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**TITLE 326 AIR POLLUTION CONTROL BOARD**

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**SECOND NOTICE OF COMMENT PERIOD**

LSA Document #09-498

**DEVELOPMENT OF NEW RULES CONCERNING BEST AVAILABLE RETROFIT TECHNOLOGY EMISSION LIMITATIONS****PURPOSE OF NOTICE**

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for new rules establishing best available retrofit technology (BART) emission limitations in order to comply with the federal regional haze rule. By this notice, IDEM is soliciting public comment on the draft rule language. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

**HISTORY**

First Notice of Comment Period: July 22, 2009, Indiana Register (DIN: [20090722-IR-326090498FNA](#)).

**CITATIONS AFFECTED:** [326 IAC 26](#).

**AUTHORITY:** [IC 13-14-8](#); [IC 13-14-9](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#).

**SUBJECT MATTER AND BASIC PURPOSE OF RULEMAKING****Basic Purpose and Background**

The First Notice of Comment Period included a discussion of three possible alternatives that could be utilized in this rulemaking to establish BART emission limitations. IDEM has decided to pursue alternative 2 that will establish BART requirements for only those sources subject to BART that have been determined to have a significant impact on a Class 1 area rather than establish BART requirements for all sources subject to BART. Alternative 3 was to do no rulemaking, an alternative IDEM eliminated because it would cause Indiana to fail to comply with the federal regional haze rule.

In accordance with Sections 169A and 169B of the Clean Air Act, the regional haze rule (64 FR 35714, July 1, 1999) requires IDEM to submit a state implementation plan (SIP) to address visibility impairment in federally-protected parks and wilderness areas (Class I areas). To meet this requirement, IDEM must evaluate whether certain emission units within affected industries adversely impact visibility in Class I areas. Though there are no Class I areas in Indiana, there are several in the region that may be affected by emissions from Indiana sources. On July 6, 2005, U.S. EPA published the BART guidelines in the Federal Register (70 FR 39104). These guidelines are a component of the regional haze regulations that are intended to protect and improve visibility in national parks and wilderness areas. The BART guidelines provide the mechanism for complying with the requirement to address visibility impairment in Class I areas.

To meet the BART component of the federal regional haze rule, Indiana's BART rule was planned in two phases. The first rule, which became effective on February 22, 2008, incorporates by reference the federal rule and guidelines and goes further to provide specific milestones to assist sources and IDEM in meeting the requirements ([326 IAC 26-1](#)). That rule set the process for sources that are subject to BART to provide the BART analysis necessary to determine the proper level of control for each emission unit and pollutant subject to BART. This second rulemaking will incorporate all necessary BART emission limits for sources subject to BART into [326 IAC 26](#) and will amend any other existing rules in Title 326 necessary for consistency.

In conjunction with sources affected by the federal BART requirements, IDEM has identified the BART-eligible units and through dispersion modeling has determined which of these sources are subject to the BART requirements. BART applies to emissions of sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and direct particulate matter (PM), including PM<sub>2.5</sub> and PM<sub>10</sub>, that contribute to visibility impacts.

IDEM has completed work with sources subject to BART to verify the source information to determine if the source must comply with the BART requirements. The emission limits for these sources will be established and included in this rulemaking. In accordance with the federal requirements, the emission limits will be based on 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; and (5) the degree of improvement in visibility that may reasonably be anticipated to result from the use of such technology.

On May 12, 2005, U.S. EPA published the Clean Air Interstate Rule (CAIR) in the Federal Register at 70 FR 25162, requiring reductions in emissions of SO<sub>2</sub> and NO<sub>x</sub> from electric generating units in 28 eastern states and the District of Columbia. Though vacated on July 11, 2008, CAIR has since been reinstated and remanded to U.S. EPA for reconsideration. In states affected by CAIR, U.S. EPA determined that CAIR improved visibility more than

implementing BART for electric generating units (EGUs), except for EGUs over 750 megawatts that must follow the BART guidelines in accordance with 40 CFR 51.308(e)(1)(ii)(B). Because CAIR was expected to result in significant reductions in SO<sub>2</sub> emissions and NO<sub>x</sub> emissions, Indiana chose to use CAIR as a substitute for BART rather than require BART-eligible EGUs to install, operate, and maintain BART in accordance with the BART guidelines ([326 IAC 26-1-5](#)). This decision may change based on the changes in U.S. EPA's CAIR Replacement rule to be published soon.

On October 13, 2006, U.S. EPA published a final rule on alternatives to source-specific BART (71 FR 60612) that allows sources subject to BART to propose an alternative to BART controls. Sources that propose an alternative to BART are required to demonstrate that the proposed alternative is better than BART and would still have to conduct the analysis to establish what the BART control level should be for the sources subject to BART. The analysis would need to show greater reasonable progress toward improved visibility than BART. The alternative could affect BART and non-BART units.

In establishing [326 IAC 26-1](#) (the 2008 Indiana BART rulemaking), IDEM established a compliance date of not more than five years from the effective date of the state rule; therefore, BART requirements established in this rulemaking will be effective no later than February 22, 2013.

Because the BART requirements themselves are "applicable" requirements of the CAA, they must be included as Title V permit conditions according to the procedures established in 40 CFR Part 70. Section 302(k) of the CAA requires emissions limits such as BART to be met on a continuous basis. Although this provision does not necessarily require the use of continuous emissions monitoring systems (CEMS), it is important that sources employ techniques that ensure compliance on a continuous basis. Monitoring requirements generally applicable to sources, including those that are subject to BART, are governed by other rules.

### Indiana BART Sources

Of the sources identified as BART-eligible, modeling indicates that one non-EGU source, Alcoa, is subject to BART. This source in Warrick County includes an on-site power generating facility, Alcoa-Warrick Power Plant, AGC Division of Alcoa Generating, Inc., and the aluminum manufacturing facility, Alcoa-Warrick Operations. This rulemaking includes units from both facilities.

IDEM identified several EGUs that are subject to BART. However, as provided by the federal rule, IDEM assumes NO<sub>x</sub> and SO<sub>2</sub> BART requirements are met by the participation of these sources in the CAIR NO<sub>x</sub> and SO<sub>2</sub> trading program. Other non-EGU sources were also identified as being BART-eligible, but they submitted analyses demonstrating that they are not subject to BART. These sources are SABIC Innovative Plastics-Mt. Vernon, ArcelorMittal-Burns Harbor LLC, and ESSROC Cement Corp.-Speed. IDEM's findings are subject to approval by U.S. EPA.

Alcoa submitted a BART analysis in which it developed BART and alternative BART control strategies. Due to technical or economic concerns relating to BART units, the alternative control strategy requires less emissions reductions from several subject-to-BART units. However, it proposes to control emissions from Boiler 1 that is not a BART-eligible unit, resulting in greater overall emission reductions. The modeling analysis shows that the alternative also achieves greater visibility improvement than BART. Alcoa plans additional changes to potline operations in the future, as described in their "BART Determination Report", December 2008, that was submitted to IDEM. Those changes will be submitted to U.S. EPA for approval into the SIP.

The alternative to BART proposed by Alcoa includes less emissions reductions on certain units for technical or economic reasons. However, Alcoa is proposing to control emissions from Boiler 1, which is not a BART-eligible unit to compensate for the BART units. Alcoa determined SO<sub>2</sub> BART for Boilers 2 and 3 as a 92% reduction of sulfur, but proposes to control SO<sub>2</sub> emissions from these boilers by 90% as part of the alternative. Alcoa currently limits sulfur in the anode grade coke to less than or equal to 2% sulfur, which is currently the limit in the sulfur dioxide rules at [326 IAC 7-4-10](#) and the limit approved into Indiana's SIP. Based on a market study, Alcoa has determined that the supply of less than 3% sulfur coke cannot be predicted beyond 2013. Therefore, Alcoa proposes BART as less than or equal to 3% sulfur coke and the alternative as less than or equal to 3.5% sulfur coke. In the alternative scenario, Alcoa proposes to control SO<sub>2</sub> emissions from Boiler 1 by 91% to compensate for the BART units. This scenario achieves visibility improvement and emissions reductions beyond what would be obtained under BART. IDEM agrees with this conclusion and, therefore, for purposes of this rule, the draft rule language includes the alternative to BART limits, except for the SO<sub>2</sub> limits for Potlines 2-6, which remain consistent with the current SO<sub>2</sub> rule limits in [326 IAC 7-4-10](#). However, the limits for Potlines 2-6 in [326 IAC 7-4-10](#) could be revised to accommodate up to 3.5% sulfur coke as contained in the alternative to BART scenario. A revision to the potline limits consistent with the alternative to BART analysis would not require a revision to this rule or Indiana's Regional Haze SIP.

Also included in the alternative scenario, NO<sub>x</sub> emissions are controlled for Boilers 1, 2, and 3 to 0.38 lb/MMBtu on a 24-hour rolling average. Presumptive BART for non-EGU industrial boilers is 0.39 lb/MMBtu. The existing electrostatic precipitators on Boilers 2, 3, and 4 were determined to be BART.

IDEM has reviewed the analyses for completeness and approvability in accordance with [326 IAC 26-1](#), the BART guidelines, and 40 CFR 51.308(e) and 40 CFR 51.308(i). The emission limits representing BART or the

alternative to BART will be included in this rulemaking and the Part 70 permit for each unit subject to BART. The completed BART rulemaking will be submitted to U.S. EPA for approval into the SIP.

#### **IC 13-14-9-4 Identification of Restrictions and Requirements Not Imposed under Federal Law**

Section 169A and 169B of the CAA contain authority and requirements to regulate pollutants that contribute to visibility impairment in mandatory Class I federal areas. The regional haze rule under 40 CFR 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans) is the federal regulation addressing these visibility issues and contains the BART guidelines at 40 CFR 51, Appendix Y (Guidelines for BART Determinations Under the regional haze rule). The actual limitations contained in this rule are not in federal language, but the authority and requirement to develop the limits comes from federal law, rules, and guidelines.

#### **Potential Fiscal Impact**

A source subject to BART may incur costs in complying with the BART requirements of this rulemaking, but the requirements to be established in state rule are based in the federal regional haze rule so that the state rule would impose no requirement that is not imposed under federal law. If Indiana does not adopt this rule, sources subject to BART would still be required to comply with the requirements as they exist in federal law. For this reason, this rulemaking will not impose a fiscal impact greater than \$500,000.

#### **Public Participation and Workgroup Information**

At this time, no workgroup is planned for the rulemaking. If you feel that a workgroup or other informal discussion on the rule is appropriate, please contact MaryAnn Stevens in the Office of Legal Counsel, Rules Development Branch at (317) 232-8635 or (800) 451-6027 (in Indiana). Please provide your name, phone number, and e-mail address, if applicable, where you can be contacted.

#### **SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST COMMENT PERIOD**

IDEM requested public comment from July 22, 2009, through August 21, 2009, regarding new rules establishing BART emission limitations in order to comply with the federal regional haze rule. IDEM received comment letters from the following parties by the comment period deadline:

Alcoa Power Generating Inc., Warrick Operations, Newburgh, Indiana (APGI)

ESSROC Cement Corp., Speed, Indiana (ESSROC)

SABIC Innovative Plastics, Mt. Vernon, Indiana (SABIC)

Following is a summary of the comments received and IDEM's responses thereto:

*Comment:* IDEM should adopt Alternative 2, listed in the First Notice of Rulemaking, to establish BART requirements only for those sources subject to BART that have been determined to have a significant impact on a Class 1 area. This alternative is allowed by the federal regional haze rule, and it is a reasonable approach because it does not require costly controls or complex permit limitations to be applied to sources that do not have a significant impact on visibility at Class 1 areas. Exempt sources, if required to expend resources on permits and, possibly, controls, would not significantly improve visibility in Class 1 areas. After expending resources on making an exemption determination from BART, a source's resources would have been wasted if Alternative 2 is not chosen as the rulemaking alternative. (ESSROC)

*Response:* IDEM concurs and plans to only establish BART requirements for sources subject to BART that are determined to have a significant impact on a Class I area.

*Comment:* The first notice for this rulemaking, LSA Document #09-498, uses the term "BART eligible sources" incorrectly in the text under the heading "Indiana BART Sources". Pursuant to BART rules, sources "subject to BART" are a subset of "BART eligible" sources. Correctly stated, the second sentence of the second paragraph under "Indiana BART Sources" should read as follows: "The emission limits representing BART or an alternative to BART will be included in this rulemaking and the Part 70 permit for each source subject to BART." (SABIC)

*Response:* IDEM concurs that a more appropriate term in the referenced sentence of the Subject Matter and Basic Purpose of Rulemaking portion of the First Notice of Comment Period would have been to reference "each source subject to BART". This will be clarified if IDEM addresses this topic in future rule background information.

*Comment:* The first notice for this rulemaking, LSA Document #09-498, needs to provide more explanation of the differences between Alternative 1 and Alternative 2. A determination that a source is subject to BART utilizes both modeling as described in 40 CFR 51, Appendix Y and a determination whether the source causes or contributes to the specified visibility impairment at a Class 1 area. The first notice is unclear as to whether the determination that a source has a "significant impact on a Class 1 area", as referenced in Alternative 2, is different than the determination that the source "causes or contributes to visibility impairment at a Class 1 area", as specified in [326 IAC 26-1-4\(a\)\(3\)](#). If "significant impact on a Class 1 area" is different, then the basis for such a determination should be established in rulemaking. If it is not different, then Alternative 2 should be eliminated. (SABIC)

*Response:* The original BART rulemaking finalized in 2008, provided a process to determine BART

requirements to meet the federal regional haze rule and the BART Guidelines in 40 CFR 51, Appendix Y. As part of that process, there was an option to apply BART requirements to all BART-eligible sources or only to the subset of BART-eligible sources that impact a Class I area. Through discussions with stakeholders and U.S. EPA during that rulemaking, a decision was made to develop language describing the specific criteria that would be used to determine if a BART-eligible source was subject to BART by determining if the source caused or contributed to visibility problems at a Class I area.

Alternative 1 in this rulemaking is an acknowledgment that the option exists to revisit the decision to limit BART requirements to only those BART-eligible sources that cause or contribute to visibility problems at a Class I area. Based on the comments received and internal discussion, IDEM plans to maintain the criteria listed in [326 IAC 26-1-4\(a\)](#) and will not apply BART to all BART-eligible sources.

*Comment:* Alcoa, Warrick Operations facilities proposed an alternative to BART in accordance with Indiana's current alternative to BART rule, [326 IAC 26-1-7](#). The first notice for this rulemaking, LSA Document #09-498, is of concern to Alcoa because it appears to be a substantive change to [326 IAC 26-1](#) dealing with alternatives to BART by virtue of the newly added requirement that "Any alternative must be for the same pollutant and must be demonstrated to attain a greater improvement in visibility than BART." (#09-498 First Notice under heading "Basic Purpose and Background"). The proposed requirement that an alternative must be for the same pollutant is a new requirement that was not previously required by [326 IAC 26-1-7](#), Appendix Y to Part 51, or 40 CFR 51.308(e)(3). It would be improper for IDEM to change the existing regulation concerning sources pursuing an alternative to BART after the analyses and proposed alternatives have been submitted by the sources subject to BART. (APGI)

*Comment:* As modeling demonstrated in the alternative to BART analysis submitted by Alcoa, an alternative to BART can meet the acceptability criteria of achieving "greater reasonable progress", even though the alternative was not based solely on a same pollutant basis. IDEM should remove the requirement from consideration under LSA Document #09-498 that any BART "alternative must be for the same pollutant" and keep the current language of [326 IAC 26-1-7](#) that requires that an alternative to BART must be demonstrated to attain a greater improvement in visibility than BART. (APGI)

*Response:* IDEM concurs that an alternative to BART does not necessarily have to be for the same pollutant as long as the requirements to [326 IAC 26](#), 40 CFR 51 Appendix Y, and 40 CFR 51.308(e) are met. Though this was in the background sections of the original BART rule and the First Notice of Comment Period for this rulemaking, this requirement is not in the existing BART rule in [326 IAC 26](#) and it will not be included in draft rule language for this rulemaking.

*Comment:* The appropriate approach that IDEM should utilize under this rulemaking is to create a regulatory provision that enables IDEM to establish facility specific BART determinations, for example, the enforceable emission limit for each subject emission unit at the source and for each haze pollutant that is emitted from the source, as specific permit conditions that are to be incorporated into a facility's Title V operating permit according to the reopening provisions of 40 CFR 70.7(f). (APGI)

*Response:* In accordance with federal BART and Part 70 permitting requirements and the existing state rule at [326 IAC 26-1-8](#), IDEM intends to include BART requirements as permit conditions in Title V permits.

## REQUEST FOR PUBLIC COMMENTS

At this time, IDEM solicits the following:

- (1) The submission of alternative ways to achieve the purpose of the rule.
- (2) The submission of suggestions for the development of draft rule language.

Mailed comments should be addressed to:

#09-498 (BART emission limits)

MaryAnn Stevens

Mail Code 61-49

Rules Development Branch

Office of Legal Counsel

Indiana Department of Environmental Management

100 North Senate Avenue

Indianapolis, Indiana 46204-2251

Hand delivered comments will be accepted by the receptionist on duty at the thirteenth floor reception desk, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Room N1301, Indianapolis, Indiana. Comments also may be submitted by facsimile to (317) 233-5517. Please confirm the timely receipt of faxed comments by calling the Rules Development Branch at (317) 233-8903. Please note it is not necessary to follow a faxed comment letter with a copy of the letter submitted through the postal system.

## COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by July 30, 2010.

Additional information regarding this rulemaking action may be obtained from MaryAnn Stevens, Rules



**DRAFT RULE**

SECTION 1. [326 IAC 26-2](#) IS ADDED TO READ AS FOLLOWS:

**Rule 2. Best Available Retrofit Technology Emission Limitations**

**[326 IAC 26-2-1](#) Applicability**

Authority: [IC 13-14-8](#); [IC 13-14-9](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

Affected: [IC 13-15](#); [IC 13-17](#)

Sec. 1. (a) This rule applies to a BART-eligible source determined to be subject to BART under [326 IAC 26-1-4](#).

(b) Alcoa in Warrick County is determined to be subject to BART and is required to meet the emission limitations and other requirements as specified in section 2 of this rule.

(Air Pollution Control Board; [326 IAC 26-2-1](#))

**[326 IAC 26-2-2](#) Alcoa emission limitations and compliance methods**

Authority: [IC 13-14-8](#); [IC 13-14-9](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

Affected: [IC 13-15](#); [IC 13-17](#)

Sec. 2. Alcoa Power Generating Inc. - Warrick Power Plant, Source Identification Number 00002, and Alcoa, Inc. - Warrick Operations, Source Identification Number 00007, shall comply with the emission limitations and compliance methods as follows:

(1) Boiler 1 at Alcoa Power Generating Inc. - Warrick Power Plant shall be in compliance with the following requirements:

(A) PM (filterable) as follows:

(i) The emission limitation is three-hundredths (0.03) pounds per million British thermal units (lb/MMBtu) on a twenty-four (24) hour daily average.

(ii) The compliance method is a continuous emissions monitoring system (CEMS) at the scrubber outlet in accordance with 40 CFR 60, Appendix B, Performance Specification 11 (PS-11)\*.

(B) SO<sub>2</sub> as follows:

(i) The removal efficiency is ninety-one percent (91%) SO<sub>2</sub> removal on a twenty-four (24) hour daily average.

(ii) The compliance method is a CEMS at the scrubber inlet and outlet in accordance with 40 CFR 60, Appendix B, Performance Specification 2 (PS-2)\*.

(C) NO<sub>x</sub> as follows:

(i) The emission limitation is thirty-eight hundredths (0.38) lb/MMBtu on a twenty-four (24) hour daily average.

(ii) The compliance method is a CEMS at the scrubber outlet in accordance with PS-2\*.

(2) Boilers 2 and 3 at Alcoa Power Generating Inc. - Warrick Power Plant shall each be in compliance with the following requirements:

(A) PM (filterable) as follows:

(i) The emission limitation is three-hundredths (0.03) lb/MMBtu on a twenty-four (24) hour daily average.

(ii) The compliance method is a CEMS at the scrubber outlet in accordance with PS-11\*.

(B) SO<sub>2</sub> as follows:

(i) The removal efficiency is ninety percent (90%) SO<sub>2</sub> removal on a twenty-four (24) hour daily average.

(ii) The compliance method is a CEMS at the scrubber inlet and outlet in accordance with PS-2\*.

(C) NO<sub>x</sub> as follows:

(i) The emission limitation is thirty-eight hundredths (0.38) lb/MMBtu on a twenty-four (24) hour rolling average.

- (ii) The compliance method is a CEMS at the scrubber outlet in accordance with PS-2\*.
- (3) Boiler 4 at Alcoa Power Generating Inc. - Warrick Power Plant shall be in compliance with PM (filterable) requirements as follows:
  - (A) The emission limitation is one-tenth (0.1) lb/MMBtu on a twenty-four (24) hour daily average.
  - (B) The compliance method is in accordance with 40 CFR 60, Appendix A, Method 5\*.
- (4) Potlines 2 through 6 at Alcoa, Inc. - Warrick Operations shall be in compliance with the following requirements:
  - (A) PM (filterable) as follows:
    - (i) The emission limitation is five-thousandths (0.005) grains per standard cubic foot (grains/scf) as measured at the outlet of the primary control devices for potlines 2 through 6.
    - (ii) The compliance method is in accordance with 40 CFR 60, Appendix A, Method 5\* for the:
      - (AA) Gas Treatment Center control device for potlines 3 and 4; and
      - (BB) primary control devices for potlines 2, 5, and 6, except that the stacks selected for sampling shall use the method described in the Site Specific Test Plan for measuring annual total fluoride emissions from potroom group primary control devices, as required by 40 CFR 63.847(b).
  - (B) SO<sub>2</sub> as follows:
    - (i) The emission limitations in [326 IAC 7-4-10\(a\)\(4\)\(B\)](#) through [326 IAC 7-4-10\(a\)\(4\)\(F\)](#).
    - (ii) The compliance method is [326 IAC 7-4-10\(c\)](#) and:
      - (AA) [326 IAC 7-4-10\(b\)](#); or
      - (BB) material balance calculations approved by the department.

\*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(Air Pollution Control Board; [326 IAC 26-2-2](#))

#### [Notice of Public Hearing](#)

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