s/  
Bureau Director, John H. Melby, Jr

\_\_\_\_\_  
Date 3/25/09

\_\_\_\_\_/s/  
Administrator, Al Shea

\_\_\_\_\_  
Date 3/30/09

\_\_\_\_\_/s/  
Secretary, Matthew J. Frank

\_\_\_\_\_  
Date 4/09/09

cc: Laurie Ross - AD/8  
Department rules coordinator

John H Melby, Jr - AM/7  
R. Eckdale - AM/7 (2)

Tom Karman - AM/7  
Tom Steidl - LS/8

DATE: April 6, 2009 FILE REF: 4533

TO: Natural Resources Board

FROM: Matthew J. Frank

SUBJECT: Request adoption of Board Order AM-20-08, proposed rules affecting NR 428 pertaining to modification of Reasonably Available Control Technology for NO<sub>x</sub> sources.

### Introduction

In 2000, the Natural Resources Board adopted ch. NR 428, "Control of Nitrogen Compound Emissions" to meet rate of progress requirements in ozone non-attainment areas. These initial requirements consisted of new and existing stationary source NO<sub>x</sub> emission limitations. In April and May 2007, the Natural Resources Board adopted revisions to ch. NR 428, establishing NO<sub>x</sub> Reasonably Available Control Technology (RACT) emission limits for major sources in ozone non-attainment areas.

### Why are the rule revisions being proposed?

The RACT rules were submitted to US EPA for approval as part of Wisconsin's State Implementation Plan (SIP) for ozone control. EPA has raised concerns about the use of the term "potential to emit" (PTE) for purposes of identifying major sources subject to NO<sub>x</sub> RACT. The term PTE is not consistent with EPA's criteria for approving RACT rules, is not consistent with the state's VOC RACT rules, nor is it consistent with the NO<sub>x</sub> RACT rule's original intent. For these reasons, the Department is proposing to define and use the term "maximum theoretical emissions" (MTE) in determining major sources subject to NO<sub>x</sub> RACT requirements.

In addition, a number of non-substantive revisions are being proposed to address issues identified by the Department and affected sources during implementation of the rules in ch. NR 428.

### Summary of the rule revisions

#### Identification of Major Sources

The Clean Air Act requires a major source of NO<sub>x</sub> emissions in ozone non-attainment areas to be subject to RACT. The EPA criteria for identifying a major source for RACT purposes is based on the facility's potential emissions without considering controls (uncontrolled emissions) which are already in place for that pollutant<sup>1</sup>. The calculation of a facility's potential emissions may, however, consider certain conditions that restrict potential emissions, if those conditions are federally enforceable. In the 1990's, EPA specifically required Wisconsin to incorporate the uncontrolled emissions basis for identifying major sources subject to the state's VOC RACT rules prior to approving those rules into the state implementation plan for ozone non-attainment purposes<sup>2</sup>.

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<sup>1</sup> USEPA, May 1988; *Issues Relating to VOC Regulation, Cutpoints, Deficiencies, and Deviations*. Ozone/Carbon Monoxide Program Branch, Air Quality Management Division, Office of Air Quality Planning and Standards.

<sup>2</sup> Nash, August 1992; *Letter to the Department addressing VOC RACT Rule SIP Deficiencies*, Regulation Development Section Air Toxics and Radiation Branch, Region 5, US EPA, Chicago, Illinois.

The EPA's criteria for identifying major sources subject to VOC RACT also apply for purposes of NO<sub>x</sub> RACT. EPA has indicated the current NO<sub>x</sub> RACT rule's use of the term "potential to emit" in the applicability provision (s. NR 428.20) does not meet their approval criteria. Even though the Department has historically used uncontrolled emissions in determining which sources are subject to RACT requirements, the term PTE does not exclude consideration of control equipment in a manner consistent with EPA's SIP approval criteria. To address this issue, the Department is proposing to define the term "maximum theoretical emissions" (MTE) and use it in place of PTE in the NO<sub>x</sub> RACT applicability statement. This change will facilitate EPA's approval of the rule and the change will also eliminate confusion with the term PTE as defined and used in state air permitting rules. The application of the MTE concept is the same approach used in gaining the aforementioned EPA approval of state VOC rules.

The Department's analysis indicates that using the MTE definition in the applicability statement of the NO<sub>x</sub> RACT program will not result in any additional controls for emissions units.

#### Clarification and Implementation Issues

There are a number of revisions proposed in the rule package to address clarification and implementation issues which are consistent with the original intent of the rules. There are no changes proposed to the primary emission limitations or which affect those individual emissions units subject to emission requirements. These revisions include:

- The existing NO<sub>x</sub> RACT rule identifies electric utility owned units as those subject to the federal Clean Air Interstate Rule (CAIR). The proposed rule revision removes the reference to the CAIR and applies standard terminology to identify the appropriate emissions units.
- The existing NO<sub>x</sub> RACT rule allows sources to apply for an alternative emission limit or compliance schedule. The applications were due by May 1, 2008 but in some cases requirements are not effective until 2013. The rule revision allows additional time for sources to submit an application for an alternative emission limit or compliance schedule.
- The existing NO<sub>x</sub> RACT rule prohibits a source with an approved alternative emission limit or compliance schedule from participating in emissions averaging. The rule revision only prohibits participation in the emissions averaging program for purposes of demonstrating compliance with an alternative emission limit or compliance schedule.
- The new source NO<sub>x</sub> emission limits in s. NR 428.04 are applicable to existing units that undergo modification. The proposed revision modifies the existing rule to avoid triggering new source NO<sub>x</sub> limits when the modification is made solely to comply with existing NO<sub>x</sub> control requirements.
- The Department made several revisions to the proposed rule to allow certain sources to demonstrate compliance through periodic stack testing instead of more costly continuous emissions monitoring.
- A number of miscellaneous revisions are proposed to clarify monitoring requirements and deadlines.
- The NO<sub>x</sub> emission limits in s. NR 428.05 are intended to apply to sources existing prior to February 1, 2001 with no lapse in applicability unless the source, due to a major modification, becomes subject to the new source limits in s. NR 428.04. The applicability statement in s. NR 428.05(1) is being revised to remove the reference to "modified" sources to clarify this intent.
- The Department proposes to identify limited periods when the current form of the emission limitation for glass furnaces is not appropriate. During these periods the numerical emission limit

does not apply. Instead, the source is required to minimize NO<sub>x</sub> emissions.

### **How does this proposal affect existing policy?**

The proposed rule modifications do not alter the existing policy.

### **Hearing synopsis and response to public comment**

On December 5, 2008 the Department conducted a public hearing in Milwaukee, Wisconsin. Three persons appeared at the public hearing and one person commented on the rule. Written comments were received from Wisconsin Manufacturing and Commerce (WMC), two electric utilities, Legislative Council Rules Clearinghouse and the EPA. The Department has also been in discussion with Saint Gobain related to compliance demonstration requirements applicable to their glass manufacturing furnaces. The substantive comments and issues and associated Department responses are as follows:

#### Identification of Major Sources

Responses to specific issues raised by WMC are as follows:

*Comment-WMC:* The Wisconsin Manufacturers and Commerce (WMC) association provided comment related to incorporating the term "Maximum Theoretical Emissions" (MTE) in place of "Potential to Emit" (PTE) currently used in the NO<sub>x</sub> RACT applicability statement under s. NR 428.20. WMC states that the DNR is exceeding the requirements of the Clean Air Act in taking this action.

*Response:* No changes are being made to the initially proposed rule. These revisions are required to meet the Clean Air Act and EPA's criteria for identifying major sources subject to RACT in an ozone non-attainment area.

*Comment-WMC:* The Clean Air Act allows for consideration of pollutant controls when determining a source's potential to emit.

*Response:* The term potential to emit is not defined under the Clean Air Act, but rather it is the responsibility of the EPA to define the term in implementing each provision of the Clean Air Act. For purposes of establishing applicability of RACT, the EPA specifically requires that a source's potential emissions be determined on an uncontrolled basis<sup>3</sup>; i.e. theoretical potential emissions must discount the operation of control devices.

WMC cites 40 C.F.R. Sec. 52.21(b)(4) in identifying the case where the Clean Air Act and EPA allows for the consideration of controls in determining a major source subject to a RACT program. This reference is to EPA's definition of potential to emit as it applies to the Prevention of Significant Deterioration air permitting program and does not apply for purposes of determining applicability of RACT.

*WMC Comment:* DNR has offered no instances where EPA has articulated the position subscribed to them in this rulemaking.

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<sup>3</sup> USEPA, May 1988; *Issues Relating to VOC Regulation, Cutpoints, Deficiencies, and Deviations*. Ozone/Carbon Monoxide Program Branch, Air Quality Management Division, Office of Air Quality Planning and Standards.

*Response:* The EPA required the Department to identify major sources subject to the state's VOC RACT rules based on uncontrolled potential emissions. This position was directly communicated by the EPA in identifying deficiencies preventing approval of Wisconsin's VOC RACT rules to the state implementation plan.<sup>4</sup> The Department addressed this issue by incorporating an appropriate definition and use of the term "maximum theoretical emissions" (MTE). This requirement also applies to NO<sub>x</sub> RACT and therefore the same corrective action is proposed by this rule revision.

*WMC Comment:* There is no Clean Air Act requirement to incorporate the term or concept of "maximum theoretical emissions".

*Response:* The Clean Air Act requires major sources in ozone non-attainment areas to be subject to NO<sub>x</sub> RACT. There is no direct Clean Air Act requirement to use either "potential to emit" (PTE) or "maximum theoretical emissions" (MTE) in identifying a major source. Rather, as with the state's VOC RACT rules, the Department is appropriately defining and using the term "maximum theoretical emissions" consistent with EPA's criteria for identifying major sources subject to RACT. This approach is taken to eliminate confusion with the PTE term as defined and applicable to other air regulatory programs (e.g. air permits).

#### Clarification and Implementation Issues

*Electric Utilities Comment:* Wisconsin Power and Light and WE Energies provided comment supporting the proposed modifications which clarify the electric utility units subject to a phased emission limitation, which allow additional time to request an alternative requirement, and which streamline compliance demonstration requirements.

*Response:* No changes are being made to the initially proposed rule.

*Glass furnaces:* Saint Gobain is a container glass manufacturer in the ozone non-attainment area. The current emission limitation for glass furnaces expressed in pounds of NO<sub>x</sub> emitted per ton of produced glass is not appropriate for periods of maintenance and hot idling of oxygen-fired furnaces. During these periods the flow of glass from the furnace is minimized to levels necessary to maintain the equipment and process. Since emissions do not decrease in direct relationship to lower furnace production levels the source may have to keep glass production higher than necessary solely to generate a compliant emission rate.

*Response:* The Department agrees that the form of the emission limitation is not appropriate for the periods when glass production is below 25% of furnace glass production capacity. The Department revised the rule as follows: Below the 25% production threshold, owners of glass furnaces are required to monitor and minimize NO<sub>x</sub> emissions through combustion optimization techniques described in s. NR 439.096. This approach reduces NO<sub>x</sub> emissions to the lowest levels practical during periods of maintenance or furnace idling. The 25% threshold for describing glass furnace production is also used in California rules that are applicable in ozone non-attainment areas.

#### **Information on the environmental analysis**

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<sup>4</sup> Nash, August 1992; *Letter to the Department addressing VOC RACT Rule SIP Deficiencies*, Regulation Development Section Air Toxics and Radiation Branch, Region 5, US EPA, Chicago, Illinois.

The existing rules in ch. NR 428 were established to reduce NO<sub>x</sub> emissions in the ozone non-attainment counties in southeast Wisconsin. The development of these rule requirements did not require an environmental analysis. The revisions proposed do not alter the emission limits and controls evaluated in formulating the existing requirements, therefore there is no change in environmental impact or need for an environmental analysis for this rule package.

**Final regulatory and flexibility analysis**

The existing rule requirements apply to large industrial or electric generation sources. Based on the limited nature of the proposed changes to the existing rule, there is no impact anticipated to small businesses.

### Fiscal Estimate — 2008 Session

<input type="checkbox"/> Original  <input type="checkbox"/> Corrected	<input checked="" type="checkbox"/> Updated  <input type="checkbox"/> Supplemental	LRB Number  Bill Number	Amendment Number if Applicable  Administrative Rule Number NR 428
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**Subject**  
 Request for adoption of Board Order AM-20-08, proposed rules affecting ch. NR 428 pertaining to modification of the NOx RACT program

**Fiscal Effect**  
 State:  No State Fiscal Effect

Check columns below only if bill makes a direct appropriation or affects a sum sufficient appropriation.

<input type="checkbox"/> Increase Existing Appropriation <input type="checkbox"/> Decrease Existing Appropriation <input type="checkbox"/> Create New Appropriation	<input type="checkbox"/> Increase Existing Revenues <input type="checkbox"/> Decrease Existing Revenues <input type="checkbox"/> Decrease Costs
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Increase Costs — May be possible to absorb within agency's budget.  
 Yes     No

**Local:**  No Local Government Costs

1. <input type="checkbox"/> Increase Costs <input type="checkbox"/> Permissive <input type="checkbox"/> Mandatory  2. <input type="checkbox"/> Decrease Costs <input type="checkbox"/> Permissive <input type="checkbox"/> Mandatory	3. <input type="checkbox"/> Increase Revenues <input type="checkbox"/> Permissive <input type="checkbox"/> Mandatory  4. <input type="checkbox"/> Decrease Revenues <input type="checkbox"/> Permissive <input type="checkbox"/> Mandatory	5. Types of Local Governmental Units Affected: <input type="checkbox"/> Towns <input type="checkbox"/> Villages <input type="checkbox"/> Cities <input type="checkbox"/> Counties <input type="checkbox"/> Others <input type="checkbox"/> School Districts <input type="checkbox"/> WTCS Districts
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<b>Fund Sources Affected</b> <input type="checkbox"/> GPR <input type="checkbox"/> FED <input type="checkbox"/> PRO <input type="checkbox"/> PRS <input type="checkbox"/> SEG <input type="checkbox"/> SEG-S	<b>Affected Chapter 20 Appropriations</b>
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**Assumptions Used in Arriving at Fiscal Estimate**

This updated fiscal estimate reflects clarifications to the assumptions discussed here. There is no change to the anticipated fiscal impact compared to the original fiscal estimate for Order AM-20-08.

**Rule Summary:** The proposed revisions include a definition of the term "maximum theoretical emissions" for use in determining sources subject to the NOx RACT program. The substance of this proposed definition is consistent with the development of the emission limitation requirements of the NOx RACT rule currently in place. Incorporating this definition will not alter the emissions units subject to NOx emission limitations.

Other revisions proposed to ch. NR 428 affect corrections and address implementation issues. These revisions also do not change the affected units or intended emission reductions. One proposed revision, however, does address whether an emissions unit is subject to an existing or new source emission limitation under ch. NR 428. Currently, an emissions unit through installation of control equipment to meet a NOx emission limitation may trigger major modification levels and applicability of a more stringent new source NOx emission limitation. The ch. NR 428 rules established emission limitations by source category with no intent of triggering a more stringent emission limit in meeting the original applicable limit. Therefore, this specific modification is consistent with the original intent and emission reductions and cost evaluated in developing the currently adopted rules.

**Fiscal Estimate:** There is no anticipated fiscal impact from these rule revisions. Since the rule revisions proposed in Board Order AM-20-08 do not change the overall NOx emission requirements or the emissions units anticipated to be subject to emission limitations there is no change anticipated due to these rule revisions versus the original fiscal estimates supporting adoption of current ch. NR 428 requirements.

**Long-Range Fiscal Implications**

<b>Prepared By:</b>  Joseph Polasek	<b>Telephone No.</b>  266-2794	<b>Agency</b>  Department of Natural Resources
<b>Authorized Signature</b>	<b>Telephone No.</b>  266-2794	<b>Date (mm/dd/ccyy)</b>

**Fiscal Estimate Worksheet — 2008 Session**  
Detailed Estimate of Annual Fiscal Effect

Original       Updated  
 Corrected       Supplemental

LRB Number	Amendment Number if Applicable
Bill Number	Administrative Rule Number NR 428

**Subject**

Proposed rules modifications affecting ch. NR 428 to address USEPA's concerns relative to SIP approval with the adopted NOx RACT rule and to incorporate minor revisions.

One-time Costs or Revenue Impacts for State and/or Local Government (do not include in annualized fiscal effect):

Annualized Costs:		Annualized Fiscal Impact on State Funds from:	
A. State Costs by Category		Increased Costs	Decreased Costs
State Operations — Salaries and Fringes		\$	\$ -
(FTE Position Changes)		( FTE )	(- FTE )
State Operations — Other Costs			-
Local Assistance			-
Aids to Individuals or Organizations			-
<b>Total State Costs by Category</b>		\$	\$ -
B. State Costs by Source of Funds		Increased Costs	Decreased Costs
GPR		\$	\$ -
FED			-
PRO/PRS			-
SEG/SEG-S			-
State Revenues	Complete this only when proposal will increase or decrease state revenues (e.g., tax increase, decrease in license fee, etc.)	Increased Revenue	Decreased Revenue
GPR Taxes		\$	\$ -
GPR Earned			-
FED			-
PRO/PRS			-
SEG/SEG-S			-
<b>Total State Revenues</b>		\$	\$ -

**Net Annualized Fiscal Impact**

	<u>State</u>	<u>Local</u>
Net Change in Costs	\$ _____	\$ _____
Net Change in Revenues	\$ _____	\$ _____

Prepared By: Joe Polasek	Telephone No. 266-2794	Agency Department of Natural Resources
Authorized Signature	Telephone No. 266-2794	Date (mm/dd/ccyy)

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

The Wisconsin Natural Resources Board adopts an order to **renumber and amend** 428.22(1)(d); **amend** NR 428.04(1) and (3)(b), 428.05(1) and (4)(b)2., 428.07(intro.), (1)(a) and (b)1. and 3., (3) and (4)(c), 428.08(title) and (2)(title), 428.09(2)(a), 428.20(1), 428.22(2)(intro.), 428.23(1)(b)1., 428.24(1)(b)(intro.) and 428.25(1)(a)1.a. and c. and (3)(b); and to **create** NR 428.02(7e), 428.08(2)(f), 428.12, 428.22(1)(d)2., and 428.23(1)(b)9., relating to modification of existing rules for control of nitrogen oxide (NO<sub>x</sub>) emitted by stationary sources in the ozone nonattainment area in southeastern Wisconsin. The proposed revisions relate to issues for SIP approvability and miscellaneous implementation issues.

**AM-20-08**

**Analysis Prepared by the Department of Natural Resources**

**1. Statute interpreted:** s. 285.11(6), Stats. The State Implementation Plan developed under s. 285.11(6), Stats., is revised.

**2. Statutory authority:** s. 227.11(2)(a) and 285.11(1) and (6), Stats.

**3. Explanation of agency authority:** Section 227.11(2)(a), Stats., gives state agencies general rule-making authority. Section 285.11(1) Stats., gives the Department the authority to promulgate rules consistent with ch. 285, Stats. Section 285.11(6), Stats., authorizes the Department to develop and revise a state implementation plan for the prevention, abatement and control of air pollution.

**4. Related statute or rule:** The current provisions of ch. NR 428 establish nitrogen oxide (NO<sub>x</sub>) emission limits for new and existing facilities which are located in ozone non-attainment counties. The primary intent of these provisions is to fulfill Clean Air Act (CAA) requirements for demonstrating rate-of-progress towards attaining the 1-hour ozone standard and applying reasonably available control technology (RACT) to major sources of NO<sub>x</sub> emissions in counties designated as non-attainment under the 8-hour ozone standard. Modifications are proposed to existing portions of ch. NR 428.

**5. Plain language analysis:**

The proposed rule revisions address two areas: 1) incorporating the term and a definition of "maximum theoretical emissions" (MTE) in place of "potential to emit" (PTE) in order to adequately identify major sources and aid in federal approval of the NO<sub>x</sub> RACT program; and 2) revisions identified by the department and stakeholders which clarify and facilitate implementation of requirements within ch. NR 428.

**Identification of major sources**

The current NO<sub>x</sub> RACT rule's use of the term "potential to emit" in the applicability provision is not adequate to meet US EPA approval criteria since it allows consideration of control equipment. To address this issue, the proposed revision incorporates the use of "maximum theoretical emissions" (MTE) for identifying major sources subject to NO<sub>x</sub> RACT requirements.

**Clarification and Implementation Issues**

There are a number of non-substantive revisions proposed in the rule package to address clarification and implementation issues which are consistent with the original intent of the rules. There are no changes proposed to the emission limitations or which affect those individual emissions units subject to emission requirements. These revisions include:

- The proposed rule revision removes the reference to the federal Clean Air Interstate Rule (CAIR) and applies standard terms in identifying the appropriate units.
- The rule revision allows additional time for sources to submit an application for an alternative emission limit or compliance schedule.
- The proposed rule revision allows a source with an approved alternative RACT requirement to participate in emissions averaging for purposes of demonstrating compliance with the original RACT limitation or schedule.
- The proposed revision avoids triggering new source NO<sub>x</sub> limits when the modification is made solely to comply with existing NO<sub>x</sub> control requirements.
- Clarification and simplification of monitoring and reporting requirements.
- The applicability statement in s. NR 428.05(1) is being revised to remove the reference to "modified" sources.
- The Department proposes to identify limited periods when the current form of the emission limitation for glass furnaces is not appropriate. During these periods the numerical emission limit does not apply. Instead, the source is required to minimize NO<sub>x</sub> emissions through combustion optimization techniques described in s. NR 439.096.

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

The NO<sub>x</sub> emission requirements of NR 428 are in place to fulfill federal ozone requirements in non-attainment areas for demonstrating rate-of-progress towards meeting 1-hour ozone attainment and for implementing reasonably available control technology (RACT) for major sources of NO<sub>x</sub> emissions for the 8-hour ozone standard. Since there is no direct federal emission limitation for NO<sub>x</sub> RACT, states must meet these requirements through rule adoption and approval by the US EPA to the State Implementation Plan. Many states have NO<sub>x</sub> emission control requirements in place or are in the process of evaluating and developing necessary rules to meet federal ozone non-attainment requirements.

The US EPA regulates NO<sub>x</sub> emissions for similar sources and to similar control levels as those contained in ch. NR 428. These regulations include new source performance standards, new source review and prevention of significant deterioration requirements, federal engine standards, the Acid Rain program, the NO<sub>x</sub> State SIP Call and various source specific consent decrees.

#### **7. Comparison with similar rules in adjacent states (Illinois, Iowa, Michigan and Minnesota):**

The need for adjacent states to implement NO<sub>x</sub> emission control requirements varies based on ozone non-attainment designations in those states and the resulting applicable federal requirements. Illinois is in the process of developing NO<sub>x</sub> RACT rules. Michigan is evaluating their applicable federal requirements based on attainment status. Iowa and Minnesota currently do not have ozone non-attainment areas which trigger federal requirements for reductions of NO<sub>x</sub> emissions. As in the case of ch. NR 428, all rules developed by these states for ozone related purposes must undergo federal approval for inclusion into their State Implementation Plan.

#### **8. Summary of factual data and analytical methodologies used and how any related findings**

**support the regulatory approach chosen:**

Several proposed revisions are needed to address EPA's concern for approving the RACT rules into the State Implementation Plan. Other proposed revisions address implementation issues and the need for clarifications identified by the Department staff and stakeholders.

**9. Analysis and supporting documents used to determine the effect on small business or in preparation of an economic impact report:**

The existing rule requirements apply to large industrial or electric generation sources. Based on the limited nature of the proposed changes, there is no impact anticipated to small businesses.

**10. Agency contact person:**

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SECTION 1. NR 428.02(7e) is created to read:

NR 428.02(7e) "Maximum theoretical emissions" means the quantity of NO<sub>x</sub> emissions that theoretically could be emitted by a stationary source without consideration of control devices based on the design capacity or maximum production capacity of the source and 8,760 hours of operation per year.

When appropriate, and upon request by the source owner or operator, maximum theoretical emissions may be limited by the imposition of conditions in a federally enforceable permit. The conditions shall be used in place of design capacity or maximum production capacity in calculating the maximum theoretical emissions for the source and may include, among other things, the establishment of production limitations, capacity limitations, or limitations on the hours of operation of any emission source, or a combination of any limitations. Production or capacity limitations shall be established on the basis of no longer than one month and may allow for averaging for up to 12 consecutive months.

SECTION 2. NR 428.04(1) and (3)(b) are amended to read:

NR 428.04(1) APPLICABILITY. The requirements of this section apply to emissions units described in this section that are located in the county of Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha County and that are constructed or that undergo a major modification, as that term is described in ch. NR 405 or 408, after February 1, 2001. When determining whether an emissions unit undergoes a major modification for purposes of this section, any increase in CO emissions resulting from the operation of the emissions unit, or operation of NO<sub>x</sub> emissions control equipment for purposes of meeting state or federal NO<sub>x</sub> emission requirements, will not be considered in the emissions calculations.

(3)(b) *Specific requirements.* The owner or operator of each NO<sub>x</sub> emissions unit subject to the requirements of sub. (2) shall determine the ~~annual unit's~~ average NO<sub>x</sub> emission rate, ~~in pound per million Btu,~~ using methods and procedures specified in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04(21), or other ~~combustion~~ emissions monitoring methods approved by the department.

SECTION 3. NR 428.05(1) and (4)(b)2. are amended to read:

NR 428.05 (1) APPLICABILITY. The requirements of this section apply to emissions units described in this section that are located in the county of Kenosha, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha County and that were initially constructed ~~or last modified~~ on or before February 1, 2001.

(4)(b)2. The owner or operator of an emissions unit subject to any of the requirements of sub. (3)(b) to (e) shall determine the unit's average NO<sub>x</sub> emission rate, ~~in pounds per million Btu,~~ using methods and procedures specified in 40 CFR part 60, Appendix B, incorporated by reference in s. NR 484.04(21), or other ~~combustion~~ emissions monitoring methods approved by the department.

SECTION 4. NR 428.07(intro.), (1)(a) and (b)1. and 3., (3) and (4)(c) are amended to read:

NR 428.07 **General requirements.** (intro) The ~~Except as provided in s. NR 428.12, the~~ owner or

operator of an NO<sub>x</sub> emissions unit subject to the requirements of subch. I shall comply with the monitoring and reporting requirements of this subchapter.

(1)(a) ~~By the dates listed in sub. (2), the~~ The owner or operator of an NO<sub>x</sub> emissions unit shall submit to the department a monitoring plan that describes in detail the systems to be used on the unit to satisfy the monitoring requirements of this subchapter- by the following deadlines:

1. For an emissions unit subject to emission limitations in s. NR 428.05(3), by December 21, 2002.

2. For an emissions unit subject to emission limitations in s. NR 428.04(2), at least 180 days prior to initial operation.

(b)1. Install all monitoring systems required under ~~this subchapter~~ s. NR 428.08 for monitoring NO<sub>x</sub> ~~mass emissions~~. This includes all systems required to monitor NO<sub>x</sub> emission rate, NO<sub>x</sub> concentration, heat input and flow, in accordance with ~~s. NR ss. NR 428.08 and~~ NR 439.09.

3. Successfully complete all certification tests and meet all ~~other provisions~~ operating specifications of this subchapter and 40 CFR parts 60 and 75 as applicable to the monitoring systems required for an emissions unit under subds. 1. and 2.

(3) REPORTING DATA PRIOR TO INITIAL CERTIFICATION. The owner or operator of an NO<sub>x</sub> emissions unit under sub. (2)(b) or (c) shall determine, record and report NO<sub>x</sub> ~~mass emissions~~, heat input, if required for purposes of compliance, and any other values required to determine NO<sub>x</sub> ~~mass emissions~~, for example NO<sub>x</sub> emission rate and heat input or NO<sub>x</sub> concentration and stack flow, using the provisions of 40 CFR 75.70(g), from the date and hour that the unit starts operating until all required certification tests are successfully completed.

(4)(c) No owner or operator of an NO<sub>x</sub> emissions unit may disrupt the continuous emission monitoring system, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording NO<sub>x</sub> ~~mass emissions emitted~~, except for periods of recertification or periods when calibration, quality assurance testing or maintenance is performed in accordance with the

applicable provisions of this subchapter.

SECTION 5. NR 428.08(title) and (2)(title) are amended to read:

NR 428.08(title) **Specific provisions for monitoring NO<sub>x</sub> and heat input for the purpose of calculating NO<sub>x</sub> mass emissions.**

(2)(title) ~~NON-UTILITY~~ OTHER UNITS.

SECTION 6. NR 428.08(2)(f) is created to read:

NR 428.08(2)(f) An owner or operator of an emissions unit that installs and operates a continuous NO<sub>x</sub> emissions monitoring system according to the requirements of 40 CFR part 75 satisfies requirements of this subsection.

SECTION 7. NR 428.09(2)(a) is amended to read:

NR 428.09(2)(a) Meet all of the requirements of 40 CFR part 75 related to monitoring and reporting NO<sub>x</sub> mass emissions during the entire year and meet the reporting deadlines specified in sub. (1).

SECTION 8. NR 428.12 is created to read:

NR 428.12 **Alternative monitoring, recordkeeping and reporting.** (1) RACT EMISSIONS UNITS. The owner or operator of an NO<sub>x</sub> emissions unit that is also subject to an emission limitation in s. NR 428.22 may satisfy the NO<sub>x</sub> emissions monitoring and reporting requirements of this subchapter by meeting the applicable NO<sub>x</sub> emissions monitoring requirements in s. NR 428.23(1)(b) and (2) and the recordkeeping and reporting requirements in s. NR 428.24(1).

(2) NON-RACT EMISSIONS UNITS. The owner or operator of an NO<sub>x</sub> emissions unit subject to an emission limitation in s. NR 428.04(2) or 428.05(3) may satisfy the NO<sub>x</sub> emissions monitoring and reporting requirements of this subchapter by meeting, as applicable by source type, the NO<sub>x</sub> emissions monitoring requirements in s. NR 428.23(1)(b) and (2) and the recordkeeping and reporting requirements in s. NR 428.24(1).

SECTION 9. NR 428.20(1) is amended to read:

NR 428.20(1) APPLICABILITY. The requirements of this subchapter apply to the owner or operator of an NO<sub>x</sub> emissions unit which is in a source category identified in s. NR 428.22 and which is located at a facility with a combined total ~~potential to emit~~ maximum theoretical emissions for all NO<sub>x</sub> emissions units of 100 tons per year or more of NO<sub>x</sub> and which is in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha.

SECTION 10. NR 428.22(1)(d) is renumbered NR 428.22(1)(d)1., and as renumbered is amended to read:

NR 428.22(1)(d) *Glass furnaces*. 1. For a glass manufacturing furnace with a maximum heat input capacity equal to or greater than 50 mmBtu per hour, 2.0 pounds per ton of produced glass, except as provided in subd. 2.

SECTION 11. NR 428.22(1)(d)2. is created to read:

NR 428.22(1)(d)2. When, on a daily basis, a glass furnace is operated at less than 25% of glass production capacity, the owner or operator shall operate the furnace according to the combustion optimization requirements of s. NR 439.096 and shall meet the monitoring requirements of s. NR 428.05(2)(e).

SECTION 12. NR 428.22(2)(intro.) is amended to read:

NR 428.22(2) ELECTRIC UTILITY BOILER COMPLIANCE SCHEDULE. (intro.) The owner or operator of an electric utility boiler ~~subject to the provisions of 40 CFR part 97~~ shall demonstrate compliance with the following interim NO<sub>x</sub> emission limitations, as applicable, on a 30-day rolling average by May 1, 2009 and with the emission limitations in sub. (1)(a) on and after May 1, 2013:

SECTION 13. NR 428.23(1)(b)1. is amended to read:

NR 428.23(1)(b)1. 'Part 75 continuous emissions monitoring.' The owner or operator of an ~~affected unit as defined under s. NR 400.02(11), or an emissions unit subject to 40 CFR part 97~~ shall ~~monitor NO<sub>x</sub> emissions for requirements of this subsection by installing and operating monitoring equipment and measuring and recording NO<sub>x</sub> emissions data according to methods and specifications~~ electric utility boiler or combustion turbine that is subject to or becomes subject to the requirements of 40 CFR part 75 and 40 CFR part 75, Appendices A to I, incorporated by reference in s. NR 484.04(27), as required of an affected unit or an emissions unit subject to 40 CFR part 97 shall use those monitoring methods and specifications for monitoring NO<sub>x</sub> emissions for purposes of this subsection.

SECTION 14. NR 428.23(1)(b)9. is created to read:

NR 428.23(1)(b)9. 'Emissions monitoring preference.' a. The owner or operator of an emissions unit that installs and operates a continuous NO<sub>x</sub> emissions monitoring system according to the requirements of 40 CFR part 75 shall satisfy the applicable monitoring requirements of this section.

b. The owner or operator of an emissions unit that installs and operates a continuous NO<sub>x</sub> emissions monitoring system according to the requirements of 40 CFR part 60 shall satisfy the applicable monitoring requirements of subd. 3.

SECTION 15. NR 428.24(1)(b)(intro.) is amended to read:

NR 428.24(1)(b) *Reporting* (intro.) In the reports to the department required under s. NR 428.25(1), if applicable, or s. NR 439.03(1)(b), the owner or operator shall submit the following information:

SECTION 16. NR 428.25(1)(a)1.a. and c. and (3)(b) are amended to read:

NR 428.25(1)(a)1.a. The participation of an emissions unit in an emissions averaging program shall be designated for ~~a full~~ each calendar year. Individual emissions units may not be withdrawn from an averaging program, during a calendar year, unless each emissions unit in the averaging program meets its applicable emission limit in s. NR 428.22.

c. An emissions unit for which the department has approved an alternative emission limit or compliance schedule under sub. (3) may not participate in an emissions averaging program under this subsection for the purpose of demonstrating compliance with the approved alternative emission limitation or compliance schedule.

(3)(b) The owner or operator of the emissions unit shall submit the request with the demonstration for an alternative RACT requirement ~~by the later of May 1, 2008 or by May 1 following the calendar year in which an emissions unit first becomes subject to an emission limitation in s. NR 428.22.~~ by the following deadlines:

1. By May 1, 2008 for an emissions unit subject to a compliance date of May 1, 2009.
2. By May 1, 2011 for an emissions unit subject to a compliance date of May 1, 2013.
3. By May 1 of the year following the calendar year in which an emissions unit first becomes subject to an emission limitation in s. NR 428.22, if the emissions unit first becomes subject to an emission limitation in s. NR 428.22 after December 31, 2007.

SECTION 17. 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

SECTION 18. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin  
Natural Resources Board on \_\_\_\_\_.

Dated at Madison, Wisconsin \_\_\_\_\_.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_  
Matthew J. Frank, Secretary

(SEAL)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

DEC 21 2007

REPLY TO THE ATTENTION OF:

(AR-18J)

Larry Bruss  
Section Chief, Regional Pollutant and Mobile Source Section  
Bureau of Air Management  
Wisconsin Department of Natural Resources  
101 S. Webster Street  
Madison, Wisconsin 53707-7921

RECEIVED

DEC 28 2007

AIR MANAGEMENT

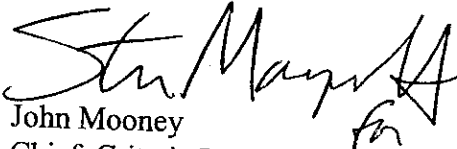
Dear Mr. Bruss:

I am writing regarding the June 12, 2007 submittals of reasonably available control technology (RACT) submittals for nitrogen oxides (NOx) and volatile organic compounds (VOC).

We have identified deficiencies with both the NOx RACT regulations and the VOC RACT negative declarations. We have discussed these deficiencies with your staff and we are attaching lists of deficiencies as well as suggestions to correct them. We plan on rulemaking on these submittals in the very near future and will be asking you to address these deficiencies in that rulemaking.

We share an interest in the need to protect and improve the air quality in Wisconsin. If you have further questions or concerns, please do not hesitate to contact me, or your staff may contact Douglas Aburano at (312) 353-6960.

Sincerely,

  
John Mooney  
Chief, Criteria Pollutant Section

NO<sub>x</sub> RACT Deficiencies

On June 12, 1007, the Wisconsin Department of Natural Resources (WDNR) submitted a state implementation plan (SIP) to address the requirements of section 182(f) of the Clean Air Act. Section 182(f) requires states to submit Reasonably Available Control Technology (RACT) regulations for major (100 ton per year or greater) sources of nitrogen oxides (NO<sub>x</sub>) for ozone nonattainment areas classified as Moderate or above. Wisconsin's NO<sub>x</sub> RACT areas would include the Milwaukee-Racine area and the Sheboygan area.

NR 428.20 Applicability and purpose. This section defines the sources that are subject to the requirements of the rule.

The requirements of this subchapter apply to the owner or operator of an NO<sub>x</sub> emissions unit which is in a source category identified in s. NR 428.22 and which is located at a facility with a combined total potential to emit for all NO<sub>x</sub> emissions units of 100 tons per year or more of NO<sub>x</sub> and which is in the county of Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha.

Potential to emit. The NR 428 series does not define PTE, which is used in defining major sources subject to RACT. Therefore the default applicable definition is found in NR 400.02(127):

NR 400.02(127)

(127) "Potential to emit" means the maximum capacity of a stationary source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air contaminant, 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 if the limitation is enforceable by the administrator.

A definition will need to be adopted to address the following EPA requirements:

1) According to the EPA Bluebook, page 2-3, the following is applicable in determining a nonCTG source subject to RACT:

- Based on theoretical potential to emit (design capacity [or maximum production] and 87860 hr/yr before add-on controls.
- To determine if source > \_\_ tpy aggregate emissions of all nonregulated sources
  - include sources which would have been covered by a CTG if they had been above the EPA -accepted size cutoff
  - exclude regulated CTG sources
- If > 100 TPY, evaluate RACT on all unregulated source types in plant.

- Even "status quo" (RACT-level) emissions must be put in regulation or federally enforceable permit form to avoid increases (e.g., emission levels without any additional controls)
- To achieve "below 100 tpy" (and avoid RACT), a State may limit production of capacity and specify this limitation in a federally enforceable permit (cannot just apply minimum controls to go below 100 tpy)
- Employ "once in always in" concept for applicability.

#### NR 428.21 Emission unit exceptions

The rule contains multiple types of exemptions from emission limitations. The justification for exemption needs clarification based on cost-effectiveness, control feasibility (RACT definition) or other approved rule precedent.

1. General exemptions - Blackstart unit, 500/200 emergency generator, fire pump, 10/20% peaking unit, research, testing line, VOC control.
2. Low operating unit – Ozone season operating threshold.
3. Tier reciprocating engines – federal manufacturing standards.
4. Other regulated unit – units well controlled by existing NR 428 limits.

Rather than exempting these source categories from RACT applicability it would be more appropriate to continue to subject them to RACT. If it is technologically infeasible or economically unreasonable to control them, then a RACT determination for these source categories would be no control. This would have the same effect as exempting them.

#### NR 428.25 Alternative compliance methods and approaches.

The section allows sources to demonstrate compliance by participating in facility or multi-facility averaging. Sources using facility averaging are required to demonstrate compliance on an annual basis and on an ozone season basis with an aggregate NO<sub>x</sub> emission limit and mass emission cap. Sources using multi-facility averaging are required to demonstrate compliance on an annual basis and ozone season basis with an aggregate NO<sub>x</sub> emission limitation.

A justification must be submitted in order to justify these alternative compliance methods. This justification should address all of the relevant RACT guidance as well as portions of the Economic Incentive Policy requirements that directly address RACT averaging and extended averaging times. A demonstration must be made that the allowed averaging program meets the approvability criteria of the EIP applicable to a RACT program in non-attainment areas. And, in particular, that emissions resulting from use of the averaging program do not result in significant negative changes in emissions versus compliance with RACT emission limits on a unit by unit basis.

## VOC RACT Deficiencies

We have reviewed the negative declarations submitted with the June 12, 2007, Milwaukee-Racine Redesignation request and have determined that VOC RACT rules are required for the source categories listed below because their negative declarations have been inadequately documented. Please note that the SOCOMI and aerospace categories are covered by a CTG. CTGs establish their own applicability criteria, which are lower (more stringent) than the 100 ton PTE cut-off for non-CTG sources. Please also note that non-CTG applicability is based on total non-CTG emissions from all sources at a facility.

On September 29, 2006, EPA issued CTGs for lithographic and letterpress printing materials, flexible packaging printing materials, flat wood paneling coatings, and industrial cleaning solvents. Although you have rules for many of these categories, these new CTGs have more stringent control requirements and/or applicability criteria. SIP revisions are required for these CTG categories, in moderate ozone nonattainment areas, by September 29, 2007.

### SOCMI Reactor/Distillation and Air Oxidation Facilities

Please forward the email from Patrick Swords of SOCMA in order to confirm that all SOCOMI manufacturing facilities located within the seven county nonattainment area, regardless of the location of their corporate headquarters, are included. Please also note that SOCOMI Reactors/Distillation and SOCOMI Air Oxidation facilities are covered by CTGs, with their own applicability requirements. Applicability for these facilities is triggered if a SOCOMI chemical is produced, not if they have 100 TPY of potential VOC emissions. Therefore, please provide an analysis (consistent with these CTGs) for any manufacturing facilities producing one or more SOCOMI chemicals. Also, NR 424.03 does not represent RACT for these CTG categories. One discrepancy between the CTG and NR 424.03, for example, is that the CTG require 98% control and NR 424.03 only requires 85% control.

### Aerospace Coating

The aerospace manufacturing CTG states that there are 17 such facilities in Wisconsin. Please make sure that you have checked the following SIC codes: 3720, 3721, 3724, 3728, 3760, 3761, 3764, 3769, 4512, 4581, 9711 which define the SIC category. Also, please note that the applicability cut-off for this category is 25 TPY of potential VOC emissions, not 100 TPY of potential emissions.

### Bakeries

Please confirm that you have checked the list in (Appendix A of the ATC) of the largest bakery companies, e.g. Nabisco, Continental Baking Company, Keebler, etc.) to determine whether they have bakery operations in the 7-county nonattainment area. These are the bakery companies that would most likely have larger and higher emitting bakeries. Also, an email in your Appendix 14 identifies an emission factor of 1 lb/ton. It isn't clear how that is consistent with the bakery emission factor in Section 2.3.2.5 of the ACT.

### Polystyrene Foam Manufacturing

Please document the production information and emission factor(s) used to estimate the PTE from the facilities that you identified. Blowing agent emissions must be included even if they are emitted after leaving the manufacturing facility. Also, please document that Plymouth Foam's 85% control requirement is permanent and enforceable.

### Industrial Wastewater

This category applies to industrial wastewater generated within the following industries: the organic chemicals, plastics, and synthetic fibers industry (SIC codes - 2821, 2823, 2824, 2865 and 2869), the pesticides manufacturing industry (SIC code 2879), the pharmaceutical manufacturing industry (SIC codes 2833, 2834, and 2836), the hazardous waste treatment, storage, and disposal facilities industry, the petroleum refining industry (SIC code 2911), and the pulp and paper industry. It is necessary to document that industrial wastewater emissions generated from facilities in these source categories have been considered. We are especially concerned about this negative declaration because, as stated in a 5/22/2007 email, WDNR does not independently determine wastewater emissions. If you do not have the resources to calculate these emissions you may find it easier to adopt a wastewater rule. We could provide you with the rule language (for this or any of these other source categories) to which there would be no opposition if there are no subject sources.

### Batch Processes

In addition to SICs 2861, 2865, 2896 (we assume that you meant 2869) and 2879, SIC codes 2821, 2834 and 2833 also define batch process plants. Please provide a list of companies in the seven-county nonattainment area with these SIC codes along with their VOC PTE. Please also provide sample PTE calculations from otherwise subject sources if their emissions were 100 PTE or greater. To establish applicability, emissions from all non-CTG sources must be added together, e.g. wastewater and batch. Also please document the reductions obtained by NR 421.03, NR 421.05 and NR 424.03, if that was the basis for excluding an otherwise applicable batch source.

### Pet/Animal Food Processing

We also request that you consider pet/animal food manufacturing sources that have "wet" milling operations as potential sources requiring VOC RACT control. We recently became aware that sources in this category can be significant sources of VOC emissions.