

DATE: October 18, 2007

TO: Natural Resources Board Member

FROM: Matthew J. Frank, Secretary

SUBJECT: Adoption of Order AM-04-06, pertaining to creation of ch. NR 433, and s. NR 484.04(11m), Wis. Adm. Code, relating to the Best Available Retrofit Technology (BART) requirements for visibility protection

Why is this rule being proposed?

The Department is proposing this rule to address the Best Available Retrofit Technology (BART) revisions to Wisconsin State Implementation Plan (SIP) which are required by the federal regional haze rule. The Department has proposed the rule for adoption at the Natural Resources Board meeting in August 2007. The rule was tabled and the Board requested additional information related to the Department's proposal to use the Clean Air Interstate Rule (CAIR) as a BART substitute for electric generating power plants. The requested information will be presented to the Board at the NR Board meeting in December 2007.

The U.S. Environmental Protection Agency (EPA) published the final "regional haze regulations and guidelines for BART determinations" on July 6, 2005 in the Federal Register (70 FR 39104). The federal regulations require all states, including Wisconsin, to revise their State Implementation Plans to address visibility impairment in Mandatory Class I Federal Areas (Class I Areas), which are specific national parks and wilderness areas across the country. The deadline for the SIP submittal is December 17, 2007.

One of the provisions of the federal regulations is the application of BART requirements to certain existing stationary sources which may reasonably be anticipated to cause or contribute to any impairment of visibility in a Class I Area. All such sources are "subject to BART". The state of Wisconsin must submit an implementation plan revision containing emission limitations representing BART and schedules for compliance for all sources subject to BART.

The federal regional haze regulation requires that the BART determination be based on an analysis of the best systems of continuous emission control technology available and associated emission reductions achievable for each source subject to BART. This analysis is to be performed on a source-by-source basis taking into account the criteria provided by the federal regulation.

The rule would require facilities affected by BART to conduct the BART analyses for their sources subject to BART and submit the analyses to the Department for review and the determination of BART requirements for each emission unit subject to BART. The BART determinations would be part of the state implementation plan (SIP) which is subject to EPA approval.

The net effect of the proposed rule would be to examine potential particulate matter (PM) emission controls for BART-eligible boilers at 10 power plants and potential SO₂, NO_x and PM emission controls for BART-eligible units at a pulp and paper facility in the State.

Summary of the rule

The rule establishes a procedure for the determination of BART requirements to control SO₂, NO_x and particulate matter (PM) emissions from sources subject to BART, which are mainly boilers at electric generating power plants and at pulp and paper facilities. The electric generating power plants subject to BART do not need to install, operate, and maintain BART for SO₂ and NO_x controls, if they are subject to the SO₂ and NO_x trading programs of the Clean Air Interstate Rule (CAIR). This exception is consistent with EPA's finding that CAIR requirements for SO₂ and NO_x can be a substitute for meeting BART requirements. The main elements of the rule are as follows:

- Identifying sources subject to BART based on their individual impacts on visibility impairment in Class I Areas and notifying the facilities.
- Requirements for the facilities to perform engineering analyses for BART determinations based on the EPA guidelines published in 40 CFR part 51, Appendix Y. If the guidelines do not provide sufficient instructions for a specific case, the facility can consult the Department for further information and clarification. The time available for conducting the BART analyses is 6 months.
- Requirements for the facilities to provide their BART analyses with all supporting documents to the Department for review and BART determinations.
- The BART rule would require that the BART determinations be based on an analysis of the best systems of continuous emission control technology available and associated emission reductions achievable for each source subject to BART. The Department will determine the emission reduction requirements for each source considering the technologies available and the following factors:
 - a) The costs of compliance
 - b) The energy and non-air quality environmental impacts of compliance
 - c) Any pollution control equipment in use at the source
 - d) The remaining useful life of the source
 - e) The degree of visibility improvement that would be achieved as a result of the emission reductions.
- An emissions trading program in lieu of BART for boilers located within a facility is a compliance option. Facilities which choose to use the emissions trading program must submit an emissions trading plan, which would be subject to Department approval. The criteria for the plan approval are listed below:
 - a) The plan must ensure an emission reduction at least 10% higher for the visibility impairing pollutants than would be achieved through the installation and operation of BART or an alternative plan that demonstrates equivalent visibility improvement.
 - b) Trading must be between the boilers located at the same facility.
 - c) Boilers participating in the trading must be equipped with continuous emission monitoring equipment meeting the applicable requirements under ch. NR 439 or 440.
 - d) The plan must specify the monitoring devices and procedures which will be used to determine the performance of the proposed emission control measures and to provide information sufficient to quantify on an hourly average basis the mass flow of each pollutant in pounds per hour and the emission rates of each pollutant in pounds per million Btu

(British thermal unit) heat input for each boiler participating in the trading. The procedures and methods required for compliance demonstration and for performance testing shall be according to the applicable requirements under ch. NR 439 or 440.

- e) For the purpose of meeting the BART requirements, excess emission reductions shall be emission reductions beyond those required to meet all state and federal requirements and may not include emission reductions used in any other trading or banking program.
- Requirements that the Department's determination of BART for a facility be published for public comment, and after consideration of all comments become legally enforceable by including them in the air quality permit for the facility.
- A provision that allows the Department to revise the BART requirements in the air quality permit, if the EPA requires a revision or the Department determines that the revision is justified based on safety, health, environmental, or excessive cost impacts which the original BART analysis failed to take into account.

Background information for the proposed BART rule

The federal regional haze regulations require all states, including Wisconsin, to revise their SIPs to address visibility impairment in Class I Areas. One of the provisions of the federal regulations is the determination and application of BART to certain stationary sources. The EPA has published regulations and guidelines for the BART determination but has left the decisions on some issues to the states' discretion. These issues along with the Department's positions are described below.

1. Introduction

The BART provision of the regional haze regulation applies to "BART-eligible" sources. These are major stationary sources from 26 identified source categories, which were not in operation prior to August 7, 1962, and were in existence on August 7, 1977, and have the potential to emit 250 tons per year or more of any visibility impairing air pollutant. Among the BART-eligible sources, only those that may cause or contribute to any impairment of visibility in any Class I Area are "subject to BART". Only a source subject to BART needs to go through a process to determine the level of emission control and the control technology representing BART. The BART determination must be based on a source specific analysis of the best systems of continuous emission control technology available taking into account:

- a) the cost of control
- b) the energy and non-air quality environmental impacts of control
- c) any pollution control equipment in use at the source
- d) the remaining useful life of the source
- e) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology

The EPA has provided guidelines for BART determinations, which can be found in Appendix Y of 40 CFR part 51. The determination of BART for fossil-fuel fired power plants having a total generating capacity greater than 750 megawatts must be made pursuant to the EPA guidelines. The application of the guidelines is not mandatory for the other source categories. However, the Department intends to follow the EPA guidelines for all BART-eligible sources.

2. Visibility Impairing Pollutants

The rule would consider sulfur dioxide (SO₂), nitrogen oxides (NO_x) and particulate matter (PM) as visibility impairing pollutants. Particulate matter smaller than 10 microns (PM₁₀) will be used as an indicator for particulate matter. According to EPA, states should use their best judgment in deciding whether certain types of volatile organic compounds (VOCs) as well as ammonia and ammonia compounds are likely to have an impact on visibility in a Class I Area. There are significant uncertainties in demonstrating the visibility impacts of VOC and ammonia caused by a single source. Therefore, the Department does not intend to include these pollutants in the BART determinations.

3. Sources Subject To BART

The regional haze regulations give states the authority to determine among the BART-eligible sources which sources are subject to BART and which sources can be exempted from the BART determinations. The EPA-guidelines provide three options for the identification of sources subject to BART.

The Department chose the option which considers the individualized contribution of BART-eligible sources to the visibility impairment in Class I Areas and has been conducting source-by-source modeling analyses to determine whether the source significantly contributes to visibility impairment in Class I Areas. The preliminary results show that ten (10) power plants and an industrial source may be subject to BART. The industrial source is a major pulp and paper facility. Further modeling results will be used to finalize the identification of sources that will be subject to the BART determination. The current preliminary list shows that the following facilities potentially have at least one emission unit subject to BART.

Ten Electric generating power plants:

- Alliant Energy-Columbia Generating Station
- Alliant Energy, Nelson Dewey Gen Station
- We Energies-Oak Creek Station
- We Energies-Valley Station
- WI Public Service Corp - JP Pulliam Plant
- Manitowoc Public Utilities
- WP & L Alliant Energy - Edgewater Gen Station
- Dairyland Power Coop Alma Station
- Dairyland Power Coop Genoa Station-EOP
- Wisconsin Public Service Corporation- Weston Plant

One Pulp and paper facility:

- Georgia-Pacific Corporation (former Fort James Operating Company)

The two other options for determining sources subject to BART are:

a) Consider all BART-eligible sources subject to BART

This option would require the BART determination process for all BART-eligible sources. The Department is not proposing this option, because some of the BART-eligible sources have minor impacts on visibility impairment in Class I Areas.

b) Consider none of the BART-eligible sources subject to BART

This option required a demonstration that emissions from BART-eligible sources in the state are not reasonably anticipated to cause or contribute to any visibility impairment in a Class I Area. This option is not applicable for Wisconsin, because the Department has already determined that BART-eligible sources in Wisconsin contribute to visibility impairment in the nearby Class I Areas.

4. Emissions Trading

The proposed BART rule includes an emissions trading program. The program is intended to provide more flexibility to facilities to meet the requirements of the BART rule. The program provides facilities with the option to install emission controls on boilers which are not subject to BART in lieu of the sources subject to BART. A facility choosing this option shall submit a plan demonstrating a control strategy that achieves at least 10 percent higher emission reductions than would be achieved through the installation and operation of BART only on units subject to BART. The plan would be subject to the Department's approval.

5. Alternative to BART Program

The regional haze regulation allows states to opt into an alternative measure in lieu of BART. The State can use other programs, for example a trading program, as an alternative to BART, if the State can show that the alternative program will achieve greater reasonable progress than would be achieved through the installation and operation of BART. Based on this alternative, the Department is proposing the emissions trading program mentioned above.

The regional haze rule gives states the option to use the Clean Air Interstate Rule (CAIR) as a BART substitute for electric generating power plants. This option along with the Department's proposed approach is discussed below.

CAIR as a BART-Substitute for Power Plants

There are ten (10) power plants among the BART-eligible sources in Wisconsin. Those power plants are also subject to the Clean Air Interstate Rule (CAIR), which is another federal rule designed to address the interstate transport of ozone and particulate matter. Although the purpose of CAIR is different from the BART rule, both rules require sulfur dioxide (SO₂) and nitrogen oxides (NO_x) reductions from power plants. CAIR provides a cap-and-trade program and applies to all power plants larger than 25 MW located in the CAIR-region, which includes the 28 states in the eastern part of the United States. BART, on the other hand, needs to be determined on a source-by-source basis and applies to a much smaller number of power plants located nationwide.

The EPA conducted modeling analyses comparing BART with CAIR and determined that CAIR makes "greater reasonable progress" than BART in terms of the overall improvement in visibility over all Class I areas. Based on this finding, the regional haze regulation allows a state participating in the CAIR cap-and-trade program to treat CAIR as a BART-substitute for power plants. However, if a state believes more progress can be made at affected Class I Areas by utilizing BART, the state need not make the determination that implementation of CAIR satisfies the BART requirement in that State. Therefore, the states have two options, either to treat CAIR and BART as separate requirements, or to consider CAIR as a BART substitute for SO₂ and NO_x, the pollutants covered by CAIR.

The Department has conducted an analysis to investigate the air quality impacts and the cost of control for each of the options if applied in Wisconsin. The analysis included all power plants in Wisconsin affected by either BART or the CAIR cap-and-trade program, as predicted by EPA in its 2004 modeling analysis. The EPA modeling prediction shows that only a limited number of power plants affected by CAIR are likely to be equipped with air pollution control systems as a result of open market trading.

The Department's analysis showed that the implementation of BART and CAIR as separate rules would result in better visibility in the nearby Class I Areas than substituting CAIR for BART. Consequently, the Department first proposed making the determination that CAIR satisfies the BART requirements for SO₂ and NO_x emissions if the power plant demonstrates that its compliance with CAIR meets its BART requirements for SO₂ and NO_x emissions. However, after receiving several comments on this issue the Department has revised its previous proposal and is now proposing to consider CAIR as a BART-substitute for the SO₂ and NO_x requirements. The reasons for the revision are as follows:

- The regional haze regulation requires states, including Wisconsin, to submit an implementation plan addressing regional haze in each Class I area affected by emissions from the state. Emissions from Wisconsin mostly affect the visibility in four Class I areas located north of Wisconsin in Michigan and Minnesota. The states of Michigan and Minnesota, along with Wisconsin and some other states, tribal governments and federal agencies are working together to address the visibility problem in the four Class I areas. Although the analyses are not finalized yet, the interim results show that the application of BART will not be sufficient to meet the reasonable progress goals required by the federal regional haze program for 2018 and additional emission reductions will be required. Our current analysis indicates that electric generating power plants as a category are the largest contributors to regional haze, as compared with the contributions of the other emission source categories. Considering also that the emission controls on power plants are more cost effective, the control of SO₂ and NO_x emissions from power plants will need to be the core element in the state implementation plan revisions addressing the reasonable progress goals required by 2018. Therefore, the Department intends to propose another rule within a year, the haze rule, which will require significant emission reductions from all coal-fired power plants including those older units which could be subject to BART. Because the haze rule will be implemented in two phases, the emission reductions at power plants in the initial phase will be in a time-frame and at a level commensurate with the emission reductions that would otherwise have been associated with BART. This approach will be more effective than a unit-by-unit BART determination, and will provide the utility companies more flexibility at lower costs to comply with the requirements. In addition, it minimizes the time and expenses for conducting site specific engineering analyses required for the BART determinations.
- As mentioned above, the analyses indicate that there will be more emission reductions required than those projected from the application of BART to meet the federal haze requirements. Since a more inclusive haze rule is needed for power plants, the BART requirements would be redundant and therefore without any significant effect on air quality. In the interests of simplicity and clarity of regulations, we believe that SO₂ and NO_x control requirements are not needed at this time in the implementation of BART for power plants that are subject to the CAIR requirements.

- The EPA's determination that CAIR is better than BART was upheld by the U.S. Court of Appeals in a decision on December 12, 2006. The EPA position was confirmed despite the fact that CAIR may not achieve as much visibility improvement as BART in each Class I area.

How this proposal affects existing policy?

The proposed rule does not affect existing policies. However, it should be noted that the rule would impose control requirements on facilities having sources subject to BART. These requirements are enforceable emission limits and compliance dates that need to be included in the facilities' air quality permits.

Hearing synopsis

The Department held public hearings on March 13, 2007 in Wausau and on March 15, 2007 in Milwaukee. Five persons attended the hearings. No comments were received at the hearings.

The Department received several written comments on the proposed rule. A summary of the comments along with the Department's responses can be found in the attachment to this document.

Final Regulatory Flexibility analysis

The proposed rule does not have a significant economic impact on small businesses. The facilities affected by the proposed rule are power plants and major manufacturers of pulp and paper. These facilities are not considered to be small businesses.

Attachment: Summary of Public Comments and Department Responses

Introduction

Prior to the development of Wisconsin's BART rule, the Department staff summarized the major issues related to the implementation of BART in an information document titled "Strategy for implementation of Best Available Retrofit Technology provisions for Wisconsin" in March 2006. That document can be found at: (<http://dnr.wi.gov/org/aw/air/hot/8hrozonestd/cairbart/BART-Rule%20background.pdf>). Its purpose was to provide information regarding BART and to ask the public and stakeholders for comments on the different options for the implementation of BART. We also had meetings with the Wisconsin utility companies, Clean Air Act Task Force, and pulp and paper companies to inform them about the BART requirements and the available options for the implementation of a BART rule. Based on the comments we received, we prepared a BART rule proposal that was authorized for public comments by the Natural Resources Board in January 2007. That BART rule proposal is posted at: <https://apps4.dhfs.state.wi.us/admrules/public/Rmo?nRmold=683>

The Department held two public hearings in Wausau and in Milwaukee in March 2007 to receive comments on the proposed BART rule. In addition, written comments were submitted to the Department by April 9, 2007.

We received written comments from: Wisconsin Legislative Council (Rules Clearinghouse); Thilmany, LLC; Wisconsin Paper Council; WE Energies; Wisconsin Public Service Corporation; Sierra Club (also on behalf of Clean Wisconsin); Wisconsin Manufacturers & Commerce; Quarles and Brady on behalf of Mosinee Mill of Wausau Paper Specialty Products, LLC; and Alliant Energy.

Changes to the rule were made to address the comments from the Rules Clearinghouse. Summaries of the other comments and our responses are provided below:

Comment: Several commenters requested that the Department consider the Clean Air Interstate Rule (CAIR) as a BART-substitute for electric generating units (EGUs). The basis for this request is the EPA determination that CAIR will achieve greater reasonable progress towards the national visibility goal than would BART for affected EGUs. The federal regional haze program at 40 CFR 51.308(e)(4) states that "A State that chooses to meet the emission reduction requirements of the Clean Air Interstate Rule (CAIR) by participating in one or more of the EPA-administrated CAIR trading programs for SO₂ and NO_x need not require BART-eligible EGUs subject to such trading programs in the State to install, operate, and maintain BART for the pollutants covered by such trading programs in the State". Since Wisconsin will participate in the CAIR trading programs, CAIR as a BART-substitute is a possible option for Wisconsin.

The Department first proposed the BART rule with a provision allowing a power plant subject to BART to demonstrate that the reductions achieved through compliance with the CAIR requirements constitute compliance with the SO₂ and NO_x requirements in the BART rule. Almost all comments on this issue opposed the deviation from the EPA's determination and requested a corresponding revision of the state's proposed rule. One commenter supported the proposed

approach and stated that it “aligns with the purpose of BART and must remain as a central element of the rule”.

Response: After consideration of those comments, the Department staff have recommended revisions of the rule on the CAIR as BART-substitute issue and is now proposing that the BART-eligible electric generating units subject to a CAIR trading program are not required to install, operate, and maintain additional control equipment to meet BART requirements for the pollutants covered by the trading program. This revision is consistent with the option allowed in the federal regulation at 40 CFR 51.308(e)(4). The Department’s reasons for the revision were outlined below:

- The regional haze regulation requires states, including Wisconsin, to submit an implementation plan addressing regional haze in each Class I area affected by emissions from the state. Emissions from Wisconsin mostly affect the visibility in four Class I areas located north of Wisconsin in Michigan and Minnesota. The states of Michigan and Minnesota , along with Wisconsin and some other states, tribal governments and federal agencies are working together to address the visibility problem in the four Class I areas. Although the analyses are not finalized yet, the interim results show that the application of BART will not be sufficient to meet the reasonable progress goals required by the federal regional haze program for 2018 and additional emission reductions will be required. Our current analysis indicates that electric generating power plants as a category are the largest contributors to regional haze, as compared with the contributions of the other emission source categories. Considering also that the emission controls on power plants are more cost effective, the control of SO₂ and NO_x emissions from power plants will need to be the core element in the state implementation plan revisions addressing the reasonable progress goals required by 2018. Therefore, the Department intends to propose another rule within a year, the haze rule, which will require significant emission reductions from all coal-fired power plants including those older units which could be subject to BART. Because the haze rule will be implemented in two phases, the emission reductions at power plants in the initial phase will be in a time-frame and at a level commensurate with the emission reductions that would otherwise have been associated with BART. This approach will be more effective than a unit-by-unit BART determination, and will provide the utility companies more flexibility at lower costs to comply with the requirements. In addition, it minimizes the time and expenses for conducting site specific engineering analyses required for the BART determinations.
- As mentioned above, the analyses indicate that there will be more emission reductions required than those projected from the application of BART to meet the federal haze requirements. Since a more inclusive haze rule is needed for power plants, the BART requirements would be redundant and therefore without any significant effect on air quality. In the interests of simplicity and clarity of regulations, we believe that additional SO₂ and NO_x control requirements are not needed at this time in the implementation of BART for power plants that are subject to the CAIR requirements.
- The EPA’s determination that CAIR is better than BART was upheld by the U.S. Court of Appeals in a decision on December 12, 2006. The EPA position was confirmed despite the fact that CAIR may not achieve as much visibility improvement as BART in each Class I area.

Comment: A commenter stated that contrary to “the fact that the Board, and not Department staff, creates environmental policy, the proposed rule does not establish a numerical “floor” for BART compliance. Rather it puts off setting any standards or any limits, and delegates that duty and authority to Department staff- outside of the Board or the public rulemaking process. This results in a rule that does not ensure the Board or the public of pollution reduction and leaves too much opportunity for post-enactment weakening of this rule. The Board should include numerical limits in the rule or, at a minimum, a presumptive minimum that cannot be weakened”.

Response: The purpose of the proposed BART rule is to establish the procedures for determining what BART is for each specific emission unit subject to BART. The BART determination process will be similar to other control technology-based (Best Available Control Technology and Lowest Achievable Emission Reduction) emission limits that are determined through a permit process and include public notice and public comments. The Department will publish its preliminary BART determination for each emission sources subject to BART and the public will have at least 30 days to comment on each preliminary BART determination. Therefore, contrary to the commenter’s opinion, the BART determination will include public participation.

Moreover, because the BART rule is intended to include site-specific conditions that take into account the five statutory factors, it would be inconsistent with that approach to establish by rule a minimum or “numerical floor” for all BART determinations.

Comment: A commenter requested the removal of “section NR 433.06 from the proposed rule to avoid backtracking on the Department’s commitment to implement BART in addition to CAIR and to ensure that modern pollution controls are put on each of Wisconsin’s power plants”.

Response: Section NR 433.06 provides a facility the option of trading emissions between boilers at the facility if the emission reductions achieved by the trading is at least 10% more than the emission reductions that would be achieved by applying BART only to the boilers subject to BART. This trading option is expected to make the rule more effective and to reduce costs. In addition, the Department is committed to providing trading options for NOx reductions under a statutory requirement (s. 285.49, Wis. Stats.).

Comment: A commenter stated that “...the draft rule does not result in a modification to the Wisconsin State Implementation Plan to incorporate the BART determinations and limits for each source. Rather, it proposes to merely amend the operating permit for each source. This poses two problems. First, putting aside the Department’s backlog of operating permits, operating permits expire and there is no assurance that the limits established as BART will be legally enforceable after the expiration of the permit. BART limits must be established by rule and included in a SIP to ensure they do not expire. Second, this process does not comply with the requirement in 40 C.F.R. § 51.308(e) that Wisconsin “submit an implementation plan containing emission limitations representing BART... for each BART-eligible source...” Federal law requires the Wisconsin State Implementation Plan to be amended to incorporate the limits. It does not allow the concept behind the proposed rule: where only the process of determining BART is in the State Implementation Plan, while leaving the actual limits up to the Department outside of the State Implementation Plan process.”

Response: The purpose of the proposed BART rule is to establish a procedure for BART determinations. The results of the BART determination process will be BART requirements for

each source subject to BART. Those requirements, as the commenter correctly states, will be incorporated into the state's federally-enforceable SIP as well as in the facility's permit and will be federally enforceable. In addition, the BART requirements will be an "applicable requirement" that is incorporated into the facility's operation permit. That means, that in each permit renewal the BART requirements will remain in place and will be enforceable.

Comment: The proposed rule requires that the visibility impacts of BART-eligible sources are determined using air quality modeling. A commenter discussed the requirements for conducting the computer modeling and requests that the modeling options provided in the rule should be removed

The commenter noted that "The Department is making a one-time determination about whether sources are subject to BART based on only three years of data – 2002, 2003, and 2004. The modeling is based upon a very small data set considering that all sources subject to this rule have been in operation since at least 1977 – over 30 years. It is entirely possible – and quite likely that those three particular years were not representative operational years for some sources." The commenter requests that "the rule should specify that all sources must model impacts to Class I areas according to a uniform method used by the Department, which should include a requirement to use potential to emit. A source that wishes to rely on its 2002 through 2004 actual emissions, based on its assertion that those emissions are representative of the source's emissions in the future, should be required to accept permit limits that prohibit them from increasing emissions in the future."

In addition the commenter requested that "DNR should not permit industry sources to submit CALPUFF modeling results based upon contributions to "natural conditions" calculated using the average "natural conditions" instead of the 20% best "natural conditions."

Response: The modeling requirements and the options included in the rule are provided to be consistent with the corresponding EPA guidance and recommendations. The Department has not deviated from the EPA recommendations and followed EPA guidance for the modeling. The specific issues raised by the commenter are addressed below:

According to the federal regional haze regulation, states have discretion to identify BART-eligible sources with minor visibility impact on Class I areas and exempt them from BART requirements. Therefore, the proposed rule requires that the Department conduct computer modeling to determine the visibility impact of each BART-eligible source on Class I areas and exempts sources with a visibility impact below the threshold defined in the proposed rule. The modeling years 2002, 2003 and 2004 were selected because meteorological data for those years were available when the Department began with the preliminary modeling and rule development. In addition, the selected modeling years and period are consistent with EPA's recommendations.

Using maximum actual emission rates for the modeling is consistent with EPA's recommendations. The proposed rule offers sources the option to use the source's "potential to emit", because some sources may not record their actual emissions daily. The source's "potential to emit" is an approximation of the maximum actual emissions.

The visibility impact of each source is expressed in "deciviews", a unit defined with the intention to better express impairment as visually perceived. It depends on the level of background impairment (also called natural conditions) in each Class I area. Therefore, the rule requires the visibility impact of each source to be compared against a background which represents the average of the

20% best days of natural conditions. To correspond with the EPA's recommendations the proposed rule also provides a facility the option to use the annual average natural visibility as background conditions, if the modeling is performed according to the EPA's requirements as verified by the Department.

Comment: The Department received comments expressing concerns that the separation between the BART portion of the regional haze requirements from the requirements for achieving the reasonable progress goals is a "problem for regulated sources". The issue seems to be the uncertainty caused by possible differences between the requirements for BART and those for achieving the reasonable progress goals. The commenter stated that "Companies could be subject to differing regulatory requirements for the same pollutants and these potentially differing requirements could result in unnecessary costs or compliance traps for companies." The commenter requested that the Department provide more information about its regulatory activities in respect to regional haze. The commenter recommended that the Department form a stakeholder group that would meet periodically with the Department's staff to closely monitor the implementation of the BART rule and the development of the reasonable progress rule.

Response: The requirements for application of BART and those for achieving the reasonable progress goals are separate, but complementary, provisions of the regional haze regulations. For BART, the states are required to identify the sources subject to BART and determine BART on a source-by-source basis. On the other hand, the requirements for achieving the reasonable progress goals may include emission limits for entire source categories or individual sources. Sources affected by both provisions need to develop a control strategy meeting the requirements of both provisions.

The Department intends to inform the public and stakeholders about the relevant regulatory activities with respect to regional haze and intends to meet periodically with stakeholders.

Comment: A commenter urged the Department to include a definition for the source category "fossil fuel-fired steam electric plants" in the BART rule, consistent with the definition of the electric generating units (EGUs) in the Clean Air Interstate Rule (CAIR). The purpose of the definition is to exclude the industrial cogeneration units from the BART source category called "fossil fuel-fired steam electric plants". As a supporting document, the commenter provided a copy of a letter from EPA to the American Forest & Paper Association dated April 4, 2007.

Response: According to the EPA letter to the American Forest & Paper Association

"...it would be reasonable for a State, for Regional Haze purposes, to treat EGUs as synonymous with the category of fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input (million BTU/hr), which is BART category number one."

Consistent with this statement of EPA, the Department is proposing a rule revision to clarify that an industrial cogeneration unit that supplies less than one-third of its potential electric output capacity on an annual basis to any utility power distribution system for sale, is not considered a "fossil fuel-fired steam electric plant" for the BART-eligibility determination.

Comment: Referring to s. NR 433.04 of the proposed rule, a commenter urged the Department to clarify that not all available retrofit control technologies need to be evaluated for the BART determinations. The control technology representing BART should be determined using a top-down approach and the analysis should stop when BART has been determined and any additional evaluations beyond that point should not be required.

Response: It is the Department's intention to streamline the BART determination process while avoiding ambiguous requirements that can be interpreted differently. The top-down approach would simplify the identification of BART if the performance and the costs of all available technologies were known for all emission units. However, this may not be the case. Especially for industrial sources, the top-down order of the available control technologies may be debatable. Therefore, all available control options need to be included in the BART analysis. However, if in any case it is obvious which control option would represent BART, the BART analysis simply needs to address the other options to demonstrate that the selected option represents the best option. In such a case, all available options would be addressed, but a full-blown analysis of each option would not need to be conducted.

Comment: A commenter suggests that the BART rule should allow the extension of the deadline for submittal of the BART analysis beyond 6 months with the approval of the Department.

Response: The Department has proposed a revision to the rule to allow one extension of up to a maximum of two months (60 days) for submittal of the BART analysis, subject to the Department's approval.

Comment: Section NR 433.04(6) of the proposed rule requires that if the Department needs additional information "the owner or operator of the BART-eligible source shall provide the information within a period of time specified by the department". The commenter requests that the language should be revised to read "... within a reasonable period of time..."

Response: The Department has modified the proposed language accordingly.

Comment: Section NR 433.05(5) of the proposed rule provides the Department with the ability to revise BART requirements if EPA does not approve the BART determination in the State Implementation Plan (SIP) or if a revision is required based on unforeseeable safety, health, environmental, or cost impacts. Recognizing the purpose of the provision, a commenter pointed out that "the language of s. NR 433.05 reads as though the department could revise the BART requirements at any time". The commenter suggested that the language be revised by using the term "final BART determination" rather than "BART requirements". In addition, the commenter requested that "technical feasibility" should be added to the reasons for a revision of the already determined BART.

Response: The revision of BART requirements is supposed to be for unexpected events such as EPA's objection to the BART determination. It is also intended as a safety measure for the rare case that the implementation of BART, as determined in the BART determination process, would cause health, safety, environmental, or excessive cost problems that could not be foreseen at the time that the BART determination was conducted. Considering that any revision of the existing BART requirements would need to be subject to public comments, the Department can and would

not propose any revision to the existing BART requirements which is not justified. The BART revision procedure would be similar to that described for the revision of operation permits (see 285.62, Stats.).

As mentioned above, s. NR 433.05(5) of the proposed rule covers the unexpected problems; the Department staff does not think that the “technical feasibility” should be an unexpected problem after the BART determination has been conducted. The technical feasibility of control options is one of the main reasons for the BART determination analysis and should not be considered an unexpected issue.

Comment: Referring to s. NR 433.06(1) (b) 2 of the proposed rule, a commenter suggested that, when using the emission trading option, the demonstration of visibility improvement should be limited to only those Class I areas where the source was shown to significantly contribute to visibility impairment. The proposed rule required this demonstration in the four Class I areas nearest to the source.

Response: We have limited the demonstration of visibility improvement to the four Class I areas in order to streamline the analyses and to simplify the rule requirements. The Department’s air quality modeling analyses show that the emissions from BART eligible sources in Wisconsin would significantly impact the visibility in the four Class I areas north of Wisconsin. These Class I areas are Boundary Waters Canoe Area Wilderness, Voyageurs National Park, Isle Royale National Park, and Seneq Wilderness Area. Assuming a facility has somehow determined that its affected sources significantly impacts only one of the four Class I areas, the practical approach would be to concentrate the detailed analysis for BART determination on that Class I area. However, the final modeling run should include all four Class I areas to demonstrate that the visibility improvement in the other Class I areas meet the “better-than-BART” criteria, as well. This is a simpler approach than the approach suggested by the commenter. The commenter’s suggestion would require that the facility first demonstrate which class I areas are significantly affected by the source and the BART rule has to define what “significant” impact means for that demonstration. Considering that it is a relatively simple procedure to include all four Class I areas in the final modeling run, the approach as proposed in the rule provides straightforward and sound results.

Comment: Section NR 433.06(1)(e) of the proposed rule deals with monitoring under the trading option and specifies hourly monitoring. One commenter suggested that daily or a 24-hour basis should be allowed since this would make compliance monitoring consistent with the applicability provision that a source has the ability to use the maximum 24-hour average actual emission rate for determining a contribution to visibility impairment.

Response: The averaging time interval for compliance with BART requirements will be determined on a source-specific basis in the BART determination process. The purpose of s. NR 433.06(1) (e) of the proposed rule is to require a monitoring system that is able to determine the emissions on an hourly-average basis. This requirement is consistent with the monitoring requirements of the EPA trading programs for boilers participating in the SO₂ cap-and-trade program or the NO_x trading program and makes use of already available data for many boilers participating in other emission trading programs.

Comment: One commenter requested that the department allow sources affected by BART to implement alternate programs in lieu of source-by-source BART since the federal regulations allow this in 40 CFR Subpart P.

Response: The federal regulations provide a broad framework for alternative measures and they can be as elaborate as a regional trading program. Considering the limited number of sources subject to BART in Wisconsin, available resources, and the feedback from the affected facilities, the Department prepared a more specific trading program as described in s. NR 433.06 of the proposed BART rule. This program allows trading among all boilers within a facility.

Comment: A commenter pointed out that the rule needed to cite specific applicable provisions in chs. NR 339 and NR440, Wis. Adm. Code, in regard to compliance demonstration, recordkeeping, and reporting requirements

Response: The purpose of the proposed BART rule is to establish a procedure for determining BART for a variety of emission sources belonging to different source categories. BART itself will be determined on a source-specific basis considering engineering analyses conducted by the affected facilities. The BART determination, like a facility's air quality permit, will include unit-specific requirements for monitoring, recordkeeping, and reporting as well as references to specific applicable provisions in chs. NR 339 and NR 440, if needed. The reference generally to chs. NR 339 and NR 440 in the proposed rule provides facilities a framework for establishing the monitoring, recordkeeping, and reporting requirements. Citing specific provisions of chs. NR 439 and NR 440 is unnecessary and not helpful at this phase of the BART determination process, considering the variety of the sources and their unknown emission controls.

Comment: The Department received comments stating that specific emission units should not be subject to BART. The basis for the comments is the Department's preliminary determination of sources subject to BART.

Response: The Department staff used the agency's database for identification of BART-eligible sources and has been conducting preliminary modeling analyses to determine the sources subject to BART in Wisconsin. Current results are preliminary and subject to change. The data used as input for the modeling and the results have been shared with the facilities to inform them of the status of the preliminary analyses and to ask them for comments and information if incorrect data were used for the analyses. The Department will continue to work with the facilities to clarify whether a specific source is subject to BART or if it is exempt.

Fiscal Estimate — 2007 Session

<input type="checkbox"/> Original	<input checked="" type="checkbox"/> Updated	LRB Number	Amendment Number if Applicable
<input type="checkbox"/> Corrected	<input type="checkbox"/> Supplemental	Bill Number	Administrative Rule Number NR 433

Subject

Best Available Retrofit Technology (BART) rule in ch. NR 433 for SO₂, NO_x and particulate matter reductions from certain stationary sources.

Fiscal Effect

State: No State Fiscal Effect

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

- Increase Existing Appropriation Increase Existing Revenues
 Decrease Existing Appropriation Decrease Existing Revenues
 Create New Appropriation

Increase Costs — May be possible to absorb within agency's budget.
 Yes No

Decrease Costs

Local: No Local Government Costs

1. Increase Costs
 Permissive Mandatory
 2. Decrease Costs
 Permissive Mandatory

3. Increase Revenues
 Permissive Mandatory
 4. Decrease Revenues
 Permissive Mandatory

5. Types of Local Governmental Units Affected:
 Towns Villages Cities
 Counties Others
 School Districts WTCS Districts

Fund Sources Affected

- GPR FED PRO PRS SEG SEG-S

Affected Chapter 20 Appropriations

20.370 2 (bg)

Assumptions Used in Arriving at Fiscal Estimate

The Department is proposing this rule to address the requirements of the federal regional haze regulation. The rule would require certain facilities to conduct engineering analyses and install air pollution control systems to reduce their emissions of sulfur dioxide, nitrogen oxides and particulate matter. Compliance is required by the end of 2013.

The fiscal estimate addresses the following cost impacts:

- Impact on the Department
- Impact on city of Manitowoc
- Impact on affected facilities

It should be noted that compliance with the proposed rule would result in emission controls and application of control systems that are not known at this time. The determination of this information is the purpose of the rule. Since the required information is not available the following estimates are based on assumptions and should be considered as an approximate range of the costs. The cost are in today's dollars and represent the upper range of the costs.

Impact on the Department:

Due to the emission reductions required by the rule, the annual emission fees paid to the Department would decline. An accurate emission reduction estimate is not available at this time, since the rule requires a source-specific engineering analysis for determination of emission reductions. In addition, some of the sources affected by this rule would also be subject to other rules, such as Reasonably Available Control Technology (RACT) and Clean Air Interstate Rule (CAIR). Assuming emission reductions typically achievable for the affected sources, and assuming that there would be no changes to the fee structure for the air program in the intervening years, the decrease in revenues (based on the reduced tonnage of emissions assumed) would be approximately \$120,000 per year in 2014 and after. (continued)

Long-Range Fiscal Implications

Prepared By:	Telephone No.	Agency
Joseph Polasek	266-2794	Department of Natural Resources
Authorized Signature	Telephone No.	Date (mm/dd/ccyy)
/S/ Joe Polasek	266-2794	07 -13 -07

Fiscal Estimate — 2007 Session

Original Updated
 Corrected Supplemental

LRB Number	Amendment Number if Applicable
Bill Number	Administrative Rule Number NR 433

Subject

BART rule in ch. NR 433 for SO₂, NO_x and particulate matter reductions from certain stationary sources.

(Assumptions Used in Arriving at Fiscal Estimate , page 2)

The rule would require that the Department identify sources subject to BART and evaluate the reports for the BART determinations. These activities would be performed by the existing Department staff and be finalized approximately within one year after the effective date of the rule. The associated fiscal impact on Department resources is expected to be absorbed within the Department's budget.

Impact on the City of Manitowoc

Under the existing conditions, this rule would impact one local government facility operated by Manitowoc Public Utility (MPU). MPU operates three coal fired boilers at its power plant. One of them, Unit 7, is affected by the Best Available Retrofit Technology (BART) rule. However, the unit is also subject to CAIR. Since the proposed BART rule considers CAIR as a BART substitute, the BART requirements are satisfied in respect to SO₂ and NO_x emissions. Assuming that the BART determination will not result in additional controls for particulate matter, the unit will not need any controls to meet the BART requirements and the rule impact is limited to preparation of an engineering report for BART determination, which can be prepared by the staff of the utility. It is assumed the cost to prepare this report will be minimal.

Impact on affected private sector facilities

The proposed BART rule would require emission controls on certain power plants and industrial sources. Since CAIR is considered as a BART substitute for electric generating power plants no NO_x and SO₂ controls would be installed on the power plants due to the BART rule. It can be assumed that only the industrial sources subject to BART, the number of which is to be determined by modeling results in the rule, would need to install emission controls for NO_x and SO₂. The rule requires an extensive evaluation of control technologies, costs and other considerations. Therefore, the specific fiscal effect of the rule cannot be accurately estimated at this time. However, assuming installation of equipment to attain the maximum level of NO_x and SO₂ control, the maximum capital and operational costs should not exceed \$12 million per year statewide starting no later than 2014.

Fiscal Estimate Worksheet — 2007 Session
 Detailed Estimate of Annual Fiscal Effect

Original Updated
 Corrected Supplemental

LRB Number	Amendment Number if Applicable
Bill Number	Administrative Rule Number AM-04-06

Subject

BART rule in ch. NR 433 for SO₂, NO_x and particulate matter reductions from certain stationary sources.

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:	
		Increased Costs	Decreased Costs
A. State Costs by Category			
State Operations — Salaries and Fringes		\$	\$ -
(FTE Position Changes)		(FTE)	(- FTE)
State Operations — Other Costs			-
Local Assistance			-
Aids to Individuals or Organizations			-
Total State Costs by Category		\$	\$ -
B. State Costs by Source of Funds			
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			- 120,000
SEG/SEG-S			
Total State Revenues		\$	\$ -120,000

Net Annualized Fiscal Impact

	<u>State</u>	<u>Local</u>
Net Change in Costs	\$ 0	\$ 0
Net Change in Revenues	\$ -120,000	\$ 0

Prepared By: Joe Polasek	Telephone No. 266-2794	Agency Department of Natural Resources
Authorized Signature /S/ Joe Polasek	Telephone No. 266-2794	Date (mm/dd/ccyy) 07 - 3 - 07

ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
CREATING RULES

The Wisconsin Natural Resources Board adopts an order to **create** NR 433 and 484.04(1m) relating to the identification of sources subject to the Best Available Retrofit Technology (BART) requirements for visibility protection and the determination of BART for those sources.

AM-04-06

Summary 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:** ss. 227.11(2)(a), 227.14(1m), 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 227.14(1m), Stats., allows state agencies to use the format of federal regulations if the proposed rule is to be administered in a manner identical or similar to the federal rule. Section 285.11(1) Stats., gives the Department the authority to promulgate rules to implement, and to be 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 proposed BART-rule would require reductions of SO₂, NO_x, and particulate matter emissions from certain stationary sources such as power plants and industrial sources by 2014 to address regional haze. The affected sources may also be subject to other rules that require emission limitations for one or more of these air pollutants. Those rules are the clean air interstate rule (CAIR), the requirements for reasonably available control technology (RACT), and the maximum achievable control technology (MACT) standards.

The U.S. EPA issued the CAIR regulation on March 10, 2005 requiring reductions in emissions of SO₂ and NO_x from electric generating power plants in 28 eastern states including Wisconsin by 2015. The rule imposes caps on emissions from the electricity generating power plants in the affected states and establishes an EPA-administered cap-and-trade program which states may participate in as a means to meet the CAIR requirements. Wisconsin is participating in the cap-and-trade program. According to the regional haze regulations, a state that opts to participate in the CAIR cap-and-trade program need not require power plants to install, operate and maintain BART for SO₂ and NO_x. Based on an EPA analysis, controls for power plants subject to CAIR will result in more visibility improvement in natural areas than BART would have provided. Consequently, the Department is proposing to allow compliance with CAIR to substitute for the SO₂ and NO_x requirements in the BART rule for the electric generating power plants in Wisconsin.

The RACT requirements are NO_x emission limitations on major stationary sources which are located in the moderate ozone non-attainment areas, i.e., the 7 counties in southeastern Wisconsin. The Department has adopted a rule to require a RACT level of control on the affected sources. It can be expected that a source subject to both RACT and BART would consider a NO_x control measure that is effective enough to comply with both requirements.

In Wisconsin, the sources subject to BART are electric generating power plants or pulp and paper facilities, which are also source categories subject to MACT standards. Since a source of particulate matter emission needs to be well controlled to meet the stringent MACT standards, it is unlikely that the BART determination would result in a more stringent particulate matter emission control than what is required for the MACT standards. Therefore, it is anticipated that the controls installed to meet the MACT standards would likely satisfy the BART level of control.

5. Plain language analysis:

The U.S. EPA published the final "regional haze regulations and guidelines for Best Available Retrofit Technology (BART) determinations" on July 6, 2005 in the Federal Register (70 FR 39104). The federal regulations require all states, including Wisconsin, to revise their State Implementation Plans (SIPs) to address visibility impairment in Mandatory Class I Federal Areas (Class I Areas), which are specific national parks and wilderness areas across the country. The deadline for the SIP submittal is December 17, 2007.

One of the provisions of the federal regulations is the application of BART to certain existing stationary sources which may reasonably be anticipated to cause or contribute to any impairment of visibility in a Class I Area. The state of Wisconsin must submit an implementation plan containing emission limitations representing BART and schedules for compliance for all sources subject to BART.

The Department is proposing this rule to comply with the BART provision of the federal regional haze regulations. The rule applies to BART-eligible sources which are major stationary sources from 26 identified source categories that have the potential to emit 250 tons per year or more of any visibility-impairing air pollutant, and were put in place between August 7, 1962 to August 7, 1977. Those BART-eligible sources that may reasonably be anticipated to cause or contribute to any impairment of visibility in any Class I Area are "subject to BART". A source subject to BART needs to go through a BART determination process, which is an engineering analysis to determine the level of emission control that represents BART and the schedule for compliance with BART. The BART determination must be based on a source-specific analysis of the best systems of continuous emission control technology available taking into account:

- The cost of compliance.
- The energy and non-air quality environmental impacts of compliance.
- Any pollution control equipment in use at the source.
- The remaining useful life of the source.
- The degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

This rule would establish that the Department identifies the sources subject

to BART and that the sources conduct the BART analyses. Based on these analyses, the Department would determine the BART level of control and the compliance schedule for each source.

The regional haze regulation allows states to implement alternative programs in lieu of BART, if the alternative program achieves greater reasonable progress than BART does. EPA has determined that the Clean Air Interstate Rule (CAIR) achieves greater progress than BART and may be used by states as a BART substitute. Therefore the Department is proposing to consider CAIR as a BART substitute for the BART-eligible power plants which are also affected by CAIR. Since CAIR limits only SO₂ and NO_x emissions, the power plants subject to BART must still undergo a BART determination for PM emission control.

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

The Department is proposing this rule to address the federal requirements in the regional haze regulation published in the July 6, 2005 Federal Register (70 FR 39104). The U.S. EPA requires all states, including Wisconsin, to develop programs to assure reasonable progress toward meeting the national goal of preventing any future, and remedying any existing, impairment of visibility in mandatory Class I Federal Areas which impairment results from manmade air pollution. The application of Best Available Retrofit Technology (BART) on certain stationary sources is one of the core requirements for the implementation plan for regional haze. The purpose of the proposed rule is to establish the procedures and criteria for identifying sources subject to BART and for determining BART for those sources.

7. Comparison with rules in adjacent states:

All states, including Wisconsin and the adjacent states, are required to submit an implementation plan containing the BART requirements by December 17, 2007. According to the information available to the Department, none of the adjacent states have finalized their implementation plan for BART yet. The following information is based on the proposed version of those states' BART rule or other publications available on the states' WebPages.

Minnesota has published its proposed version of the BART rule and some additional information. The core elements of the rule are similar to those proposed by the Department. These are:

- Both states identify the sources subject to BART by conducting air quality modeling.
- Both states consider the following visibility impairing pollutants in their BART rule: sulfur dioxide (SO₂), nitrogen oxides (NO_x) and particulate matter (PM). Other visibility impairing pollutants, volatile organic compounds (VOC) and ammonia (NH₃), have minor impacts and are not addressed in the rule.
- Both states intend to use the EPA guidelines for the BART determination for all sources subject to BART.
- The BART rule in both states would require facilities to conduct the BART determination analyses.

One difference between Wisconsin and Minnesota is in the emission trading or averaging possibilities considered in the BART rule. Wisconsin would allow trading or averaging between all boilers at a facility including boilers not subject to BART. Minnesota allows averaging only among the BART affected sources at a facility.

Minnesota's proposed rule does not explicitly address the question of whether CAIR requirements can substitute for BART requirements for power plants. Minnesota is expected to make this determination after the BART analyses have been conducted and more information is available about air quality modeling and planned controls on BART-eligible units' compliance with CAIR.

Illinois Environmental Protection Agency and Michigan Department of Environmental Quality have not published any information regarding their BART rules yet, so there is no basis for comparing their programs to Wisconsin's.

Iowa passed a rule for identification of sources subject to BART in March 2005 prior to publication of the final federal regional haze regulation. The Iowa rule does not address the actual BART determination process.

8. Summary of factual data and analytical methodologies:

Since the proposed rule is based on the requirements which are in the federal regional haze rule, the Department is relying on the factual data and analytical methodologies used by U.S. EPA to support the federal rule-making. The corresponding federal regulations were published on July 6, 2005 in the Federal Register (70 FR 39104).

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

Since no small businesses are affected by the proposed rule, no analysis was performed. An economic impact report was not requested.

10. Effect on small business:

There is no known effect on small business due to the proposed BART rule. None of the BART-eligible sources qualify as a small business.

11. Agency contact person:

Farrokh Ghoreishi, 608-264-8868, farrokh.ghoreishi@wisconsin.gov

Note: The consent of the Attorney General and the Revisor of Statutes will be requested under s. 227.21(2)(b), Stats., for the incorporation by reference in ch, NR 484 of federal guidelines contained in 40 CFR part 51, Appendix Y.

SECTION 1. Chapter NR 433 is created to read:

CHAPTER NR 433

PROTECTION OF VISIBILITY BY APPLICATION OF BEST AVAILABLE RETROFIT TECHNOLOGY

NR 433.01 Applicability; purpose. (1) **APPLICABILITY.** The provisions of this chapter apply to facilities having one or more BART-eligible sources.

(2) **PURPOSE.** This chapter is adopted under s. 285.11, Stats., to establish the procedures for controlling emissions of air pollutants from BART-eligible sources which may reasonably be anticipated to cause or contribute to any visibility impairment in any mandatory class I federal area.

NR 433.02 Definitions. The definitions contained in ch. NR 400 apply to the terms used in this chapter. In addition, the following definitions apply to the terms used in this chapter:

(1) "BART-eligible source" means any of the stationary sources of air pollutants listed in this subsection, including any reconstructed source, which was not in operation prior to August 7, 1962, and was in existence on August 7, 1977, and which has the potential to emit 250 tons per year or more of any visibility impairing air pollutant. In determining potential to emit, fugitive emissions, to the extent quantifiable, shall be counted. The stationary sources are as follows:

(a) Fossil fuel-fired steam electric plants of more than 250 million Btu per hour heat input, except for cogeneration units that supply one-third or less of their potential electric output capacity and 219,000 megawatt-hours or less actual electric output on an annual basis to any utility power distribution system for sale.

(b) Coal cleaning plants (thermal dryers).

(c) Kraft pulp mills.

(d) Portland cement plants.

(e) Primary zinc smelters.
(f) Iron and steel mill plants.
(g) Primary aluminum ore reduction plants.
(h) Primary copper smelters.
(i) Municipal incinerators capable of charging more than 250 tons of refuse per day.

(j) Hydrofluoric, sulfuric, and nitric acid plants.
(k) Petroleum refineries.
(l) Lime plants.
(m) Phosphate rock processing plants.
(n) Coke oven batteries.
(o) Sulfur recovery plants.
(p) Carbon black plants (furnace process).
(q) Primary lead smelters.
(r) Fuel conversion plants.
(s) Sintering plants.
(t) Secondary metal production facilities.
(u) Chemical process plants.
(v) Fossil fuel boilers of more than 250 million Btu per hour heat input.

(w) Petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels.

(x) Taconite ore processing facilities.
(y) Glass fiber processing plants.
(z) Charcoal production facilities.

(2) "Best available retrofit technology" or "BART" means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each visibility impairing pollutant which is emitted by a stationary source. The emission

limitation shall be established on a case-by-case basis, taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source and the degree of improvement in visibility which may reasonably be anticipated to result from the use of the technology.

(3) "Deciview" means a metric for visibility impairment. A deciview is a haze index derived from calculated light extinction that is designed so that uniform changes in haziness correspond to uniform incremental changes in perception across the entire range of conditions, from pristine to highly impaired. The haze index in units of deciviews is calculated as follows:

$$\text{Haze index deciview} = 10 \ln_e (b_{\text{ext}}/10 \text{ Mm}^{-1})$$

where:

b_{ext} is the atmospheric light extinction coefficient, expressed in inverse megameters (Mm^{-1})

(4) "In existence" means that the owner or operator obtained all necessary preconstruction approvals or permits required by federal or state air pollution emissions and air quality laws or regulations and either began, or caused to begin, a continuous program of physical on-site construction of the facility, or entered into binding agreements or contractual obligations, which could not be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the facility to be completed in a reasonable time.

(5) "In operation" means engaged in activity related to the primary design function of the source.

(6) "Integral vista" means a view perceived from within a mandatory class I federal area of a specific landmark or panorama located outside the boundary of the mandatory class I federal area.

(7) "Least impaired days" means the average visibility impairment,

measured in deciviews, for the 20% of monitored days in a calendar year with the lowest amount of visibility impairment.

(8) "Major stationary source" has the meaning given in s. NR 405.02(22).

(9) "Mandatory class I federal area" means any area identified in 40 CFR part 81, Subpart D.

(10) "Potential to emit" means the maximum capacity of a stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit an air pollutant including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

(11) "Secondary emissions" means emissions which occur as a result of the construction or operation of an existing stationary facility but do not come from the existing stationary facility. Secondary emissions may include, but are not limited to, emissions from ships or trains coming to or from the existing stationary facility.

(12) "Visibility impairing air pollutant" means SO₂, NO_x or particulate matter. Particulate matter smaller than 10 microns in diameter (PM₁₀) may be used as the indicator for particulate matter.

(14) "Visibility impairment" means any humanly perceptible change in visibility, perceived as light extinction, visual range, contrast or coloration, from that which would have existed under natural conditions. Natural conditions include naturally occurring phenomena that reduce visibility as measured in terms of light extinction, visual range, contrast, or coloration.

NR 433.03 Identification of sources subject to BART. (1) On or before 90 days after the effective date of this section ...[revisor insert date], the department shall identify all BART-eligible sources that may reasonably be anticipated to cause or contribute to any visibility impairment in any mandatory class I federal area according to the criteria and procedures in this section and the applicable guidelines in 40 CFR part 51, Appendix Y, incorporated by reference in s. NR 484.04(11m). These sources are identified as sources subject to BART. The department may request in writing information that is required for the identification of sources subject to BART from the owner or operator of a BART-eligible source. The owner or operator of the source shall submit to the department true, accurate and complete information in writing within a reasonable time period specified by the department in its request.

(2) The department shall identify sources subject to BART by using an air quality modeling analysis to estimate the individual contribution of each BART-eligible source to visibility impairment in a mandatory class I federal area. The department shall use an air quality model approved by the EPA and conduct the air quality modeling analysis according to procedures that include all of the following:

(a) The department shall apply the air quality model to each BART-eligible source for calendar years 2002, 2003 and 2004.

(b) The individual contribution to visibility impairment shall be calculated on a daily basis, using emission rates reflecting steady-state operating conditions during periods of high capacity utilization of the source. These emission rates shall reflect either the maximum actual emission rates provided by the owner or operator, if available and approved by the department, or the source's potential to emit. The maximum actual emission rates shall be the 24-hour average actual emission rate from the highest emitting day of the meteorological period modeled, unless this rate reflects

periods of start-up, shutdown or malfunction. The source's potential to emit shall be averaged over 24 hours or shorter periods of time.

(3) A BART-eligible source shall be considered subject to BART if the air quality modeling analysis conducted under sub.(2) demonstrates that the source contributes to visibility impairment in any mandatory class I federal area. A source shall be considered to contribute to visibility impairment if for any year modeled the 98th percentile daily average change in visibility impairment from the source is equal to or greater than 0.5 deciviews, as compared to natural visibility conditions. Natural visibility conditions for each mandatory class I federal area shall be the average natural visibility impairment of the 20% best visibility days, or with department approval of a request made by the source owner or operator, the annual average natural visibility impairment for the class I area.

(4) On or before 90 days after the effective date of this section ...[revisor insert date], the department shall provide written notice to the owner or operator of each facility which the department has determined includes a source that is subject to BART.

NR 433.04 BART analyses. (1) No later than 180 days after the department sends a notification under s. NR 433.03(4) that a source is subject to BART, the owner or operator of the source shall conduct and submit to the department a BART analysis for all emissions units which comprise the BART-eligible source. If the owner or operator submits a written request for an extension prior to the BART analysis submittal deadline date, the department may grant an extension of up to 60 days to the submittal deadline. The BART analysis shall contain all information necessary to evaluate all available retrofit control technologies for each unit and to determine the level of control that is BART for the unit, including all of the following:

(a) A list of all emissions units which comprise the BART-eligible source within the facility.

(b) All available retrofit emission control technologies for each visibility impairing pollutant emitted by each unit subject to BART at the facility.

(c) An evaluation of each control technology identified in par. (b), considering all of the following factors:

1. The costs of compliance.
2. The energy and non-air quality environmental impacts of compliance.
3. Any existing pollution control technology in use at the source.
4. The remaining useful life of the source.
5. The degree of improvement in visibility which may reasonably be anticipated to result from the use of the technology.

(d) Procedures for an initial performance test and for demonstrating compliance with the emission limits representing BART on a continuous basis including continuous emission monitoring, recordkeeping, and reporting according to the applicable requirements of ch. NR 439 or 440.

(2) The BART analysis shall be conducted pursuant to the applicable guidelines in 40 CFR part 51, Appendix Y, incorporated by reference in s. NR 484.04(11m).

(3) If the owner or operator of a BART-eligible source proposes to use the emissions trading program under s. NR 433.06 for compliance with this section, the owner or operator shall submit to the department the emissions trading plan required under s. NR 433.06(1).

(4) If the BART analysis for a source subject to BART demonstrates that all control technologies are technologically or economically infeasible, the owner or operator of the source shall propose in the BART analysis a design, equipment, work practice, or other operational standard, or combination thereof, to meet the BART requirements. If a design, equipment, work practice

or operational standard is proposed, the analysis shall include a calculation of the emission reductions to be achieved by implementation of the design, equipment, work practice or operation, and shall provide the method for demonstrating compliance.

(5) The owner or operator of a BART-eligible source shall certify in writing that any information submitted to the department under this section is true, accurate, and complete, based on information and belief formed after reasonable inquiry.

(6) The department may request in writing additional information necessary to evaluate the BART analysis. The owner or operator of the BART-eligible source shall provide the information in writing within the reasonable period of time specified by the department in the request.

(7) If a fossil fuel-fired steam electric plant subject to BART is subject to the trading programs of the clean air interstate rule under 40 CFR part 97, the owner or operator of the fossil fuel-fired electric plant is not required to conduct a BART analysis for SO₂ and NO_x emissions under this section.

NR 433.05 Determination of BART requirements. (1) PRELIMINARY DETERMINATION. (a) The department shall make a preliminary determination of the BART requirements for each emissions unit which comprises the sources subject to BART based on the information in the BART analysis required under s. NR 433.04 and other available information. The preliminary BART determination for each facility shall include all of the following elements:

1. A list of all emissions units which comprise the source subject to BART.
2. A determination of the BART requirements for each emissions unit.

3. Requirements for initial performance tests and for demonstrating compliance with the emission limits representing BART on a continuous basis, including emission monitoring, recordkeeping and reporting.

4. The requirement that the owner or operator of each source subject to BART shall install and operate BART as expeditiously as practicable, but in no event later than December 31, 2013.

5. The requirement that the owner or operator of each source subject to BART shall maintain the control equipment required by the BART determination and establish procedures to ensure the equipment is properly operated and maintained.

(b) The determination of BART shall be based on the department's review of the analysis of the best system of continuous emission control technology available and associated emission reductions achievable for each unit subject to BART at the facility. The department shall take into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from use of the technology.

(c) The determination of BART for all emissions units which comprise the source subject to BART shall be made pursuant to the applicable guidelines in 40 CFR part 51, Appendix Y, incorporated by reference in s. NR 484.04(11m).

(d) If the department determines that it is technologically or economically infeasible for a source to install and operate the available control technologies, it may instead prescribe a design, equipment, work practice, or other operational standard, or combination thereof to meet the BART requirements. The department shall estimate the emission reduction to be achieved by implementation of the design, equipment, work practice or operation, and shall prescribe the method for demonstrating compliance.

(e) If a fossil-fuel fired steam electric plant is subject to the clean air interstate rule trading programs under 40 CFR part 97 the determination of BART shall be made for particulate matter emissions only.

(f) The department shall incorporate the results of its preliminary BART determination in a draft revision to the source's air quality permit.

(2) EXCEPTION. The department may not make a determination of BART for SO₂ or for NO_x if the potential to emit of a BART-eligible source is less than 40 tons per year of the respective pollutant; or for particulate matter, if the potential to emit PM₁₀ of a BART-eligible source is less than 15 tons per year.

(3) PUBLIC NOTICE AND COMMENT. The department shall notify the owner or operator of the source subject to BART and the EPA of its preliminary BART determination and shall publish a notice of its preliminary BART determination and the draft permit conditions for public comment. The department shall provide at least 30 days for submittal of written comments.

(4) FINAL DETERMINATION. Following the close of the public comment period and after consideration of all public comments, the department shall make a final BART determination and issue a revision to the facility's air quality permit which includes the BART requirements.

(5) REVISION. The department may revise the BART requirements in the air quality permit, if the EPA requires a revision of the BART requirements or the department determines that the revision of the existing BART requirements is justified based on safety, health, environmental or excessive cost impacts which the original BART analysis and BART determination failed to take into account. The department shall provide notice and offer an opportunity for public comment on any proposed revision under this section.

NR 433.06 Emissions trading program for boilers. (1) The owner or operator of a facility, having at least one boiler subject to BART, may

propose an emissions trading program if the program achieves an improvement in visibility in the mandatory class I federal areas greater than would be achieved through the installation and operation of BART on each boiler subject to BART. The owner or operator of a boiler subject to BART proposing to use an emissions trading program shall submit an emissions trading plan to the department prior to the department's BART determination. The plan shall be subject to department approval and meet the following criteria:

(a) The plan shall contain the proposed control strategy and the method of demonstrating compliance.

(b) The plan shall achieve either of the following:

1. For each visibility impairing pollutant subject to the trading plan, an emission reduction at least 10% greater than would be achieved through the installation and operation of BART on each boiler subject to BART.

2. An improvement in visibility in the mandatory class I federal areas greater than or equal to the visibility improvement achieved under subd. 1. The improvement in visibility shall be demonstrated by comparing the 20% best days of visibility and the 20% worst days of visibility in at least the 4 mandatory class I federal areas nearest to the source and for each calendar year 2002, 2003 and 2004. The daily visibility shall be determined using an air quality model approved by the EPA for predicting visibility impacts from single emission sources and conducting the air quality modeling analyses according to the guidelines in 40 CFR part 51, Appendix Y, incorporated by reference in s. NR 484.04(11m).

(c) Trading shall be between all boilers located on the same property.—

(d) Boilers participating in the trading shall achieve the required emission reductions on a continuous basis and shall be subject to continuous emission monitoring, which meets the applicable requirements under ch. NR 439 or 440.

(e) The plan shall specify the monitoring devices and procedures which

will be used to provide information sufficient to assess the performance of the proposed emission control measures and to quantify on an hourly average basis the mass flow of each pollutant in pounds per hour and the emission rate of each pollutant in pounds per mmBtu heat input for each boiler participating in the trading. The procedures and methods required for compliance demonstration and for performance testing shall be according to the applicable requirements of ch. NR 439 or 440.

(f) Excess emission reductions, for the purposes of meeting the BART requirements, shall be emission reductions beyond those required to meet all state and federal requirements and may not include emission reductions used in any other banking or trading program.

(2) If the department approves the emissions trading plan, the department shall propose to revise the source's air quality permit to include the requirements of the emissions trading plan in lieu of the BART requirements for the boilers identified in the emissions trading plan.

(3) After the department incorporates the emissions trading plan in the revised air operation permit, the owner or operator of the BART-eligible source shall comply with the requirements of the emissions trading plan for the boilers identified in the plan.

SECTION 2. NR 484.04(11m) in Table 2 is created to read:

NR 484.04

	CFR Appendix Reference	Title	Incorporated by Reference For
(11m)	40 CFR part 51 Appendix Y	Guidelines for BART Determinations Under the Regional Haze Rule	NR 433.03(1) NR 433.04(2) NR 433.05(1)(c)

SECTION 3. 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 4. 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)