Report From Agency

REPORT TO LEGISLATURE

NR 433, Wis. Adm. Code
Identification of sources subject to the Best Available Retrofit Technology (BART) requirements for visibility protection and the determination of BART for those sources

Board Order No. AM-04-06
Clearinghouse Rule No. 07-017

Basis and Purpose of the Proposed Rule

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. Under s. 285.14(2), Stats., rules that affect the State Implementation Plan must be submitted to standing committees of the legislature with jurisdiction over environmental matters at least 60 days before the rule may be submitted to the U.S. Environmental Protection Agency. It is the Department's intent to submit the proposed rule to the U.S. EPA as a revision to the State Implementation Plan.

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 SO_2, 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, NOx 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 NOx controls, if they are subject to the SO2 and NOx trading programs of the Clean Air Interstate Rule (CAIR). This exception is consistent with EPA's finding that CAIR requirements for SO2 and NOx 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 (SO_2), 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 (SO_2) 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 NOx, 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 NOx emissions if the power plant demonstrates that its compliance with CAIR meets its BART requirements for SO2 and NOx 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 NOx 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 NOx 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 NOx 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.

Summary of Public Comments

The summary of public comments is attached.

Modifications Made

After consideration of comments that the Department consider the Clean Air Interstate Rule (CAIR) as a BART-substitute for electric generating units, the Board adopted revisions to the rule on the CAIR as BART-substitute issue and is 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.

Appearances at the Public Hearing

March 13, 2007 – Wausau

In support – none
In opposition – none

As interest may appear:

Kelly T. Zagrzebski, 4512 Huntington Court, Wausau, WI 54401

March 15, 2007 – Milwaukee

In support:

Elizabeth Wheeler, Clean Wisconsin, 122 State Street, Suite 200, Madison, WI 53702

In opposition:

Michele Pluta, Alliant Energy, 4902 N. Biltmore Lane, Madison, WI 53707

As interest may appear:

Kris McKinney, WE Energies, 333 W. Everett St., A231, Milwaukee, WI 53203
Dave Durment, 231 W. Michigan, P145, Milwaukee, WI 53203

Changes to Rule Analysis and Fiscal Estimate

The rule analysis was changed to reflect consideration of the CAIR rules. The fiscal estimate is unchanged.

Response to Legislative Council Rules Clearinghouse Report

The recommendations were accepted.

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?nRmoId=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 NOx 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 NOx 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 NOx 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 NOx 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 <u>each</u> 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 consistence 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 it's 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 Seney 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 NOx 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.