INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: August 31, 2011

RE: ALCOA Power Generating, Inc. – Warrick Power Plant / 173-29684-00002

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

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(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNTVOP.dot12/3/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

ALCOA Power Generating, Inc - Warrick Power Plant
4700 Darlington Road
Newburgh, Indiana 47630

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T173-29684-00002	
Issued by: Tripurari Sinha Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: August 31, 2011 Expiration Date: August 31, 2016

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Certification
Emergency Occurrence Report
Quarterly Report
Quarterly Deviation and Compliance Monitoring Report

Appendix A: Acid Rain Permit

Attachment A: 40 CFR Part 60, Subpart OOO, Standards of Performance for Stationary Nonmetallic Mineral Processing Plants

Attachment B: 40 CFR Part 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Attchment C: 40 CFR Part 60, Subpart Db, New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary electric utility generating station.

Source Address:	4700 Darlington Road, Newburgh, Indiana 47630
General Source Phone Number:	812-853-1519
SIC Code:	4931
County Location:	Warrick
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Major Source, under Nonattainment NSR Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced on July 26, 1956, with an on-line date of April 1960, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-1, which is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NO_x), carbon dioxide (CO_2), sulfur dioxide (SO_2), and particulate matter (PM). Boiler No. 1 was configured with a low NO_x burner and over-fire air in 2003. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 1 were installed in 2008.

Note: Boiler No. 1 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced on July 26, 1956, with an on-line date of January 1964, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-2, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 2 was configured with a low NOx burner and over-fire air in 2004. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 2 were installed in 2008.

Note: Boiler No. 2 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(c) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced on July 26, 1956, with an on-line date of October 1965, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-3, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 3 was configured with a low NOx burner and over-fire air in 2002. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 3 were installed in 2008.

Note: Boiler No. 3 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced on March 16, 1968, with an electrostatic precipitator (ESP) for control of particulate matter. Boiler No. 4 was configured with a low NOx burner in 1998, a Selective Catalytic Reduction (SCR) system permitted and constructed in 2004, a wet FGD scrubber, which commenced operation in 2008, and a reagent injection system that will reduce sulfuric acid emissions exiting the SCR, constructed in 2009. Boiler No. 4 has a nominal heat input capacity of 2,958 MMBtu/hr, and vents to Stack 243, which has continuous emissions monitors (CEMs) for nitrogen oxides (NOx), carbon dioxide (CO2), and sulfur dioxide (SO2), and a continuous opacity monitor (COM). Boiler No. 4 has a natural gas burner for start-up and may be fired in conjunction with the coal-fired capability. Construction of a dedicated wet limestone slurry absorber scrubber began in 2005.

This unit is not an affected facility under NSPS Da because it did not commence construction, modification, or reconstruction after September 18, 1978, or after June 19, 1984. The low NO_x burner constructed in 1998, the SCR system constructed in 2004, and the wet FGD scrubber, constructed in 2008 do not qualify as modifications as defined by 40 CFR 60, Subpart A. Specifically, the physical change did not result in increases to the atmosphere of any air pollutant (to which a standard applies) or result in any air pollutant not previously emitted.

(e) One (1) gas-fired boiler, identified as Emergency Rolling Mill Boiler, constructed in 1979, with a nominal heat input capacity of 79 million Btu per hour (MMBtu/hr) and exhausting to Stack 242.

This unit is not an affected facility under NSPS Db because it did not commence construction, modification or reconstruction after June 19, 1984.

(f) One (1) unloading station for barges, constructed prior to 1974, consisting of a clamshell bucket that transfers coal and limestone from the barge to a spud hopper, with a nominal throughput of 1,300 tons of coal per hour or 800 tons of limestone per hour, a pipe conveyor will transfer the material to a hopper used for loading trucks, with emissions from the drop points controlled by a baghouse, exhausting through Stack 244. The spud hopper and the baghouse were installed in 2008 in order to accommodate the transfer of limestone. The unloading station is not considered an affected facility under 40 CFR 60, Subpart OOO when unloading and transferring limestone because it is not physically connected to the crushing/grinding operations.

(g) A coal transfer system, constructed prior to 1974, with a nominal throughput of 1,300 tons of coal per hour, consisting of the following equipment:

(1) One (1) unloading station for trucks, adjacent to the 211 railcar dumper, with a drop point to an underground conveyor, with the drop point, identified as DP-1, equipped with wet suppression, and exhausting to the ambient air.

(2) The 211 rail car dumper, with an enclosed drop point to an underground conveyor, with the drop point, identified as DP-3, equipped with wet suppression and exhausting to the ambient air.

(3) One (1) 9.0 acre coal storage pile, having an estimated storage capacity of 300,000 tons, with fugitive emissions controlled by periodic watering by truck, and exhausting to the ambient air.

(4) The 210H truck hopper, with a drop point on a coal storage pile identified as F-1, uncontrolled and exhausting to the ambient air.

(5) Multiple unloading stations for trucks, with drop points to a coal storage pile, identified as F-1, uncontrolled and exhausting to the ambient air.

(6) Enclosed conveyor (4), with a drop point to the F-1 coal pile stacking tower, uncontrolled and exhausting to the ambient air.

(7) Enclosed conveyors 5 and 5A with each transfer point enclosed.

(8) Nineteen (19) coal bunkers (four (4) coal bunkers per unit for units 1-3, and seven (7) for unit 4). Bunkers are loaded via a conveyor tripper system servicing Boilers No. 1, No. 2, No. 3 and No. 4. Particulate matter generated from loading bunkers is controlled by rotoclones or water sprays and exhausts to the ambient air.

(9) Two (2) enclosed coal crushers, operating in parallel, constructed in 1960, with each transfer point equipped with wet suppression, and exhausting to the ambient air.

(h) A limestone transfer and handling system were installed in 2008, with a nominal throughput of 500 tons of limestone per hour, consisting of the following equipment:

(1) One (1) 1.42 acre limestone storage pile, having an estimated storage capacity of 22,000 tons, with fugitive emissions controlled by periodic watering by truck. Under 40 CFR 60, Subpart OOO, this is not an affected unit since it is not directly connected to the product line of the nonmetallic mineral processing plant.

(2) One (1) limestone hopper, receiving limestone from the stockpiles via front end loaders, emissions uncontrolled and exhausting to ambient air.

(3) One (1) enclosed pipe conveyor, transferring limestone from the limestone hopper to one (1) of the three (3) limestone day silos, emissions controlled by the limestone day silos bin vent filters.

(4) Three (3) limestone day silos No. 1 - No. 3, each with maximum throughput capacity of 20.0 tons per hour, each equipped with a bin vent filter for particulate control, exhausting to vents 245, 246, and 247, respectively.

(5) Three (3) weigh scales, each with a maximum capacity of 20.0 tons per hour, each receiving material from one of the limestone day silos and transferring limestone to one (1) of three (3) gravity discharge chutes, all emissions control by the limestone day silos' bin vent filters, and exhausting to vents 245, 246, 247.

(6) Three (3) wet ball mill crushers, receiving limestone from weigh scales via the three (3) gravity discharge chutes, the transfer point is enclosed and emissions are controlled by the limestone day silos' bin vent filters, and exhausting to vents 245, 246, and 247.

Under 40 CFR 60, Subpart OOO, the one (1) limestone hopper, one (1) pipe conveyor, three (3) limestone day silos, three (3) weigh scales, three (3) gravity discharge chutes, and three (3) wet ball mill crushers are considered affected units.

(i) One (1) dry flyash storage and loadout system, consisting of the following equipment:

(1) Three (3) pneumatic conveyors with filter/separators, Units #1, #2, and #3 Pneumatic Conveyor Air Filter/Separators, were installed 2009; each of a capacity of 14.0 tons per hour, each equipped with a baghouse for particulate control, and venting to stacks 283A1, 283A2, and 283A3, respectively.

(2) One (1) pneumatic conveyor with filter/separator, Unit #4 Pneumatic Conveyor Air Filter/Separator, installed in 2009; with a capacity of 30.0 tons per hour, equipped with a baghouse for particulate control, and venting to stack 283B1.

(3) One (1) intermediate silo, Units #1 - #3 Intermediate Flyash Silo installed in 2009, with a capacity of 42.0 tons per hour, equipped with a baghouse for particulate control, and exhausting to stack 283A.

(4) One (1) intermediate silo, Unit #4 Intermediate Flyash Silo installed in 2009, with a capacity of 30.0 tons per hour, equipped with a baghouse for particulate control, and exhausting to stack 283B.

(5) One (1) dry flyash storage silo, Flyash Loadout Silo installed in 2009, with a capacity of 72.0 tons per hour, equipped with a baghouse for particulate control, exhausting to stack 283C.

(j) A gypsum transfer and handling system installed in 2008, with a nominal throughput of 72 tons of gypsum per hour, consisting of the following equipment:

(1) One (1) gypsum vacuum belt press dewatering system installed in 2008, with a nominal capacity of 72 tons of gypsum per hour, emissions are uncontrolled and exhausting through vent 248 to ambient atmosphere.

(2) One (1) saturated gypsum enclosed pipe conveyor installed in 2008, with a nominal capacity of 72 tons of saturated gypsum per hour.

Under 40 CFR 60, Subpart OOO, these units are not considered affected units.

(k) One (1) diesel emergency firewater pump engine, identified as 249, built in 2005 and approved for construction in 2008, rated at 465 horsepower, using no controls. Under 40 CFR 63, Subpart ZZZZ, the diesel emergency firewater pump engine is considered to be a stationary internal combustion engine.

(l) Various diesel engine driven pumps, each with a rated capacity of less than 500 horsepower, identified as Y-pit Pumps approved for construction in 2008, provided the total combined horsepower of all diesel engine driven pumps does not exceed 1000 horsepower, located at the Y-pit for the purpose of removing rainwater. Pursuant to 40 CFR 1068.30, these Y-pit Pumps are considered nonroad engines. Therefore, under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, these Y-pit Pumps are not considered to be stationary internal combustion engines.

(m) Two (2) rental diesel units that shall not exceed 775 hp each, permitted in 2008, identified as Engine1 and Engine2. Pursuant to 40 CFR 1068, the rental diesel units are considered nonroad engines. Therefore, under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, the engines are not considered to be stationary internal combustion engines.

Note: These rental diesel units will be installed on an as-needed basis.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Underground conveyors. [326 IAC 6-3]

(b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3]

(c) Two (2) emergency generators, each rated at 201 HP. Under 40 CFR 63, Subpart ZZZZ, the emergency generators are considered to be a stationary internal combustion engines.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

(c) It is an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]

(a) This permit, T173-29684-00002, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit or of permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control).

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)][326 IAC 2-7-6(1) and (6)][326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee’s control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T173-29684-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit, except for permits issued pursuant to Title IV of the Clean Air Act and 326 IAC 21 (Acid Deposition Control)

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12] [40 CFR 72]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Pursuant to 326 IAC 2-7-11(b) and 326 IAC 2-7-12(a), administrative Part 70 operating permit amendments and permit modifications for purposes of the acid rain portion of a Part 70 permit shall be governed by regulations promulgated under Title IV of the Clean Air Act. [40 CFR 72]

(c) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b),(c), or (e). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

(f) This condition does not apply to emission trades of SO_2 or NO_X under 326 IAC 21 or 326 IAC 10-4.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of

326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]

C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.13 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.14 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2][326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(rr)(2)(A)(iii) and/or 326 IAC 2-3-1 (mm)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)) that a “project” (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(ee) and/or 326 IAC 2-3-1(z)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(rr) and/or 326 IAC 2-3-1(mm)), the Permittee shall comply with following:

(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (qq) and/or 326 IAC 2-3-1 (ll)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (xx) and/or 326 IAC 2-3-1 (qq), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS
Four (4) Coal-Fired Boilers: (Boiler No. 1, Boiler No. 2, Boiler No. 3 & Boiler No. 4)

Emissions Unit Description:

(a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced on July 26, 1956, with an on-line date of April 1960, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-1, which is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NO_x), carbon dioxide (CO_2), sulfur dioxide (SO_2), and particulate matter (PM). Boiler No. 1 was configured with a low NO_x burner and over-fire air in 2003. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 1 were installed in 2008.

Note: Boiler No. 1 is capable of burning non-hazardous carbon anode production waste Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced on July 26, 1956, with an on-line date of January 1964, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-2, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 2 was configured with a low NOx burner and over-fire air in 2004. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 2 were installed in 2008.

Note: Boiler No. 2 is capable of burning non-hazardous carbon anode production waste Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(c) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced on July 26, 1956, with an on-line date of October 1965, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-3, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 3 was configured with a low NOx burner and over-fire air in 2002. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 3 were installed in 2008.

Note: Boiler No. 3 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced on March 16, 1968, with an electrostatic precipitator (ESP) for control of particulate matter. Boiler No. 4 was configured with a low NOx burner in 1998, a Selective Catalytic Reduction (SCR) system permitted and constructed in 2004, a wet FGD scrubber, which commenced operation in 2008, and a reagent injection system that will reduce sulfuric acid emissions exiting the SCR, constructed in 2009. Boiler No. 4 has a nominal heat input capacity of 2,958 MMBtu/hr, and vents to Stack 243, which has continuous emissions monitors (CEMs) for nitrogen oxides (NOx), carbon dioxide (CO2), and sulfur dioxide (SO2), and a continuous opacity monitor (COM). Boiler No. 4 has a natural gas burner for start-up and may be fired in conjunction with the coal-fired capability. Construction of a dedicated wet limestone slurry absorber scrubber began in 2005.

This unit is not an affected facility under NSPS Da because it did not commence construction, modification, or reconstruction after September 18, 1978, or after June 19, 1984. The low NOx burner constructed in 1998, the SCR system constructed in 2004 and the wet FGD scrubber, constructed in 2008 do not qualify as modifications as defined by 40 CFR 60, Subpart A. Specifically, the physical change did not result in increased to the atmosphere of any air pollutant (to which a standard applies) or result in any air pollutant not previously emitted.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 PSD Minor Limits [326 IAC 2-2]

In order to render PSD (Prevention of Significant Deterioration) not applicable, the following shall apply:

(a) The PM emissions from Boilers No. 1, No. 2, and No. 3, combined, shall not exceed 1060.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the PM emissions from Boiler No. 4 shall not exceed 1425.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

PM emissions from Boilers No. 1, No. 2, and No. 3 = [(PM E.F. No. 1 x H.E. No. 1) + (PM E.F. No. 2 x H.E. No. 2) + (PM E.F. No. 3 x H.E. No. 3)] / 2000 lb/ton

Where:

PM E.F. No. 1 = lb PM/MMBtu heat input to the Boiler No. 1 based on PM-CEMS output.

PM E.F. No. 2 = lb PM/MMBtu heat input to the Boiler No. 2 based on PM-CEMS output.

PM E.F. No. 3 = lb PM/MMBtu heat input to the Boiler No. 3 based on PM-CEMS output.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

PM emissions from Boiler No. 4 = [(PM E.F. No. 4 x H.E. No. 4) + (PM SCR E.F. No. 4 x SCR H.E. No. 4) + (PM SCR reduced E.F. No. 4 x SCR reduced H.E. No. 4)] / 2000 lb/ton

Where:

PM E.F. No. 4 = lb PM/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is not in operation

PM SCR E.F. No. 4 = lb PM/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is operating but the reagent injection system is not operating

PM SCR Reduced E.F. No. 4 = lb PM/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is not in operation

SCR H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is operating but the reagent injection system is not operating

H.E. SCR No. 4 Reduced = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection rate is at or above the rate established during the reagent injection compliance tests and the SCR is operating.

Compliance with the above PM limits and Condition D.4.2 shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modifications No. 173-22006-00002.

(b) The NOx emissions from Boilers No. 1, No. 2, No. 3 and Boiler No. 4, combined, shall not exceed 13,720.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above NOx limit and Condition D.5.1 (a), shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the Significant Source Modification No.: 173-22006-00002.

(c) The H_2SO_4 emissions from Boilers No. 1, No. 2, No. 3, and Boiler No. 4, combined, shall be less than 677.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the H_2SO_4 emissions from Boilers No. 1, No. 2, and No. 3, shall be a value established during the latest compliant stack test for the respective boiler. The following equation shall be utilized to determine compliance:

H_2SO_4 emissions = [(H_2SO_4 E.F. No. 1 x H.E. No. 1) + (H_2SO_4 E.F. No. 2 x H.E. No. 2) + (H_2SO_4 E.F. No. 3 x H.E. No. 3) + (H_2SO_4 E.F. No. 4 x H.E. No. 4) + (H2SO4 SCR E.F. No. 4 x SCR H.E. No. 4)] + (H2SO4 SCR reduced x H.E. No. 4 SCR reduced)] / 2000 lb/ton

Where:

H_2SO_4 E.F. No. 1 = lb H_2SO_4/MMBtu heat input to Boiler No. 1 established during the latest compliance stack test.

H_2SO_4 E.F. No. 2 = lb H_2SO_4/MMBtu heat input to Boiler No. 2 established during the latest compliance stack test.

H_2SO_4 E.F. No. 3 = lb H_2SO_4/MMBtu heat input to Boiler No. 3 established during the latest compliance stack test.

H2SO4 E.F. No. 4 = lb H2SO4/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the reagent injection system and the SCR are not in operation

H2SO4 SCR E.F. No. 4 = lb H2SO4/MMBtu heat input to Boiler No. 4 when the SCR is in operation but the reagent injection system is not in operation = a value established during the latest compliance stack test for this operating condition.

H2SO4 SCR Reduced E.F. No. 4 = lb H2SO4/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

H.E. No. 4 =Heat Input (MMBtu) to Boiler No. 4 when the reagent injection system and SCR are not in operation

H.E. SCR No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection system is not operating but the SCR is operating

H.E. SCR No. 4 Reduced = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection rate is at or above the rate established during the reagent injection compliance tests and the SCR is operating.

Compliance with the above H_2SO_4 limits shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modifications No.: 173-22006-00002.

(d) The PM_{10} emissions from Boilers No. 1, No. 2, and No. 3, and Boiler No. 4, combined, shall not exceed 4490.00 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the PM_{10} emissions from Boilers No. 1, No. 2, No. 3 and No. 4 shall be a value established during the latest compliant stack test for the respective boiler. The following equation shall be utilized to determine compliance:

PM_{10} emissions = [(PM_{10} E.F. No. 1 x H.E. No. 1) + (PM_{10} E.F. No. 2 x H.E. No. 2) + (PM_{10} E.F. No. 3 x H.E. No. 3) + (PM_{10} E.F. No. 4 x H.E. No. 4) + (PM_{10} SCR E.F. No. 4 x SCR H.E. No. 4) + (PM_{10} SCR reduced E.F. No. 4 x SCR reduced H.E. No. 4)] / 2000 lb/ton

Where:

PM10 E.F. No. 1 = lb PM10/MMBtu heat input to the Boiler No. 1 established during the latest compliance stack test for this operating condition.

PM10 E.F. No. 2 = lb PM10/MMBtu heat input to the Boiler No. 2 established during the latest compliance stack test for this operating condition

PM10 E.F. No. 3 = lb PM10/MMBtu heat input to the Boiler No. 3 established during the latest compliance stack test for this operating condition

PM10 E.F. No. 4 = lb PM10/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is not in operation

PM10 SCR E.F. No. 4 = lb PM10/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is operating but the reagent injection system is not operating

PM10 SCR Reduced E.F. No. 4 = lb PM10/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is not in operation

SCR H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is operating but the reagent injection system is not operating

H.E. SCR No. 4 Reduced = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection rate is at or above the rate established during the reagent injection compliance tests and the SCR is operating.

Compliance with the above PM_{10} limit and Condition D.4.2 shall render the requirements of [326 IAC 2-2] (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modifications No.: 173-22006-00002.

D.1.2 Nonattainment New Source Review (NSR) Minor Limit for $PM_{2.5}$ [326 IAC 2-1.1-5]

The $PM_{2.5}$ emissions from Boilers No. 1, No. 2, No. 3, and Boiler No. 4, combined, shall not exceed 4490.00 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the $PM_{2.5}$ emissions from Boilers No. 1, No. 2, No. 3 and No. 4 shall be a value established during the latest compliant stack test for the respective boiler. The following equation shall be utilized to determine compliance:

$PM_{2.5}$ emissions = [($PM_{2.5}$ E.F. No. 1 x H.E. No. 1) + ($PM_{2.5}$ E.F. No. 2 x H.E. No. 2) + (PM2.5 E.F. No. 3 x H.E. No. 3) + (PM2.5 E.F. No. 4 x H.E. No. 4) + (PM2.5 SCR E.F. No. 4 x SCR H.E. No. 4) + ($PM_{2.5}$ SCR reduced E.F. No. 4 x SCR reduced H.E. No. 4)] / 2000 lb/ton

Where:

$PM_{2.5}$ E.F. No. 1 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 1 established during the latest compliance stack test

$PM_{2.5}$ E.F. No. 2 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 2 established during the latest compliance stack test

$PM_{2.5}$ E.F. No. 3 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 3 established during the latest compliance stack test

$PM_{2.5}$ E.F. No. 4 =lb $PM_{2.5}$/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is not in operation

$PM_{2.5}$ SCR E.F. No. 4 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is operating but the reagent injection system is not operating

PM2.5 SCR Reduced E.F. No. 4 = lb PM2.5/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is not in operation

SCR H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is operating but the reagent injection system is not operating

Compliance with the above $PM_{2.5}$ limits and Condition D.4.3 shall render the requirements of 326 IAC 2-1.1-5-2 (Nonattainment New Source Review (NSR)) not applicable to Significant Source Modifications No.: 173-22006-00002.

D.1.3 Pollution Control Project (PCP) [326 IAC 2-2]

Pursuant to Significant Source Modification 173-18485-00002 issued on April 8, 2004, and in order to render PSD (Prevention of Significant Deterioration) not applicable, the following applies:

(a) Pursuant to 326 IAC 2-2.5, the installation and operation of the selective catalytic reduction (SCR) for Boiler No. 4 is considered a pollution control project because of the expected decrease in NO_X emissions.

(b) The expected emissions increase of sulfuric acid (H_2SO_4) from this pollution control project is exempted from the 326 IAC 2-2 PSD requirements.

(c) This pollution control project does not revise the existing applicable limitations and requirements already specified in the PSD permit 173-2087-00002, issued on December 9, 1991 for Boiler No. 4.

D.1.4 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]

Pursuant to CP 173-2087-00002, issued on December 9, 1991 and 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the PM emissions exhausted from Boiler No. 4 through Stack 243 shall not exceed 0.228 pound per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{(C)\,(a)\,(h)}{76.5\ (Q^{0.75})\ (N^{0.25})}$$

Where C = 50 µ/m3
Q = 7029 MMBtu/hr (capacity of boilers 1-4)
N = 3 (number of stacks)
a = 0.8
h = 442 Feet (average stack height)

Pt = 0.228 pound per million Btu heat input (lb/MMBtu)

Pursuant to 326 IAC 6-2-3(b), limitations for all facilities which were existing and in operation on or before June 8, 1972, shall be calculated using the above equation and shall include the parameters for all facilities in operation on June 8, 1972. Therefore, the values in the above equation are representative of the parameters as they existed on June 8, 1972, and do not necessarily reflect current operating configurations.

D.1.5 Startup, Shutdown and Other Opacity Limits [326 IAC 5-1-3]

Pursuant to 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), the following applies to Boiler No. 4:

(a) When building a new fire in a boiler, opacity may exceed the applicable limitation established in 326 IAC 5-1-2 for a period not to exceed five (5) hours (fifty (50) six (6)-minute averaging periods) from the time of the first exceedance or until the flue gas temperature reaches two hundred fifty (250) degrees Fahrenheit at the inlet of the electrostatic precipitator, whichever occurs first. Operation of the electrostatic precipitator is not required during these times. [326 IAC 5-1-3(e)]

Operation of the electrostatic precipitator is not required during these times. [326 IAC 5-1-3(e)]

(b) When shutting down a boiler, opacity may exceed the applicable limitation established in 326 IAC 5-1-2 for a period not to exceed four and one half (4.5) hours (forty five (45) six (6)-minute averaging periods) after initial trip of the main fuel supply. Although operation of the electrostatic precipitator is not required during these times, continued precipitator operation as the boiler cools will minimize PM emissions associated with shutdown event. [326 IAC 5-1-3(e)].

(c) When removing ashes from the fuel bed or furnace in a boiler or blowing tubes, opacity may exceed the applicable limit established in 326 IAC 5-1-2 and stated in Section C - Opacity. However, opacity levels shall not exceed sixty percent (60%) for any six (6)-minute averaging period and opacity in excess of the applicable limit shall not continue for more than one (1) six (6)-minute averaging period in any sixty (60) minute period. The exceedances shall not be permitted for more than three (3) six (6)-minute averaging periods in a twelve (12) hour period. [326 IAC 5-1-3(b)]

(d) If a facility cannot meet the opacity limitations of 326 IAC 5-1-3(b), the Permittee may submit a written request to IDEM, OAQ, for a temporary alternative opacity limitation in accordance with 326 IAC 5-1-3(d). The Permittee must demonstrate that the alternative limit is needed and justifiable.

D.1.6 Sulfur Dioxide (SO_2) [326 IAC 7-4-10]

Pursuant to 326 IAC 7-4-10 (Warrick County Sulfur Dioxide Emission Limitations), the SO_2 emissions from Boilers No. 1, No. 2, No. 3 and No. 4 each shall not exceed 5.11 pounds per million Btu (lbs/MMBtu).

D.1.7 Carbon Monoxide (CO) Limitation [326 IAC 2-2]

Pursuant to Significant Source Modification 173-16275-00002 issued on November 6, 2002, and as revised by the SPM 173-22581-00002, and in order to render PSD (Prevention of Significant Deterioration) not applicable, the combined carbon monoxide (CO) emissions from Boilers No. 1, No. 2, and No. 3, exhausted through Stacks 241-1, 241-2, and 241-3 shall not exceed 2099.80 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.1.8 PSD Minor Limit for Sulfur Dioxide [326 IAC 2-2]

(a) Pursuant to the August 12, 1996 Administrative Amendment to Condition 7 of CP (173)-2087-00002, issued on December 9, 1991, sulfur dioxide emissions from Boilers No. 1, No. 2, No. 3 and No. 4 shall not exceed a total of 157,206 tons per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to a total of 79,074 tons of sulfur input per year, based on:

(1) A 365 consecutive day weighted average sulfur dioxide emission rate in pounds per million British thermal units, with compliance determined at the end of each day, and

(2) Operating a continuous monitoring system for sulfur dioxide in accordance with the requirements 326 IAC 3-5-1.

(b) Pursuant to Condition 8(b) of CP 173-2087-00002, issued on December 9, 1991, SO_2 emissions from Boiler No. 4 shall not exceed 181.2 tons per day with compliance determined at the end of each day.

(c) Pursuant to Condition 8(a) of CP 173-2087-00002, issued on December 9, 1991, SO_2 emissions from Boilers No. 1, No. 2, and No. 3 shall not exceed a total of 249.5 tons per day with compliance determined at the end of each day.

D.1.9 Discontinuation of Natural Gas Co-fire

Alcoa Power Generating Inc. - Warrick Power Plant may, at their option, discontinue use of the natural gas co-fire for Boilers No. 1, No. 2, and No. 3. Written notification must be submitted to IDEM, OAQ if it is decided that use of the gas co-fire system will be discontinued. Gas igniters on each unit will then be used for startup fuel only. New Source Performance Standards and New Source Review will not be applicable to the removal of these systems.

Compliance Determination Requirements

D.1.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) By December 31 of the second calendar year following the most recent stack test, compliance with the CO limitations in Condition D.1.7 for Boilers No. 1, No. 2 and No. 3 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures).

(b) By December 31 of the calendar year following the most recent stack test, compliance with the H_2SO_4 limitations in Condition D.1.1(c) for Boilers No. 1, No. 2, No. 3 and No. 4 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated every five (5) years following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures).

(c) By December 31 of the calendar year following the most recent stack test, compliance with the PM_{10} limitations in Condition D.1.1 (d) for Boilers No. 1, No. 2, No. 3 and No. 4 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures).

(d) By December 31 of the calendar year following the most recent stack test, compliance with the $PM_{2.5}$ limitations in Condition D.1.2 for Boilers No. 1, No. 2, No. 3 and No. 4 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures).

(e) By December 31 of the second calendar year following the most recent stack test, compliance with the PM limitations in Condition D.1.1(a) for Boiler No. 4 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(f) The most recent stack test while the SCR was in operation but the reagent injection system was not operating was conducted on March 6, 2009. By December 31, 2014, compliance with the H2SO4 limitations in Condition D.1.1(c) for Boiler No. 4 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every fifth calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(g) The most recent stack test while the SCR and reagent injection system were in operation was conducted on September 25, 2009. By December 31, 2014, compliance with the H2SO4 limitations in Condition D.1.1(c) for Boiler No. 4 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every fifth calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(h) The most recent stack test while the SCR was not operating was conducted on November 6, 2009. By December 31, 2014, compliance with the H2SO4 limitations in Condition D.1.1(c) for Boiler No. 4 for the SCR not-operating mode condition shall be determined by a performance stack test during a scheduled outage of the SCR conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every fifth calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(i) By December 31 of the second calendar year following the most recent stack test while the SCR is in operation with and without the reagent injection system in operation, compliance with the PM_{10} and $PM_{2.5}$ limitations in Condition D.1.1 (d) and Condition D.1.2 for Boiler No. 4 shall be determined by a performance stack test conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM_{10} and $PM_{2.5}$ includes filterable and condensable PM.

(j) By December 31 of the second calendar year following the most recent stack test for the SCR not-operating mode condition, compliance with the PM_{10} and $PM_{2.5}$ limitations in Condition D.1.1 (d) and Condition D.1.2 for Boiler No. 4 shall be determined by a performance stack test during the first scheduled outage of the SCR conducted using methods as approved by the Commissioner. This testing shall be repeated by December 31 of every second calendar year following this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(k) Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.11 Operation of Electrostatic Precipitator [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule or in this permit, the electrostatic precipitator shall be operated at all times that Boiler No. 1, Boiler No. 2, Boiler No. 3 and Boiler No. 4 are vented to the respective ESP's.

D.1.12 Operation of Wet Scrubbers [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule in this permit, the dedicated wet scrubber for Boiler No. 1, Boiler No. 2, Boiler No. 3, and Boiler No. 4 shall be in operation and control SO_2 and H2SO4 emissions from Boiler No. 1, Boiler No. 2, Boiler No. 3, and Boiler No. 4 at all times that the boiler is in operation.

D.1.13 Continuous Emissions Monitoring [326 IAC 3-5]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), the Permittee shall comply with the following:

(1) Continuous emission monitoring systems for Boiler No. 1, Boiler No. 2, Boiler No. 3 and Boiler No. 4 shall be calibrated, maintained, and operated for measuring SO2, NOx, and O2 or CO2.

(2) The dedicated wet scrubbers for Boiler No. 1, Boiler No. 2, and Boiler No. 3 continuous emissions monitoring systems shall be calibrated, maintained, and operated for measuring SO2 at the inlet of each scrubber.

(3) Whenever a NOx CEM is down for more than twenty-four (24) hours, the Permittee shall apply the data substitution procedures specified by 40 CFR Part 75.

(4) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5 or 40 CFR 75.

(b) The Permittee shall comply with the following for Boiler No. 1, Boiler No. 2, and Boiler No. 3:

(1) PM compliance will be demonstrated by the associated PM CEMS;

(2) Upon successful completion of the certification of the PM CEMS, the Petitioner shall submit all required information to the IDEM Office of Air Quality; and

(3) Installation, operation, testing, monitoring, data reporting, data substitution, and other requirements for the PM CEMS shall be determined by NSPS, 40 CFR Part 60, Subpart Db and 326 IAC 3-5 (Continuous Monitoring of Emissions).

(c) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3, and shall meet all applicable performance specifications of 326 IAC 3-5-2.

(d) The Permittee shall comply with the following for Boiler No. 4:

(1) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), the Permittee shall install calibrate, certify, operate, and maintain all necessary continuous opacity monitoring systems (COMS) and related equipment for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.

(2) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.

(3) In the event that a breakdown of a COMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.

(4) Whenever a COMS is malfunctioning or is down for maintenance or repairs for a four (24) hours of shutdown or malfunction of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self-monitor the emissions from the emission unit stack.

(A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.

(B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.

(C) Method 9 readings may be discontinued once a COMS is online.

(D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.

(5) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 60 and/or 40 CFR 63.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.1.14 Transformer-Rectifier (T-R) Sets [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The ability of the ESP to control particulate emissions shall be monitored once per day, when the unit is in operation, by measuring and recording the number of T-R sets in service and the primary and secondary voltages and the currents of the T-R sets.

(b) Reasonable response steps shall be taken whenever the percentage of T-R sets in service falls below ninety percent (90%). Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. T-R set failure resulting in less than ninety percent (90%) availability is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.15 Wet Scrubbers [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

For each of the dedicated wet scrubbers for Boiler No. 1, No. 2, and No. 3, the Permittee shall continuously monitor and determine SO_2 emissions reduction by SO_2 CEMS. Whenever the SO_2 reduction fall below ninety percent (90%), the Permittee shall take response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A SO2 emissions reduction of less than ninety percent (90%) is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

Compliance with this percent SO2 reduction requirement will be determined on a twenty-four (24) hour daily (block) average.

D.1.16 Opacity Readings for Boiler No. 4 only [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) In the event of emissions exceeding thirty percent (30%) average opacity for three (3) consecutive six (6) minute averaging periods, appropriate response steps shall be taken such that the cause(s) of the excursion are identified and corrected and opacity levels are brought back below thirty percent (30%). Examples of expected response steps include, but are not limited to, boiler loads being reduced and ESP T-R sets being returned to service.

(b) Opacity readings in excess of thirty percent (30%) but not exceeding the opacity limit for the unit are not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition

(c) The Permittee may request that the IDEM, OAQ approve a different opacity trigger level than the one specified in (a) and (b) of this condition, provided the Permittee can demonstrate, through stack testing or other appropriate means, that a different opacity trigger level is appropriate for monitoring compliance with the applicable particulate matter mass emission limits.

D.1.17 SO_2 Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]

The following shall apply to the wet scrubbers for Boiler No. 1, Boiler No. 2, Boiler No. 3, and Boiler No. 4 respectively:

(a) At any time the wet scrubber for Boiler No. 1, Boiler No. 2, Boiler No. 3, and Boiler No. 4 is operating, if the respective SO2 continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall monitor and record exhaust air stream pressure drop, recirculation pH, pump motor amperage and number of recirculation pumps in service, to demonstrate that the operation of the wet scrubber continues in a manner typical for the boiler load and sulfur content of the coal fired.

(b) Wet scrubber parametric monitoring readings shall be recorded at least twice per day until the primary CEMS or a backup CEMS is brought online.

(c) Actual fuel usage during each SO2 CEMs downtime shall be recorded during the full duration of each downtime event.

D.1.18 Particulate (PM) Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]

For Boiler No. 1, Boiler No. 2, and Boiler No. 3, the following shall be used to provide information related to particulate emissions:

(a) In the event that a breakdown of a PM-CEMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.

(b) If a PM-CEMS is down for less than twenty-four (24) hours, the Permittee shall substitute an average of the quality-assured data from the hour immediately before and the hour immediately after the missing data period for each hour of missing data.

(c) Whenever a PM-CEMS is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall comply with the following:

(1) Monitor and record the pH of the scrubbing liquid, scrubber liquid inlet rate as measured by pump amperage, and exhaust air flow rate of the wet scrubber.

(2) Measure and record the number of T-R sets in service and the primary and secondary voltages and the currents of the T-R sets of the ESP.

(3) Wet scrubber and T-R parametric monitoring readings shall be recorded at least twice per day until the primary CEMS or backup CEMS is brought online.

D.1.19 Compliance Assurance Monitoring (CAM) [40 CFR Part 64]

Pursuant to 40 CFR Part 64, the Permittee shall comply with the following Compliance Assurance Monitoring requirements for the wet scrubbers and the electrostatic precipitators controlling Boiler No. 1, Boiler No. 2, and Boiler No. 3:

Monitoring Approach for PM10 Emissions from Boiler No. 1, Boiler No. 2, and Boiler No. 3			
PARAMETER	INDICATOR NO. 1	INDICATOR NO. 2	INDICATOR NO. 3
I. Indicator Measurement Approach	PM10 Emission Rate	Proper Operation of Scrubbers	Proper Operation of Electrostatic Precipitators (ESP)
	Test methods approved by the Commissioner, Scrubbers, and ESPs	PM-CEMS and maintenance of minimum scrubber liquid inlet rate measured with pump amperage	i. # of T-R sets in operation ii. primary & secondary voltages iii. currents of T-R sets
II. Indicator Range	an excursion is defined as being outside the following: PM10 emission limit of 0.081 lb/MMBtu	an excursion is defined as being outside the following: PM emissions in excess of 0.03 lb/mm Btu, 24-hour average	an excursion is defined as being outside the following: i. # of T-R sets in service shall be > 90%
III. Performance Criteria	--	Pursuant to 40 CFR 60, Subpart Db	--
A. Data Representativeness	Test methods as approved by Commissioner	Pursuant to 40 CFR 60, Subpart Db	Subject to Instrument Specifications of Section C of permit
B. Verification of Operational Status	N/A	N/A	N/A

Monitoring Approach for PM10 Emissions from Boiler No. 1, Boiler No. 2, and Boiler No. 3			
PARAMETER	INDICATOR NO. 1	INDICATOR NO. 2	INDICATOR NO. 3
C. QA/QC Practices and Criteria	Test methods as approved by Commissioner	PM-CEMS per manufacturer recommendations Liquid inlet rate measured by pump amperage per Instrument Specifcations of Section C of permit, gas flow per 40 CFR 75 RATA requirements	Electrostatic precipitator current and voltage monitoring data per manufacturer recommendations
D. Monitoring Frequency	Once every 2 years.	Continuous	Once per day when operating
IV. Data Collection Proceedure	Test methods as approved by Commissioner	Continuous emissions data acquisition system	Daily observations are recorded in log
Averaging Period	Test methods as approved by Commissioner	PM and PM_{10} - 24 hour average per the PM-CEMS	N/A

Pursuant to 40 CFR Part 64, the Permittee shall comply with the following Compliance Assurance Monitoring requirements for the electrostatic precipitator controlling Boiler No. 4:

Monitoring Approach for PM Emissions from Boiler 4			
PARAMETER	INDICATOR NO. 1	INDICATOR NO. 2	INDICATOR NO. 3
I. Indicator Measurement Approach	Particulate Emission Rate	Opacity	Electrostatic Precipitators (ESP)
	Methods approved by the Commissioner, Scrubbers, and ESPs	COM	i. # of T-R sets in operation ii. primary & secondary voltages iii. currents of T-R sets
II. Indicator Range	Particulate emission limit of 0.228 lb/MMBtu	Pursuant to 326 IAC 5-1 - Opacity Limitations, and IAC 5-1-3 - Tempory Opacity Limitations	an excursion is defined as being outside the following: i. # of T-R sets in service shall be > 90%
III. Performance Criteria		Pursuant to 40 CFR, Part 75	--
A. Data Representativeness	Methods as approved by Commissioner	Pursuant to 326 IAC 3	Subject to Instrument Specifications of Section C of permit
B. Verification of Operational Status	N/A	--	N/A
C. QA/QC Practices and Criteria	--	Pursuant to 326 IAC 3	Electrostatic precipitator current and voltage monitoring data, per manufacturer recommendations
D. Monitoring Frequency	Once every 2.5 years.	6 minute average	Once per day when operating
IV. Data Collection Proceedure	Methods as approved by Commissioner	Pursuant to 40 CFR, Part 75	Daily observations are recorded in log

D.1.20 Monitoring Requirements for the Wet Scrubber for Boiler No.1, Boiler No.2, Boiler No.3, and

Boiler No. 4. [326 IAC 2-7-6(1)]
[326 IAC 2-7-5(1)]

For the dedicated wet scrubber for Boiler No.1, Boiler No.2, Boiler No.3. and Boiler No. 4, the Permittee shall comply with the following:

(a) The Permittee shall monitor the pH of the scrubbing liquid, exhaust air stream pressure drop and pump motor amperage for each pump of the dedicated wet scrubber for Boiler No.1, Boiler No.2, Boiler No.3. and Boiler No. 4 at least once per day when the wet scrubber is in operation.

(b) When for any one reading, the pH of the scrubbing liquid is less than 4.7 or a value established during the latest Relative Accuracy Test Audit (RATA), the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pH reading that is less than 4.7 or a value established during the latest RATA is not a deviation from this permit.

(c) When for any one reading, the exhaust air stream pressure drop is outside the initial compliance demonstration range of 3.0 and 10.0 inches of water or a range established during the latest Relative Accuracy Test Audit (RATA), the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure drop reading that is outside the normal range or a range established during the latest RATA is not a deviation from this permit.

(d) When for any one reading, the scrubber inlet rate indicates that the scrubber liquid input rate is less than 329 gallons per minute or a value established during the latest Relative Accuracy Test Audit (RATA), the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A flow rate reading that is less than 329 gallons per minute or a rate established during the latest RATA is not a deviation from this permit.

Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The instruments used for determining the pH, pressure drop and pump motor amperage shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.21 Record Keeping Requirements

(a) For each of the wet scrubbers and ESP's for Boiler No. 1, Boiler No. 2, Boiler No. 3, and Boiler No. 4 the following shall apply:

(1) To document the compliance status with SO2 Conditions D.1.6 - Sulfur Dioxide (SO2), D.1.8 - Sulfur Dioxide Limitations, D.1.13 - Continuous Emissions Monitoring, and D.1.17 - SO2 Monitoring Downtime, the Permittee shall maintain records in accordance with (A) through (D) below. Records shall be complete and sufficient to establish the compliance status with the SO_2 limits as required in Conditions D.1.6- Sulfur Dioxide (SO2) and D.1.8 - Sulfur Dioxide Limitations. The Permittee shall maintain records in accordance with (C) below during SO_2 CEMS downtime if a backup CEMS is not used.

(A) All SO_2 continuous emissions monitoring data, pursuant to 326 IAC 7-2-1(g),

(B) Calculated fuel usage during each SO_2 CEMS downtime for Unit(s)

affected by CEM downtime lasting 24 hours or more.

(C) The recirculation pH, the exhaust air stream pressure drop, and the pump motor amperage for each pump of the respective wet scrubber and number of recirculation pumps in service.

(D) The substitute data used for the missing data periods if data substitution pursuant to 40 CFR Part 75 Subpart D is used to provide data for the SO_2 CEM downtime, in accordance with Condition D.1.17.

(2) To document the compliance status with NOx Condition D.1.1 (b), the Permittee shall maintain records of all NOx and CO_2 or O_2 continuous emissions monitoring data, pursuant to 326 IAC 3-5-6. Records shall be complete and sufficient to establish compliance with the NOx limit as required in Condition D.2.1 (b).

(3) To document the compliance status with Condition D.1.1(c), the Permittee shall keep records that verify the emissions rates of H_2SO_4 from Boiler No.1, Boiler No. 2, Boiler No. 3, and Boiler No. 4. These shall be made available upon request to IDEM, OAQ and the US EPA.

(4) To document the compliance status with Condition D.1.19, the Permittee shall maintain records of corrective actions taken in response to excursions as required by the CAM Plan for the ESP (if any are required).

(5) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

(b) The following shall apply for Boiler No. 1, Boiler No. 2 and Boiler No. 3:

(1) To document the compliance status with Conditions D.1.13 (a) - Continuous Emissions Monitoring, and D.1.14 - Transformer-Rectifier (T-R) Sets, the Permittee shall maintain records in accordance with (A) through (B) below.

(A) Data and results from the most recent stack test.

(B) All ESP parametric monitoring readings as specified by Condition D.14(a). The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).

(2) To document the compliance status with Conditions D.1.13- Continuous Emissions Monitoring, D1.14 - Transformer-Rectifier (T-R) Sets, D.1.15 - Wet Scrubbers, D.1.18 - Particulate (PM) Monitoring System Downtime, and D.1.20 – Monitoring Requirement for the Wet Scrubber, the Permittee shall maintain records in accordance with (A) through (D) below. The Permittee shall maintain records in accordance with (D) below during PM CEMS downtime if a backup CEMS is not used.

(A) All continuous emissions monitoring data for SO2 emissions reduction, as a twenty-four (24) hour daily (block) average, in accordance with Condition D.1.15 (b).

(B) All ESP parametric monitoring readings, in accordance with Condition D.1.14. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the

process did not operate that day).

(C) All wet scrubber liquid inlet flow rate readings measured by pump amperage, in accordance with Condition D.1.20. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).

(D) All ESP and scrubber parametric monitor readings, in accordance with Conditions D.1.14 (a) and D.1.20.

(c) The following shall apply for Boiler No. 4:

To document the compliance status with Section C - Opacity and Conditions D.1.1 - PSD Minor Limits, D.1.4 - Particulate Emission Limitations for Sources of Indirect Heating, D.1.5 - Startup, Shutdown and Other Opacity Limits, D.1.13 - Continuous Emissions Monitoring, D.1.14(a) - Transformer-Rectifier (T-R) Sets, D.1.24 - Wet Scrubber, and D.1.16- Opacity Readings, the Permittee shall maintain records in accordance with (A) through (E) below.

Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and in Conditions D.1.1 - PSD Minor Limits, D.1.4 - Particulate Emission Limitations for Sources of Indirect Heating, D.1.5 - Startup, Shutdown and Other Opacity Limits.

(A) Data and results from the most recent stack test.

(B) All continuous opacity monitoring data, pursuant to 326 IAC 3-5.

(C) The results of all Method 9 visible emission readings taken during any periods of COMS downtime.

(D) Daily records of the number of T-R sets in service, the primary and secondary voltages, and the currents of the T-R sets. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).

(E) All wet scrubber pH, exhaust air stream pressure drop, and pump motor current readings, in accordance with Conditions D.1.17 and D.1.20. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).

D.1.22 Reporting Requirements

(a) The following shall apply for Boiler No. 1, Boiler No. 2, and Boiler No. 3:
A quarterly report of the information to document the compliance status with Conditions D.1.1, D.1.2, D.1.7, and D.1.8 (a) and (c) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

(b) The following shall apply for Boiler No. 4:
A quarterly report of opacity exceedances and a quarterly summary of the information to document the compliance status with Conditions D.1.1, D.1.2, D.1.6, and D.1.8(a) and (b) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does

require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(34).

(c) The following shall apply to Boiler No. 1, Boiler No. 2, Boiler No. 3, and Boiler No. 4: Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

(1) Date of downtime.

(2) Time of commencement.

(3) Duration of each downtime.

(4) Reasons for each downtime.

(5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require the certification by a “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) gas-fired boiler, identified as Emergency Rolling Mill Boiler, constructed in 1979, with a nominal heat input capacity of 79 million Btu per hour (MMBtu/hr) and exhausting to Stack 242.

This unit is not an affected facility under NSPS Db because it did not commence construction, modification or reconstruction after June 19, 1984.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3, the PM emissions from the Emergency Rolling Mill Boiler stack shall not exceed 0.227 pound per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{(C)\,(a)\,(h)}{76.5\ (Q^{0.75})\ (N^{0.25})}$$

Where C = 50 µ/m3
Q = 7108 MMBtu/hr (capacity of boilers)
N = 3 (number of stacks)
a = 0.8
h = 442 Feet (average stack height)

Pt = 0.227 lb/MMBtu

Pursuant to 326 IAC 6-2-3(b), limitations for all facilities which were existing and in operation on or before June 8, 1972, shall be calculated using the above equation and shall include the parameters for all facilities in operation on June 8, 1972. Therefore, the values in the above equation are representative of the parameters as they existed on June 8, 1972, and do not necessarily reflect current operating configurations.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) One (1) unloading station for barges, constructed prior to 1974, consisting of a clamshell bucket that transfers coal and limestone from the barge to a spud hopper, with a nominal throughput of 1,300 tons of coal per hour or 800 tons of limestone per hour, a pipe conveyor will transfer the material to a hopper used for loading trucks, with emissions from the drop points controlled by a baghouse, exhausting through Stack 244. The spud hopper and the baghouse were installed in 2008 in order to accommodate the transfer of limestone. The unloading station is not considered an affected facility under 40 CFR 60, Subpart OOO when unloading and transferring limestone because it is not physically connected to the crushing/grinding operations.

(g) A coal transfer system, constructed prior to 1974, with a nominal throughput of 1,300 tons of coal per hour, consisting of the following equipment:

(1) One (1) unloading station for trucks, adjacent to the 211 railcar dumper, with a drop point to an underground conveyor, with the drop point, identified as DP-1, equipped with wet suppression, and exhausting to the ambient air.

(2) The 211 rail car dumper, with an enclosed drop point to an underground conveyor, with the drop point, identified as DP-3, equipped with wet suppression and exhausting to the ambient air.

(3) One (1) 9.0 acre coal storage pile, having an estimated storage capacity of 300,000 tons, with fugitive emissions controlled by periodic watering by truck, and exhausting to the ambient air.

(4) The 210H truck hopper, with a drop point on a coal storage pile identified as F-1, uncontrolled and exhausting to the ambient air.

(5) Multiple unloading stations for trucks, with drop points to a coal storage pile, identified as F-1, uncontrolled and exhausting to the ambient air.

(6) Enclosed conveyor (4), with a drop point to the F-1 coal pile stacking tower, uncontrolled and exhausting to the ambient air.

(7) Enclosed conveyors 5 and 5A with each transfer point enclosed.

(8) Nineteen (19) coal bunkers (four (4) coal bunkers per unit for units 1-3, and seven (7) for unit 4). Bunkers are loaded via a conveyor tripper system servicing Boilers No. 1, No. 2, No. 3 and No. 4. Particulate matter generated from loading bunkers is controlled by rotoclones or water sprays and exhausts to the ambient air.

(9) Two (2) enclosed coal crushers, operating in parallel, constructed in 1960, with each transfer point equipped with wet suppression, and exhausting to the ambient air.

(h) A limestone transfer and handling system installed in 2008, with a nominal throughput of 500 tons of limestone per hour, consisting of the following equipment:

(1) One (1) 1.42 acre limestone storage pile, having an estimated storage capacity of 22,000 tons, with fugitive emissions controlled by periodic watering by truck. Under 40 CFR 60, Subpart OOO, this is not an affected unit since it is not directly connected to the product line of the nonmetallic mineral processing plant.

(2) One (1) limestone hopper, receiving limestone from the stockpiles via front end loaders, emissions uncontrolled and exhausting to ambient air.

(3) One (1) enclosed pipe conveyor, transferring limestone from the limestone hopper to one (1) of the three (3) limestone day silos, emissions controlled by the limestone day silos bin vent filters.

(4) Three (3) limestone day silos No. 1 - No. 3, each with maximum throughput capacity of 20.0 tons per hour, each equipped with a bin vent filter for particulate control, exhausting to vents 245, 246, and 247, respectively.

(5) Three (3) weigh scales, each with a maximum capacity of 20.0 tons per hour, each receiving material from one of the limestone day silos and transferring limestone to one (1) of three (3) gravity discharge chutes, all emissions control by the limestone day silos' bin vent filters, and exhausting to vents 245, 246, 247.

(6) Three (3) wet ball mill crushers, receiving limestone from weigh scales via the three (3) gravity discharge chutes, the transfer point is enclosed and emissions are controlled by the limestone day silos' bin vent filters, and exhausting to vents 245, 246, and 247.

Under 40 CFR 60, Subpart OOO, the one (1) limestone hopper, one (1) pipe conveyor, three (3) limestone day silos, three (3) weigh scales, three (3) gravity discharge chutes, and three (3) wet ball mill crushers are considered affected units.

(i) One (1) dry flyash storage and loadout system, consisting of the following equipment:

(1) Three (3) pneumatic conveyors with filter/separators, Units #1, #2, and #3 Pneumatic Conveyor Air Filter/Separators installed 2009; each of a capacity of 14.0 tons per hour, each equipped with a baghouse for particulate control, and venting to stacks 283A1, 283A2, and 283A3, respectively.

(2) One (1) pneumatic conveyor with filter/separator, Unit #4 Pneumatic Conveyor Air Filter/Separator installed in 2009; with a capacity of 30.0 tons per hour, equipped with a baghouse for particulate control, and venting to stack 283B1.

(3) One (1) intermediate silo, Units #1 - #3 Intermediate Flyash Silo installed in 2009, with a capacity of 42.0 tons per hour, equipped with a baghouse for particulate control and exhausting to stack 283A.

(4) One (1) intermediate silo (Unit #4 Intermediate Flyash Silo) installed in 2009, with a capacity of 30.0 tons per hour, equipped with a baghouse for particulate control and exhausting to stack 283B.

(5) One (1) dry flyash storage silo, Flyash Loadout Silo, installed in 2009, with a capacity of 72.0 tons per hour, equipped with a baghouse for particulate control, exhausting to stack 283C.

(j) A gypsum transfer and handling system, installed in 2008, with a nominal throughput of 72 tons of gypsum per hour, consisting of the following equipment:

(1) One (1) gypsum vacuum belt press dewatering system, installed in 2008, with a nominal capacity of 72 tons of gypsum per hour, emissions are uncontrolled and exhausting through vent 248 to ambient atmosphere.

(2) One (1) saturated gypsum enclosed pipe conveyor, installed in 2008, with a nominal capacity of 72 tons of saturated gypsum per hour.

Under 40 CFR 60, Subpart OOO, these units are not considered affected units.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from each of the following operations shall not exceed the pound per hour limits listed in the table below:

Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
Unloading Station (when handling coal)	1,300	81
Coal storage, handling drop points, crushers, and bunkers	1,300	81
Unloading Station (when handling limestone)	800	74.74
Limestone storage and handling drop points	500	68.96
Limestone wet ball mills	20	51
Dewatered gypsum transfer and handling system	72	48
Unit #1 Pneumatic Conveyor Air Filter/Separators	14	24
Unit #2 Pneumatic Conveyor Air Filter/Separators	14	24
Unit #3 Pneumatic Conveyor Air Filter/Separators	14	24
Unit #4 Pneumatic Conveyor Air Filter/Separator	30	40
Unit #1 Intermediate Flyash Silo	14	24
Unit #2 Intermediate Flyash Silo	14	24
Unit #3 Intermediate Flyash Silo	14	24
Unit #4 Intermediate Flyash Silo	30	40
Flyash Loadout Silo	72	48

These limits are determined by the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour.

When the process weight rate exceeds two hundred (200) tons per hour, the maximum allowable emission may exceed E pounds per hour, provided the concentration of particulate matter in the discharge gases to the atmosphere is less than 0.10 pounds per one thousand (1,000) pounds of gases.

D.3.2 PSD Minor Limits [326 IAC 2-2]

In order to render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the following conditions shall apply:

(a) The PM/PM10 emissions shall not exceed the following:

Process Description	Control (Stack/Vent)	PM Emission Limit (lbs/hr)	PM_{10} Emission Limit (lbs/hr)
Unloading Station for Barges Spud Hopper, Truck Loading Hopper, and conveyance points	Unloading Station for Barges Baghouse (244)	9.43	9.43
Limestone Day Silos No. 1, No. 2, and No. 3, and associated weight scales and conveyance drop points.	Limestone Day Silos Bin Vent Filters (245), (246), (247)	0.96	0.96
Unit #1 Flyash Transfer	Unit #1 Conveyor Baghouse (283A1)	0.09	0.09
Unit #2 Flyash Transfer	Unit #2 Conveyor Baghouse (283A2)	0.09	0.09
Unit #3 Flyash Transfer	Unit #3 Conveyor Baghouse (283A3)	0.09	0.09
Unit #4 Flyash Transfer	Unit #4 Conveyor Baghouse (283B1)	0.17	0.17
Unit #1-#3 Intermediate Storage	Unit #1-#3 Intermediate Silo Baghouse (283A)	0.11	0.11
Unit #4 Intermediate Storage	Unit #4 Intermediate Silo Baghouse (283B)	0.10	0.10
Flyash Storage/Loadout Silo	Baghouse (283C)	0.55	0.55

Compliance with these limits, in conjunction with the PM/PM10 fugitive emissions from the associated road travel and storage piles, ensures the PM emissions from the limestone transfer, handling, and storage, shall not exceed 429.13 tons per year, and the PM_{10} emissions shall not exceed 145.93 tons per year.

(b) The coal throughput to the coal transfer station shall not exceed 3,707,969 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this limit ensures the PM/PM10 emissions from the coal transfer station, including PM/PM10 fugitive emissions from the associated road travel, shall not exceed 450 tons per year of PM and 340 tons per year of PM10.

Compliance with the PM/PM10 limits in Conditions D.1.1, and D.3.2 shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modifications No. 173-22006-00002.

D.3.3 Nonattainment New Source Review (NSR) Minor Limit for PM2.5 [326 IAC 2-1.1-5]

In order to render 326 IAC 2-1.1-5 (Nonattainment New Source Review (NSR)) not applicable, the following conditions shall apply:

(a) The PM2.5 emissions shall not exceed the following:

Process Description	Control (Stack/Vent)	PM2.5 Emission Limit (lbs/hr)
Unloading Station for Barges Spud Hopper, Truck Loading Hopper, and conveyance points	Hopper Baghouse (244)	9.43
Limestone Day Silos No. 1, No. 2, and No. 3, and associated weight scales and conveyance drop points.	Limestone Day Silos Bin Vent Filters (245), (246), (247)	0.96
Unit #1 Flyash Transfer	Unit #1 Conveyor Baghouse (283A1)	0.09
Unit #2 Flyash Transfer	Unit #2 Conveyor Baghouse (283A2)	0.09
Unit #3 Flyash Transfer	Unit #3 Conveyor Baghouse (283A3)	0.09
Unit #4 Flyash Transfer	Unit #4 Conveyor Baghouse (283B1)	0.17
Unit #1-#3 Intermediate Storage	Unit #1-#3 Intermediate Silo Baghouse (283A)	0.11
Unit #4 Intermediate Storage	Unit #4 Intermediate Silo Baghouse (283B)	0.10
Flyash Storage/Loadout Silo	Baghouse (283C)	0.55

Compliance with these limits, in conjunction with the PM2.5 fugitive emissions from the associated road travel and storage piles, ensures the $PM_{2.5}$ emissions from the limestone transfer, handling, and storage, shall not exceed 145.93 tons per year.

(b) The coal throughput to the coal transfer station shall not exceed 3,707,969 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this limit ensures the $PM_{2.5}$ emissions from the coal transfer station, including fugitive emissions from the associated road travel, shall not exceed 340 tons per year.

Compliance with the $PM_{2.5}$ limits in Conditions D.1.2, D.3.3 shall render the requirements of 326 IAC 2-1.1-5-2 (Nonattainment New Source Review (NSR)) not applicable to Significant Source Modifications No. 173-22006-00002.

Compliance Determination Requirements

D.3.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate the compliance status with Conditions D.3.1 and D.3.2, the Permittee shall perform PM and PM_{10} testing of the coal and limestone unloading operations utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) In order to demonstrate the compliance status with Condition D.3.3, the Permittee shall perform $PM_{2.5}$ testing of the dry flyash storage and loadout system and unloading station for barges utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.3.5 Particulate Control [326 IAC 2-7-6(6)]

(a) Except as otherwise provided by statute or rule or in this permit, the watering system for the coal storage pile shall be in operation and control emissions as needed when coal is being unloaded. Except as otherwise provided by statute or rule or in this permit, the watering system for the limestone storage pile shall be in operation and control emissions as needed when limestone is being unloaded.

(b) Except as otherwise provided by statute or rule or in this permit, the dust collectors for particulate control shall be in operation and control emissions at all times the associated coal processing or conveyors are in operation.

(c) Except as otherwise provided by statute or rule or in this permit, the bin vent filters and the hopper baghouse for particulate control shall be in operation and control emissions at all times the associated limestone weighing, storage or conveyors are in operation.

(d) Except as otherwise provided by statute or rule or in this permit, the bin vent filters for particulate control shall be in operation and control emissions at all times when the flyash is being loaded into the loadout flyash silo or intermediate silos.

(e) Except as otherwise provided by statute or rule or in this permit, the rotoclones for particulate control shall be in operation and control emissions at all times the associated coal bunkers are in operation and the coal bunkers feed conveyor water sprays are not operating. In the event of simultaneous rotoclone and water spray system failure, a trained employee will make hourly visible emission observations at the coal bunker feed conveyor area to confirm the absence of dusting while the conveyor continues operating.

(f) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.6 Visible Emissions Notations [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) The following conditions shall apply to the coal transfer station, the limestone hopper, and the gypsum transfer and handling system:

(1) Visible emission notations of the coal drop points, coal transfer points, coal crushers, the limestone hopper, and the gypsum transfer and handling system exhaust vent (248) shall be performed once per week during normal daylight operations. A trained employee shall record whether the emissions are normal or abnormal.

(2) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation.

(3) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(4) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(5) If abnormal emissions are observed from the coal unloading station drop points, coal transfer station exhausts, or coal crushers, the Permittee shall take reasonable response steps. Visible emissions that do not violate 326 IAC 6-4 (Fugitive Dust Emissions), 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) or an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

(b) Pursuant to 40 CFR 64, the following conditions shall apply to the coal and limestone unloading station:

(1) Visible emission notations of the coal and limestone unloading station baghouse exhaust (244) shall be performed once per week. A trained employee shall record whether any emissions are observed.

(2) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(3) If visible emissions are observed, the Permittee shall suspend operations controlled by this baghouse within 1 hour of the observance of visible emissions and shall not resume these operations until the cause of the visible emissions has been identified and corrected. Failure to take the response steps outlined

above shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

(c) The following conditions shall apply to the dry flyash storage and loadout system:

(1) Visible emission notations of the Stack exhausts for Unit #1 Conveyor Baghouse (283A1), Unit #2 Conveyor Baghouse (283A2), Unit #3 Conveyor Baghouse (283A3), Unit #4 Conveyor Baghouse (283B1), Unit #1-#3 Intermediate Silo Baghouse (283A), Unit #4 Intermediate Silo Baghouse (283B), and the Flyash Storage/Loadout Silo Baghouse (283C) shall be performed at least once per day during normal daylight operations.

(2) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(3) At any of these baghouses where visible emissions are observed, the Permittee shall suspend operations controlled by this baghouse in question within 1 hour of the observance of visible emissions and shall not resume the operation in question until the cause of the visible emissions has been identified and corrected. Failure to take the response steps outlined above shall be considered a deviation from this permit.

D.3.7 Particulate Control [326 IAC 2-7-6(6)]

In the event that rotoclones failure has been observed and the coal bunker conveyor water sprays are not operating, thus resulting in visible emissions in the bunker conveyor area:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.8 Record Keeping Requirements

(a) To document the compliance status with Section C - Opacity, Section C - Fugitive Dust Emissions, and Condition D.3.6 (a), the Permittee shall maintain a log of the weekly visible emission notations of the coal transfer station drop points and transfer points, the coal crushers, the limestone hopper, and the gypsum transfer and handling system.

(b) To document the compliance status with Section C - Opacity, Section C - Fugitive Dust Emissions, and Condition D.3.6 (b), the Permittee shall maintain a weekly record of the visible emission notations of the coal and limestone unloading station baghouse exhaust (244). The Permittee shall include in its weekly record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate).

(c) To document the compliance status with Condition D.3.6 (c) - Visible Emission Notation, the Permittee shall maintain records of visible emission notations of Stack exhaust from Unit #1 Conveyor Baghouse (283A1), Unit #2 Conveyor Baghouse (283A2), Unit #3 Conveyor Baghouse (283A3), Unit #4 Conveyor Baghouse (283B1), Unit #1-#3 Intermediate Silo Baghouse (283A), Unit #4 Intermediate Silo Baghouse (283B), and the Flyash Storage/Loadout Silo Baghouse (283C) once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(d) To document the compliance status with Conditions D.3.2 (b) and D.3.3 (b) (2), the Permittee shall maintain records of the coal usage.

(e) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

SECTION D.4 FACILITY OPERATION CONDITIONS - Diesel Engines

Facility Description [326 IAC 2-7-5(15)]

(k) Various diesel engine driven pumps, each with a rated capacity of less than 500 horsepower, identified as Y-pit Pumps approved for construction in 2008, provided the total combined horsepower of all diesel engine driven pumps does not exceed 1000 horsepower, located at the Y-pit for the purpose of removing rainwater. Pursuant to 40 CFR 1068.30, these Y-pit Pumps are considered nonroad engines. Therefore, under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, the Y-pit Pumps are not considered to be stationary internal combustion engines.

(l) Two (2) rental diesel units that shall not exceed 775 hp each, permitted in 2008, identified as Engine1 and Engine2. Pursuant to 40 CFR 1068, the rental diesel units are considered nonroad engines. Therefore, under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, the engines are not considered to be stationary internal combustion engines.

Note: These rental diesel units will be installed on an as-needed basis.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Nonroad Engines [326 IAC 12] [40 CFR 60, Subpart IIII] [326 IAC 20-82] [40 CFR 63, Subpart ZZZZ]

In order to render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII), which are incorporated by reference as 326 IAC 12, and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), which are incorporated by reference as 326 IAC 20-82, not applicable, and to ensure the Y-pit Pumps and Engine1 and Engine2 are nonroad engines, as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), the Permittee shall comply with the following:

(a) The Y-pit Pumps and Engine1 and Engine2 shall remain at a location for a period not to exceed twelve (12) consecutive months.

(b) Any unit that replaces the Y-pit Pumps and Engine1 and Engine2 at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period.

(c) For the purposes of this condition and pursuant to 40 CFR 1069.30 Nonroad Engine (2)(iii), a location is any single site at a building, structure, facility, or installation.

Compliance with these limits shall render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII) and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) not applicable.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.2 Record Keeping Requirements

(a) The Permittee shall maintain records of the dates of installation and removal of units identified as the Y-pit Pump, Engine1 and Engine2 as each unit is installed and removed.

(b) The Permittee shall maintain records of the make, and horsepower of each rental diesel

unit brought onto the site.

(c) The Permittee shall maintain records of the fuel type and usage of units Y-pit Pump, Engine1 and Engine2.

(d) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

The following insignificant activities:

(a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6.

(b) Flyash handling facility and transport systems, wet flyash sluiced and conveyed to one (1) ash pond, with a combined surface area of 61.2 acres.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Organic Solvent Degreasing Operations: Cold Cleaner Operation [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the Permittee shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.5.2 Organic Solvent Degreasing Operations: Cold Cleaner Degreaser Operation and Control [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control) for a cold cleaner degreaser facility, the Permittee shall ensure that the following control equipment requirements are met:

(1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^{O}C) (one hundred twenty degrees Fahrenheit (120°F)):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(B) A water cover when solvent is used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for a cold cleaning facility, the Permittee shall ensure that the following operating requirements are met:

(1) Close the cover whenever articles are not being handled in the degreaser.

(2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

SECTION E TITLE IV ACID RAIN PROGRAM CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced on July 26, 1956, with an on-line date of April 1960, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-1, which is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NO_x), carbon dioxide (CO_2), sulfur dioxide (SO_2), and particulate matter (PM). Boiler No. 1 was configured with a low NO_x burner and over-fire air in 2003. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 1 were installed in 2008.

Note: Boiler No. 1 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced on July 26, 1956, with an on-line date of January 1964, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-2, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 2 was configured with a low NOx burner and over-fire air in 2004. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 2 were installed in 2008.

Note: Boiler No. 2 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(c) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced on July 26, 1956, with an on-line date of October 1965, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-3, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 3 was configured with a low NOx burner and over-fire air in 2002. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 3 were installed in 2008.

Note: Boiler No. 3 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced on March 16, 1968, with an electrostatic precipitator (ESP) for control of particulate matter. Boiler No. 4 was configured with a low NOx burner in 1998, a Selective Catalytic Reduction (SCR) system permitted and constructed in 2004, a wet FGD scrubber, which commenced operation in 2008, and a reagent injection system that will reduce sulfuric acid emissions exiting the SCR, constructed in 2009. Boiler No. 4 has a nominal heat input capacity of 2,958 MMBtu/hr, and vents to Stack 243, which has continuous emissions monitors (CEMs) for nitrogen oxides (NOx), carbon dioxide (CO2), and sulfur dioxide (SO2), and a continuous opacity monitor (COM). Boiler No. 4 has a natural gas burner for start-up and may be fired in conjunction with the coal-fired capability. Construction of a dedicated wet limestone slurry absorber scrubber began in 2005.

This unit is not an affected facility under NSPS Da because it did not commence construction, modification, or reconstruction after September 18, 1978, or after June 19, 1984. The low NO_x burner constructed in 1998, the SCR system constructed in 2004 and the wet FGD scrubber, constructed in 2008 do not qualify as modifications as defined by 40 CFR 60, Subpart A. Specifically, the physical change did not result in increase to the atmosphere of any air pollutant (to which a standard applies) or result in any air pollutant not previously emitted.

Boilers 1, 2, and 3 are owned and operated by Alcoa Power Generating, Inc. and are Opt-In units.

Boiler 4 is co-owned by Alcoa Power Generating, Inc. and Vectren and operated by Alcoa Power Generating, Inc.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Acid Rain Program

E.1 Acid Rain Permit [326 IAC 2-7-5(1)(C)] [326 IAC 21] [40 CFR 72 through 40 CFR 78]

Pursuant to 326 IAC 21 (Acid Deposition Control), the Permittee shall comply with all provisions of the Acid Rain permit issued for this source, and any other applicable requirements contained in 40 CFR 72 through 40 CFR 78. The Acid Rain permit for this source is attached to this permit as Appendix A, and is incorporated by reference.

E.2 Title IV Emissions Allowances [326 IAC 2-7-5(4)] [326 IAC 21]

Emissions exceeding any allowances that the Permittee lawfully holds under the Title IV Acid Rain Program of the Clean Air Act are prohibited, subject to the following limitations:

(a) No revision of this permit shall be required for increases in emissions that are authorized by allowances acquired under the Title IV Acid Rain Program, provided that such increases do not require a permit revision under any other applicable requirement.

(b) No limit shall be placed on the number of allowances held by the Permittee. The Permittee may not use allowances as a defense to noncompliance with any other applicable requirement.

(c) Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act.

SECTION G.1 FACILITY OPERATION CONDITIONS - Standards of Performance for Stationary Nonmetallic Mineral Processing Plants

Facility Description [326 IAC 2-7-5(15)]

(h) A limestone transfer and handling system, approved for construction in 2008, with a nominal throughput of 500 tons of limestone per hour, consisting of the following equipment:

(2) One (1) limestone hopper, receiving limestone from the stockpiles via front end loaders, emissions uncontrolled and exhausting to ambient air.

(3) One (1) enclosed pipe conveyor, transferring limestone from the limestone hopper to one (1) of the three (3) limestone day silos, emissions controlled by the limestone day silos bin vent filters.

(4) Three (3) limestone day silos No. 1 - No. 3, each with maximum throughput capacity of 20.0 tons per hour, each equipped with a bin vent filter for particulate control, exhausting to vents 245, 246, and 247, respectively.

(5) Three (3) weigh scales, each with a maximum capacity of 20.0 tons per hour, each receiving material from one of the limestone day silos and transferring limestone to one (1) of three (3) gravity discharge chutes, all emissions control by the limestone day silos' bin vent filters, and exhausting to vents 245, 246, and 247.

(6) Three (3) wet ball mill crushers, receiving limestone from weigh scales via the three (3) gravity discharge chutes. The transfer point is enclosed and emissions are controlled by the limestone day silos' bin vent filters, and exhausting to vents 245, 246, and 247.

Under 40 CFR 60, Subpart OOO, the one (1) limestone hopper, one (1) pipe conveyor, three (3) limestone day silos, three (3) weigh scales, three (3) gravity discharge chutes, and three (3) wet ball mill crushers are considered affected units.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

G.1.1 General Provisions Relating to New Source Performance Standards (NSPS) [326 IAC 12-1] [40 CFR 60, Subpart A] [326 IAC 12]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the limestone material handling equipment except when otherwise specified in 40 CFR 60, Subpart OOO.

G.1.2 Standards of Performance for Stationary Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart 000, the Permittee shall comply with the provisions of Standards of Performance for Stationary Nonmetallic Mineral Processing Plants, which are incorporated by reference as 326 IAC 12, for the limestone material handling equipment as follows:

(1) 40 CFR 60.670(a)
(2) 40 CFR 60.670(d)
(3) 40 CFR 60.670(e)
(4) 40 CFR 60.670(f)

(5) Table 1 to 40 CFR 60, Subpart OOO
(6) 40 CFR 60.671
(7) 40 CFR 60.672
(8) 40 CFR 60.673(b)
(9) 40 CFR 60.675(a)
(10) 40 CFR 60.675(b)
(11) 40 CFR 60.675(c)
(12) 40 CFR 60.675(d)
(13) 40 CFR 60.675(e)
(14) 40 CFR 60.675(f)
(15) 40 CFR 60.675(g)
(16) 40 CFR 60.675 (h)(1)
(17) 40 CFR 60.676(a)
(18) 40 CFR 60.676(f)
(19) 40 CFR 60.676(g)
(20) 40 CFR 60.676(h)
(21) 40 CFR 60.676 (i)(1)
(22) 40 CFR 60.676(j)

SECTION G.2 FACILITY OPERATION CONDITIONS - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Facility Description [326 IAC 2-7-5(15)]

(m) One (1) diesel emergency firewater pump engine, identified as 249, built in 2005 and approved for construction in 2008, rated at 465 horsepower, using no controls. Under 40 CFR 63, Subpart ZZZZ, the diesel emergency firewater pump engine is considered to be a stationary internal combustion engine.

Specifically Regulated Insignificant Activities

(c) Two (2) emergency generators, each rated at 201 HP, and the 121 HP emergency firewater pump engine. Under 40 CFR 63, Subpart ZZZZ, the emergency generators and emergency firewater pump engine are considered to be a stationary internal combustion engines.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

National Emissions Standards for Hazardous Air Pollutants Requirements [326 IAC 2-7-5(1)]

G.2.1 National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-81] [40 CFR Part 63, Subpart ZZZZ]

Pursuant to 40 CFR 63.6590(c), the Permittee shall comply with the requirements of 40 CFR Part 63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines), which are incorporated by reference as 326 IAC 20-81. The emergency firewater pumps and the two emergency generators shall comply with the following portions of 40 CFR 63, Subpart ZZZZ:

(a) 40 CFR 63.6580
(b) 40 CFR 63.6585(a) and (b)
(c) 40 CFR 63.6590(a)(1)(ii)
(d) 40 CFR 63.6590(a)(1)(iv)
(e) 40 CFR 63.6595(a)(1)
(f) 40 CFR 63.66595(c)
(g) 40 CFR 63.6602
(h) 40 CFR 63.6605
(i) 40 CFR 63.6612(a)
(j) 40 CFR 63.6625(e)
(k) 40 CFR 63.6625(f)
(l) 40 CFR 63.6625(h)
(m) 40 CFR 63.6625(i)
(n) 40 CFR 63.63.6640(a), (b), (e), and (f)
(o) 40 CFR 63.6645(a)(5)
(p) 40 CFR 63.6650(f)
(q) 40 CFR 63.6655(d)
(r) 40 CFR 63.6655(e)(2)
(s) 40 CFR 63.6655(f)(1)
(t) 40 CFR 63.6660
(u) 40 CFR 63.6665
(v) 40 CFR 63.6670
(w) 40 CFR 63.6675
(x) 40 CFR 63, Table 2c, Table 6 and Table 8

SECTION G.3 FACILITY OPERATION CONDITIONS - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced on July 26, 1956, with an on-line date of April 1960, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-1, which is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NO_x), carbon dioxide (CO_2), sulfur dioxide (SO_2), and particulate matter (PM). Boiler No. 1 was configured with a low NO_x burner and over-fire air in 2003. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 1 were installed in 2008.

Note: Boiler No. 1 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced on July 26, 1956, with an on-line date of January 1964, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-2, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 2 was configured with a low NOx burner and over-fire air in 2004. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 2 were installed in 2008.

Note: Boiler No. 2 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(c) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced on July 26, 1956, with an on-line date of October 1965, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-3, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 3 was configured with a low NOx burner and over-fire air in 2002. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 3 were installed in 2008.

Note: Boiler No. 3 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

G.3.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for Boilers No. 1, No. 2, and No. 3 except as otherwise specified in 40 CFR Part 60, Subpart Db.

G.3.2 New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units: Requirements [40 CFR Part 60, Subpart Db] [326 IAC 12]

Pursuant to 40 CFR 60.40b, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart Db for Boiler 1, Boiler 2, and Boiler 3, as specified as follows:

(1) 40 CFR 60.40b(a)
(2) 40 CFR 60.40b(g)
(3) 40 CFR 60.40b(j)
(4) 40 CFR 60.41b
(5) 40 CFR 60.42b(e)
(6) 40 CFR 60.42b(g)
(7) 40 CFR 60.42b(h)
(8) 40 CFR 60.42b (k)(4)
(9) 40 CFR 60.43b(e)
(10) 40 CFR 60.43b(f)
(11) 40 CFR 60.43b(g)
(12) 40 CFR 60.43b(h)
(13) 40 CFR 60.44b(a)
(14) 40 CFR 60.44b(b
(15) 40 CFR 60.44b(c)
(16) 40 CFR 60.44b(h)
(17) 40 CFR 60.44b(i)
(18) 40 CFR 60.45b(a)
(19) 40 CFR 60.45b(b)
(20) 40 CFR 60.45b (c)(1)
(21) 40 CFR 60.45b (c)(2)
(22) 40 CFR 60.45b (c)(3)
(23) 40 CFR 60.45b (c)(4)
(24) 40 CFR 60.45b (c)(5)
(25) 40 CFR 60.45b(f)
(26) 40 CFR 60.45b(g)
(27) 40 CFR 60.45b(h)
(28) 40 CFR 60.45b(i)
(29) 40 CFR 60.46b(a)
(20) 40 CFR 60.46b(b)
(30) 40 CFR 60.46b(c)
(31) 40 CFR 60.46b (d)(7)
(32) 40 CFR 60.46b (e)(1)
(33) 40 CFR 60.46b (e)(2)
(34) 40 CFR 60.46b (e)(3)
(35) 40 CFR 60.46b(j)
(36) 40 CFR 60.47b(a)
(37) 40 CFR 60.47b(c)
(38) 40 CFR 60.47b(d)
(39) 40 CFR 60.47b(e)
(40) 40 CFR 60.48b(b)
(41) 40 CFR 60.48b(c)
(42) 40 CFR 60.48b(d)

(43) 40 CFR 60.48b(e)
(44) 40 CFR 60.48b(f)
(45) 40 CFR 60.48b (j)(1)
(46) 40 CFR 60.48b(k)
(47) 40 CFR 60.49b(a)
(48) 40 CFR 60.49b(b)
(49) 40 CFR 60.49b(d)
(50) 40 CFR 60.49b(f)
(51) 40 CFR 60.49b(g)
(52) 40 CFR 60.49b (h)(1)
(53) 40 CFR 60.49b (h)(2)
(54) 40 CFR 60.49b (h)(3)
(55) 40 CFR 60.49b(i)
(56) 40 CFR 60.49b(j)
(57) 40 CFR 60.49b(k)
(58) 40 CFR 60.49b(l)
(59) 40 CFR 60.49b(n)
(60) 40 CFR 60.49b(o)
(61) 40 CFR 60.49b(v)
(62) 40 CFR 60.49b(w)

SECTION H Clean Air Interstate Rule (CAIR) Nitrogen Oxides Annual, Sulfur Dioxide, and Nitrogen Oxides Ozone Season Trading Programs – CAIR Permit for CAIR Units Under 326 IAC 24-1-1(a), 326 IAC 24-2-1(a), and 326 IAC 24-3-1(a)

Facility Description [326 IAC 2-7-5(15)]

(d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced on March 16, 1968, with an electrostatic precipitator (ESP) for control of particulate matter. Boiler No. 4 was configured with a low NOx burner in 1998, a Selective Catalytic Reduction (SCR) system permitted and constructed in 2004, and a reagent injection system that will reduce sulfuric acid emissions exiting the SCR, constructed in 2009. Boiler No. 4 has a nominal heat input capacity of 2,958 MMBtu/hr, and vents to Stack 243, which has continuous emissions monitors (CEMs) for nitrogen oxides (NOx), carbon dioxide (CO2), and sulfur dioxide (SO2), and a continuous opacity monitor (COM). Boiler No. 4 has a natural gas burner for start-up and may be fired in conjunction with the coal-fired capability. Construction of a dedicated wet limestone slurry absorber scrubber began in 2005.

This unit is not an affected facility under NSPS Da because it did not commence construction, modification, or reconstruction after September 18, 1978, or after June 19, 1984. The low NO_X burner constructed in 1998 and the SCR system constructed in 2004 do not qualify as modifications as defined by 40 CFR 60, Subpart A. Specifically, the physical change did not result in increased to the atmosphere of any air pollutant (to which a standard applies) or result in any air pollutant not previously emitted.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

H.1 Automatic Incorporation of Definitions [326 IAC 24-1-7(e)] [326 IAC 24-2-7(e)] [326 IAC 24-3-7(e)] [40 CFR 97.123(b)] [40 CFR 97.223(b)] [40 CFR 97.323(b)]

This CAIR permit is deemed to incorporate automatically the definitions of terms under 326 IAC 24-1-2, 326 IAC 24-2-2, and 326 IAC 24-3-2.

H.2 Standard Permit Requirements [326 IAC 24-1-4(a)] [326 IAC 24-2-4(a)] [326 IAC 24-3-4(a)] [40 CFR 97.106(a)] [40 CFR 97.206(a)] [40 CFR 97.306(a)]

(a) The Permittee shall operate each source and unit in compliance with this CAIR permit.

(b) The CAIR NO_X unit, subject to this CAIR permit is Unit 4. The CAIR SO_2 units subject to this CAIR permit are Units 1, 2, 3, and 4. The CAIR NO_X ozone season units subject to this CAIR permit is Unit 4 and large affected Warrick units 1, 2, and 3.

H.3 Monitoring, Reporting, and Record Keeping Requirements [326 IAC 24-1-4(b)] [326 IAC 24-2-4(b)] [326 IAC 24-3-4(b)] [40 CFR 97.106(b)] [40 CFR 97.206(b)] [40 CFR 97.306(b)]

(a) The owners and operators, and the CAIR designated representative, of each CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source and CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit at the source shall comply with the applicable monitoring, reporting, and record keeping requirements of 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11.

(b) The emissions measurements recorded and reported in accordance with 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11 shall be used to determine compliance by each CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source with the CAIR NO_X emissions limitation under 326 IAC 24-1-4(c), CAIR SO_2 emissions limitation under 326 IAC 24-2-4(c), and CAIR NO_X ozone season emissions

limitation under 326 IAC 24-3-4(c) and Condition H.4.1, Nitrogen Oxides Emission Requirements, Condition H.4.2, Sulfur Dioxide Emission Requirements, and Condition H.4.3, Nitrogen Oxides Ozone Season Emission Requirements.

H.4.1 Nitrogen Oxides Emission Requirements [326 IAC 24-1-4(c)] [40 CFR 97.106(c)]

(a) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_X source and each CAIR NO_X unit at the source shall hold, in the source's compliance account, CAIR NO_X allowances available for compliance deductions for the control period under 326 IAC 24-1-9(i) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_X units at the source, as determined in accordance with 326 IAC 24-1-11.

(b) A CAIR NO_X unit shall be subject to the requirements under 326 IAC 24-1-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-1-4(c)(2), and for each control period thereafter.

(c) A CAIR NO_X allowance shall not be deducted for compliance with the requirements under 326 IAC 24-1-4(c)(1), for a control period in a calendar year before the year for which the CAIR NO_X allowance was allocated.

(d) CAIR NO_X allowances shall be held in, deducted from, or transferred into or among CAIR NO_X allowance tracking system accounts in accordance with 326 IAC 24-1-9, 326 IAC 24-1-10, and 326 IAC 24-1-12.

(e) A CAIR NO_X allowance is a limited authorization to emit one (1) ton of nitrogen oxides in accordance with the CAIR NO_X annual trading program. No provision of the CAIR NO_X annual trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-1-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.

(f) A CAIR NO_X allowance does not constitute a property right.

(g) Upon recordation by the U.S. EPA under 326 IAC 24-1-8, 326 IAC 24-1-9, 326 IAC 24-1-10, or 326 IAC 24-1-12, every allocation, transfer, or deduction of a CAIR NO_X allowance to or from a CAIR NO_X source's compliance account is incorporated automatically in this CAIR permit.

H.4.2 Sulfur Dioxide Emission Requirements [326 IAC 24-2-4(c)] [40 CFR 97.206(c)]

(a) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR SO_2 source and each CAIR SO_2 unit at the source shall hold, in the source's compliance account, a tonnage equivalent of CAIR SO_2 allowances available for compliance deductions for the control period under 326 IAC 24-2-8(j) and 326 IAC 24-2-8(k) not less than the tons of total sulfur dioxide emissions for the control period from all CAIR SO_2 units at the source, as determined in accordance with 326 IAC 24-2-10.

(b) A CAIR SO_2 unit shall be subject to the requirements under 326 IAC 24-2-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-2-4(c)(2), and for each control period thereafter.

(c) A CAIR SO_2 allowance shall not be deducted for compliance with the requirements under 326 IAC 24-2-4(c)(1), for a control period in a calendar year before the year for which the CAIR SO_2 allowance was allocated.

(d) CAIR SO_2 allowances shall be held in, deducted from, or transferred into or among CAIR SO_2 allowance tracking system accounts in accordance with 326 IAC 24-2-8, 326 IAC 24-2-9, and 326 IAC 24-2-11.

(e) A CAIR SO_2 allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO_2 trading program. No provision of the CAIR SO_2 trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-2-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.

(f) A CAIR SO_2 allowance does not constitute a property right.

(g) Upon recordation by the U.S. EPA under 326 IAC 24-2-8, 326 IAC 24-2-9, or 326 IAC 24-2-11, every allocation, transfer, or deduction of a CAIR SO_2 allowance to or from a CAIR SO_2 source's compliance account is incorporated automatically in this CAIR permit.

H.4.3 Nitrogen Oxides Ozone Season Emission Requirements [326 IAC 24-3-4(c)] [40 CFR 97.306(c)]

(a) As of the allowance transfer deadline for a control period, the owners and operators of each CAIR NO_X ozone season source and each CAIR NO_X ozone season unit at the source shall hold, in the source's compliance account, CAIR NO_X ozone season allowances available for compliance deductions for the control period under 326 IAC 24-3-9(i) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_X ozone season units at the source, as determined in accordance with 326 IAC 24-3-11.

(b) A CAIR NO_X ozone season unit shall be subject to the requirements under 326 IAC 24-3-4(c)(1) for the control period starting on the applicable date, as determined under 326 IAC 24-3-4(c)(2), and for each control period thereafter.

(c) A CAIR NO_X ozone season allowance shall not be deducted for compliance with the requirements under 326 IAC 24-3-4(c)(1), for a control period in a calendar year before the year for which the CAIR NO_X ozone season allowance was allocated.

(d) CAIR NO_X ozone season allowances shall be held in, deducted from, or transferred into or among CAIR NO_X ozone season allowance tracking system accounts in accordance with 326 IAC 24-3-9, 326 IAC 24-3-10, and 326 IAC 24-3-12.

(e) A CAIR NO_X ozone season allowance is a limited authorization to emit one (1) ton of nitrogen oxides in accordance with the CAIR NO_X ozone season trading program. No provision of the CAIR NO_X ozone season trading program, the CAIR permit application, the CAIR permit, or an exemption under 326 IAC 24-3-3 and no provision of law shall be construed to limit the authority of the State of Indiana or the United States to terminate or limit the authorization.

(f) A CAIR NO_X ozone season allowance does not constitute a property right.

(g) Upon recordation by the U.S. EPA under 326 IAC 24-3-8, 326 IAC 24-3-9, 326 IAC 24-3-10, or 326 IAC 24-3-12, every allocation, transfer, or deduction of a CAIR NO_X ozone season allowance to or from a CAIR NO_X ozone season source's compliance account is incorporated automatically in this CAIR permit.

H.5 Excess Emissions Requirements [326 IAC 24-1-4(d)] [326 IAC 24-2-4(d)] [326 IAC 24-3-4(d)] [40 CFR 97.106(d)] [40 CFR 97.206(d)] [40 CFR 97.306(d)]

(a) The owners and operators of a CAIR NO_X source and each CAIR NO_X unit that emits nitrogen oxides during any control period in excess of the CAIR NO_X emissions limitation shall do the following:

(1) Surrender the CAIR NO_X allowances required for deduction under 326 IAC 24-1-9(j)(4).

(2) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-1-4, the Clean Air Act (CAA), and applicable state law.

(b) The owners and operators of a CAIR SO_2 source and each CAIR SO_2 unit that emits sulfur dioxide during any control period in excess of the CAIR SO_2 emissions limitation shall do the following:

(1) Surrender the CAIR SO_2 allowances required for deduction under 326 IAC 24-2-8(k)(4).

(2) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-2-4, the Clean Air Act (CAA), and applicable state law.

(c) The owners and operators of a CAIR NO_X ozone season source and each CAIR NO_X ozone season unit that emits nitrogen oxides during any control period in excess of the CAIR NO_X ozone season emissions limitation shall do the following:

(1) Surrender the CAIR NO_X ozone season allowances required for deduction under 326 IAC 24-3-9(j)(4).

(2) Pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, the Clean Air Act (CAA) or applicable state law.

Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 326 IAC 24-3-4, the Clean Air Act (CAA), and applicable state law.

H.6 Record Keeping Requirements [326 IAC 24-1-4(e)] [326 IAC 24-2-4(e)] [326 IAC 24-3-4(e)] [326 IAC 2-7-5(3)] [40 CFR 97.106(e)] [40 CFR 97.206(e)] [40 CFR 97.306(e)]

Unless otherwise provided, the owners and operators of the CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source and each CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit at the source shall keep on site at the source or at a central location within Indiana for those owners or operators with unattended sources, each of the following documents for a period of five (5) years from the date the document was created:

(a) The certificate of representation under 326 IAC 24-1-6(h), 326 IAC 24-2-6(h), and 326 IAC 24-3-6(h) for the CAIR designated representative for the source and each CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation. The certificate and documents shall be retained on site at the source or at a central location within Indiana for those owners or operators with unattended sources beyond such five (5) year period until such documents are superseded because of the

submission of a new account certificate of representation under 326 IAC 24-1-6(h), 326 IAC 24-2-6(h), and 326 IAC 24-3-6(h) changing the CAIR designated representative.

(b) All emissions monitoring information, in accordance with 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11, provided that to the extent that 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11 provides for a three (3) year period for record keeping, the three (3) year period shall apply.

(c) Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program.

(d) Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program or to demonstrate compliance with the requirements of the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program.

This period may be extended for cause, at any time before the end of five (5) years, in writing by IDEM, OAQ or the U.S. EPA. Unless otherwise provided, all records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

H.7 Reporting Requirements [326 IAC 24-1-4(e)] [326 IAC 24-2-4(e)] [326 IAC 24-3-4(e)] [40 CFR 97.106(e)] [40 CFR 97.206(e)] [40 CFR 97.306(e)]

(a) The CAIR designated representative of the CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source and each CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit at the source shall submit the reports required under the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program, including those under 326 IAC 24-1-11, 326 IAC 24-2-10, and 326 IAC 24-3-11.

(b) Pursuant to 326 IAC 24-1-4(e), 326 IAC 24-2-4(e), and 326 IAC 24-3-4(e) and 326 IAC 24-1-6(e)(1), 326 IAC 24-2-6(e)(1), and 326 IAC 24-3-6(e)(1), each submission under the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program shall include the following certification statement by the CAIR designated representative: “I am authorized to make this submission on behalf of the owners and operators of the source or units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(c) Where 326 IAC 24-1, 326 IAC 24-2, and 326 IAC 24-3 requires a submission to IDEM, OAQ, the information shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

(d) Where 326 IAC 24-1, 326 IAC 24-2, and 326 IAC 24-3 requires a submission to U.S. EPA, the information shall be submitted to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue, NW
Mail Code 6204N
Washington, DC 20460

H.8 Liability [326 IAC 24-1-4(f)] [326 IAC 24-2-4(f)] [326 IAC 24-3-4(f)] [40 CFR 97.106(f)] [40 CFR 97.206(f)] [40 CFR 97.306(f)]

The owners and operators of each CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source and each CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit shall be liable as follows:

(a) Each CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source and each CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit shall meet the requirements of the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program, respectively.

(b) Any provision of the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program that applies to a CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source or the CAIR designated representative of a CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source shall also apply to the owners and operators of such source and of the CAIR NO_X units, CAIR SO_2 units, and CAIR NO_X ozone season units at the source.

(c) Any provision of the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program that applies to a CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit or the CAIR designated representative of a CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit shall also apply to the owners and operators of such unit.

H.9 Effect on Other Authorities [326 IAC 24-1-4(g)] [326 IAC 24-2-4(g)] [326 IAC 24-3-4(g)] [40 CFR 97.106(g)] [40 CFR 97.206(g)] [40 CFR 97.306(g)]

No provision of the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program, a CAIR permit application, a CAIR permit, or an exemption under 326 IAC 24-1-3, 326 IAC 24-2-3, and 326 IAC 24-3-3 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source or CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act (CAA).

H.10 CAIR Designated Representative and Alternate CAIR Designated Representative [326 IAC 24-1-6] [326 IAC 24-2-6] [326 IAC 24-3-6] [40 CFR 97, Subpart BB] [40 CFR 97, Subpart BBB] [40 CFR 97, Subpart BBBB]

Pursuant to 326 IAC 24-1-6, 326 IAC 24-2-6, and 326 IAC 24-3-6:

(a) Except as specified in 326 IAC 24-1-6(f)(3), 326 IAC 24-2-6(f)(3), and 326 IAC 24-3-6(f)(3), each CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source, including all CAIR NO_X units, CAIR SO_2 units, and CAIR NO_X ozone season units at the source, shall have one (1) and only one (1) CAIR designated representative, with regard to all matters under the CAIR NO_X annual trading program, CAIR SO_2 trading program, and CAIR NO_X ozone season trading program concerning the source or any CAIR NO_X unit, CAIR SO_2 unit, and CAIR NO_X ozone season unit at the source.

(b) The provisions of 326 IAC 24-1-6(f), 326 IAC 24-2-6(f), and 326 IAC 24-3-6(f) shall apply where the owners or operators of a CAIR NO_X source, CAIR SO_2 source, and CAIR NO_X ozone season source choose to designate an alternate CAIR designated representative.

Except as specified in 326 IAC 24-1-6(f)(3), 326 IAC 24-2-6(f)(3), and 326 IAC 24-3-6(f)(3), whenever the term "CAIR designated representative" is used, the term shall be construed to include the CAIR designated representative or any alternate CAIR designated representative.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)

☐ Report (specify)

☐ Notification (specify)

☐ Affidavit (specify)

☐ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12) • The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and • The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boilers No. 1, No. 2, and No. 3
Parameter: PM Emissions
Limit: Shall be less than 1,060.0 tons per twelve (12) consecutive month period

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature:_____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boiler No. 4
Parameter: PM Emissions
(Calculated using the most recent PM emission factor in lb/MMBtu, approved by IDEM derived as specified by Condition D.1.11 (e))

Limit: Shall be less than 1,425.0 tons per twelve (12) consecutive month period.

QUARTER: _____ YEAR: _____

Month	PM (tons)	PM (tons)	PM (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Telephone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boilers No. 1, No. 2, No. 3, and No. 4
Parameter: NOx Emissions
Limit: Shall be less than 13,720.0 tons per twelve (12) consecutive month period

QUARTER: _____ YEAR: _____

Month	NOx (tons)	NOx (tons)	NOx (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Telephone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boilers No., 1, No. 2, No. 3, and No. 4
Parameter: H_2SO_4 Emissions
Limit: Shall be less than 677.0 tons per twelve (12) consecutive month period.

QUARTER: _____ YEAR: _____

Month	H_2SO_4 (tons)	H_2SO_4 (tons)	H_2SO_4 (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Telephone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boilers No., 1, No. 2, No. 3, and No. 4
Parameter: PM_{10} Emissions
Limit: Shall be less than 4,490.0 tons per twelve (12) consecutive month period

QUARTER: _____ YEAR: _____

Month	PM_{10} (tons)	PM_{10} (tons)	PM_{10} (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Telephone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boilers No., 1, No. 2, No. 3, and No. 4
Parameter: $PM_{2.5}$ Emissions
Limit: Shall be less than 4,490.0 tons per twelve (12) consecutive month period

QUARTER: _____ YEAR: _____

Month	PM_{10} (tons)	PM_{10} (tons)	PM_{10} (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Telephone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boilers No. 1, No. 2, and No. 3
Parameter: CO Emissions
Limit: Shall be less than 2,099.80 tons per twelve (12) consecutive month period

QUARTER: _____ YEAR: _____

Month	CO (tons)	CO (tons)	CO (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Telephone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boiler No. 1, 2, 3
Parameter: SO2 Emissions (Condition D.1.6 and D.1.8(c))
Limit: (a) Total shall not exceed 249.5 tons per day with compliance determined at the end of each day.
(b) Each unit shall not exceed 5.11 lb SO2 per MMBtu

QUARTER: _____ YEAR: _____

Date	Daily Average, lb SO2 / MMBtu			SO2 ton/day Units 1, 2, 3
	Unit 1	Unit 2	Unit 3	

Date	Daily Average, lb SO2 / MMBtu			SO2 ton/day

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boiler No. 1, 2, 3 and 4
Parameter: SO2 Emissions (Condition **D.1.8 (a),** D.1.8(b) and D.1.8(c))
Limit:
(a) Total of all units shall not exceed 157,206 tons per twelve consecutive month period with compliance determined at the end of each month based on 365 day rolling average.
(b) Unit 4 shall not exceed 181.2 tons per day with compliance determined at the end of each day.
(c) Total from Boilers No.1, No.2 and No.3 shall not exceed 249.5 tons/day with compliance determined at the end of each day

QUARTER: _____ YEAR: _____

Date	Units 1-3 SO2 Daily Tons	Unit 4 SO2 Daily Tons	Units 1-4 SO2 Daily Tons	365-day Rolling Average SO2 Total Tons

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Telephone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boiler No. 4
Parameter: SO2 Emissions (Condition D.1.6)
Limit: Unit 4 shall not exceed 5.11 lb SO2 per MMBtu

QUARTER: _____ YEAR: _____

Date	Daily Average lb SO2 / MMBtu	SO2 tons per day	365-day rolling average total SO2 Units 1, 2, 3 and 4

Date	Daily Average lb SO2 / MMBtu	SO2 tons per day	365-day rolling average total SO2 Units 1, 2, 3 and 4

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

Attachment A – Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12]

Source Description and Location

Source Name:	Alcoa Power Generating, Inc. Warrick Power Plant
Source Location:	4700 Darlington Road, Newburgh, IN 47630
County:	Warrick
SIC Code:	4931
Permit Renewal No.:	T173-29684-00002
Permit Reviewer:	Kimberley Malley/Ghassan Shalabi

NSPS [40 CFR Part 60, Subpart OOO]

Subpart OOO— Standards of Performance for Nonmetallic Mineral Processing Plants

Source: 74 FR 19309, Apr. 28, 2009, unless otherwise noted.

§ 60.670 Applicability and designation of affected facility.

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in §60.671).

(b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in §60.676(a).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part 60 that do not apply to owners and operators of affected facilities subject to this subpart or that apply with certain exceptions.

§ 60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

Bagging operation means the mechanical process by which bags are filled with nonmetallic minerals.

Belt conveyor means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capacity means the cumulative rated capacity of all initial crushers that are part of the plant.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more affected facilities to a control device.

Control device means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities at a nonmetallic mineral processing plant.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

Crush or *Crushing* means to reduce the size of nonmetallic mineral material by means of physical impaction of the crusher or grinding mill upon the material.

Crusher means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: Jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

Enclosed truck or railcar loading station means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

Fixed plant means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

Fugitive emission means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

Grinding mill means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: Hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

Initial crusher means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

Nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals:

(1) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(2) Sand and Gravel.

(3) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(4) Rock Salt.

(5) Gypsum (natural or synthetic).

(6) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(7) Pumice.

(8) Gilsonite.

(9) Talc and Pyrophyllite.

(10) Boron, including Borax, Kernite, and Colemanite.

(11) Barite.

(12) Fluorospar.

(13) Feldspar.

(14) Diatomite.

(15) Perlite.

(16) Vermiculite.

(17) Mica.

(18) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

Nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in §60.670 (b) and (c).

Portable plant means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

Production line means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

Saturated material means, for purposes of this subpart, mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket elevators and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be "saturated" for purposes of this definition.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens). Grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be screening operations.

Seasonal shut down means shut down of an affected facility for a period of at least 45 consecutive days due to weather or seasonal market conditions.

Size means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

Stack emission means the particulate matter that is released to the atmosphere from a capture system.

Storage bin means a facility for storage (including surge bins) of nonmetallic minerals prior to further processing or loading.

Transfer point means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

Truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: Trucks, front end loaders, skip hoists, and railcars.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

Wet material processing operation(s) means any of the following:

(1) Wet screening operations (as defined in this section) and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line; or

(2) Screening operations, bucket elevators and belt conveyors in the production line downstream of wet mining operations (as defined in this section) that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line.

Wet mining operation means a mining or dredging operation designed and operated to extract any nonmetallic mineral regulated under this subpart from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.

Wet screening operation means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

§ 60.672 Standard for particulate matter (PM).

(a) Affected facilities must meet the stack emission limits and compliance requirements in Table 2 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.8. The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.

(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

(c) [Reserved]

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity; and

(2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.

(f) Any baghouse that controls emissions from only an individual, enclosed storage bin is exempt from the applicable stack PM concentration limit (and associated performance testing) in Table 2 of this subpart but must meet the applicable stack opacity limit and compliance requirements in Table 2 of this subpart. This exemption from the stack PM concentration limit does not apply for multiple storage bins with combined stack emissions.

§ 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital cost that would be required to construct a comparable new facility” under §60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under §60.15, the “fixed capital cost of the new components” includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

(a) The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(1) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals ±1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(2) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform

monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays.

(c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A–7). The Method 22 (40 CFR part 60, Appendix A–7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A–7) test, including the date and any corrective actions taken, in the logbook required under §60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to §60.675(b) simultaneously with a Method 22 (40 CFR part 60, Appendix A–7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.

(d) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A–7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (*e.g.* , using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media or otherwise repairing the control device;

(iv) Sealing off a defective fabric filter compartment;

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or

(vi) Shutting down the process producing the PM emissions.

(e) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A–7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of Table 6 to Subpart AAAAA of 40 CFR part 63.

§ 60.675 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A–1 through A–7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the PM standards in §60.672(a) as follows:

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A–3 of this part or Method 17 of Appendix A–6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, Appendix A–3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 of Appendix A–4 of this part and the procedures in §60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in §60.672(b) or §60.672(e)(1), the owner or operator shall use Method 9 of Appendix A–4 of this part and the procedures in §60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (*e.g.,* road dust). The required observer position relative to the sun (Method 9 of Appendix A–4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under §60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A–4), the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, Appendix A–4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) or §60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in §60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.

(1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A–4) performance test according to this section and §60.11.

(2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A–7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in §60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 CFR part 60, Appendix A–4) performance test according to this section and §60.11 to show compliance with the opacity limit in §60.672(e)(1).

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 5I of Appendix A–3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A–3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A–1 of this part [*i.e.,* velocity head <1.3 mm H_2O (0.05 in. H_2O)] and referred to in EPA Method 5 of Appendix A–3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (*e.g.,* from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$v_e = \frac{Q_f}{A_e} \qquad \text{(Eq. 1)}$$

Where:

V_e= average building vent velocity (feet per minute);

Q_f= average fan flow rate (cubic feet per minute); and

A_e= area of building vent and measurement location (square feet).

(f) To comply with §60.676(d), the owner or operator shall record the measurements as required in §60.676(c) using the monitoring devices in §60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A–4) testing, the owner or operator may reduce the 30-day advance notification of performance test in §60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in §60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with §60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to §60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to §60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by §63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.

(e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A–4) to demonstrate compliance with §60.672(b), (e) and (f).

(g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in §60.672(b) and the emission test requirements of §60.11.

(h) The subpart A requirement under §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

(k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to §60.4(b).

Table 1 to Subpart OOO—Exceptions to Applicability of Subpart A to Subpart OOO

Table 1 to Subpart OOO—Exceptions to Applicability of Subpart A to Subpart OOO

Subpart A reference	Applies to subpart OOO	Explanation
60.4, Address	Yes	Except in §60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a)(1) notification of the date construction or reconstruction commenced (§60.676(h)).
		Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, Appendix A–4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, Appendix A–4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§60.675(c)), Method 9 (40 CFR part 60, Appendix A–4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

Table 2 to Subpart OOO—Stack Emission Limits for Affected Facilities With Capture Systems

Table 2 to Subpart OOO—Stack Emission Limits for Affected Facilities With Capture Systems

For * * *	The owner or operator must meet a PM limit of * * *	And the owner or operator must meet an opacity limit of * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf)[a]	7 percent for dry control devices[b]	An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet scrubber parameters according to §60.674(a)

For * * *	The owner or operator must meet a PM limit of * * *	And the owner or operator must meet an opacity limit of * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
			and §60.676(c), (d), and (e).
Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	0.032 g/dscm (0.014 gr/dscf)[a]	Not applicable (except for individual enclosed storage bins) 7 percent for dry control devices on individual enclosed storage bins	An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet scrubber parameters according to §60.674(a) and §60.676(c), (d), and (e); and
			Monitoring of baghouses according to §60.674(c), (d), or (e) and §60.676(b).

[a]Exceptions to the PM limit apply for individual enclosed storage bins and other equipment. See §60.672(d) through (f).

[b]The stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

Table 3 to Subpart OOO—Fugitive Emission Limits

Table 3 to Subpart OOO—Fugitive Emission Limits

For * * *	The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671) * * *	The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart.
Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	7 percent opacity	12 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart; and Periodic inspections of water sprays according to §60.674(b) and §60.676(b); and
			A repeat performance test according to §60.11 of this part and §60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water

For * * *	**The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671) * * ***	**The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * ***	**The owner or operator must demonstrate compliance with these limits by conducting * * ***
			sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.

Attachment B – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII] [326 IAC 12]

Source Description and Location	
Source Name:	Alcoa Power Generating, Inc. Warrick Power Plant
Source Location:	4700 Darlington Road, Newburgh, IN 47630
County:	Warrick
SIC Code:	4931
Permit Renewal No.:	T173-29684-00002
Permit Reviewer:	Kimberley Malley/Ghassan Shalabi

NSPS [40 CFR Part 60, Subpart IIII]

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 72 FR 32742, June 13, 2007, unless otherwise noted.

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines,

(ii) The model year listed in table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

Emission Standards for Manufacturers

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per

cylinder that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

§ 60.4203 How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the useful life of the engines.

Emission Standards for Owners and Operators

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Reduce nitrogen oxides (NO_X) emissions by 90 percent or more, or limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (g/KW-hr) (1.2 grams per HP-hour (g/HP-hr)).

(2) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (d)(1) and (2) of this section.

(1) Reduce NO_Xemissions by 90 percent or more, or limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (1.2 grams per HP-hour).

(2) Reduce PM emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

Fuel Requirements for Owners and Operators

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(d) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the Federal Aid Highway System may petition the Administrator for approval to use any fuels mixed with used lubricating oil that do not meet the fuel requirements of paragraphs (a) and (b) of this section. Owners and operators must demonstrate in their petition to the Administrator that there is no other place to use the lubricating oil. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

Other Requirements for Owners and Operators

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model year?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section.

(h) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

Compliance Requirements

§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and §60.4202(c) using the certification procedures required in 40 CFR part 94 subpart C, and must test their engines as specified in 40 CFR part 94.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 40 CFR 1039.125, 40 CFR 1039.130, 40 CFR 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89 or 40 CFR part 94 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under parts 89, 94, or 1039 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO_X and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_X and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (d) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

C_i= concentration of NO_Xor PM at the control device inlet,

C_o= concentration of NO_Xor PM at the control device outlet, and

R = percent reduction of NO_Xor PM emissions.

(2) You must normalize the NO_Xor PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \% O_2} \qquad \text{(Eq. 3)}$$

Where:

C_{adj}= Calculated NO_Xor PM concentration adjusted to 15 percent O_2.

C_d= Measured concentration of NO_Xor PM, uncorrected.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

%O_2= Measured O_2concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent $O_2$and CO_2concentration is measured in lieu of O_2concentration measurement, a CO_2correction factor is needed. Calculate the CO_2correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific $F_o$value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209_{H}}{F_c} \qquad \text{(Eq. 4)}$$

Where:

F_o= Fuel factor based on the ratio of O_2volume to the ultimate CO_2volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2, percent/100.

F_d= Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

F_c= Ratio of the volume of CO_2produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

Where:

X_{CO2}= CO_2correction factor, percent.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

(iii) Calculate the $NO_X$and PM gas concentrations adjusted to 15 percent O_2using CO_2as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \qquad \text{(Eq. 6)}$$

Where:

C_{adj}= Calculated NO_Xor PM concentration adjusted to 15 percent O_2.

C_d= Measured concentration of NO_Xor PM, uncorrected.

%CO_2= Measured CO_2concentration, dry basis, percent.

(e) To determine compliance with the NO_Xmass per unit output emission limitation, convert the concentration of NO_Xin the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 7)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_d= Measured NO_Xconcentration in ppm.

$1.912x10^{-3}$= Conversion constant for ppm $NO_X$to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-}hour} \qquad (Eq. 8)$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj}= Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

Notification, Reports, and Records for Owners and Operators

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

Special Requirements

§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §60.4205. Non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder, must meet the applicable emission standards in §60.4204(c).

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

§ 60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI engines located in areas of Alaska not accessible by the Federal Aid Highway System should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) The Governor of Alaska may submit for EPA approval, by no later than January 11, 2008, an alternative plan for implementing the requirements of 40 CFR part 60, subpart IIII, for public-sector electrical utilities located in rural areas of Alaska not accessible by the Federal Aid Highway System. This alternative plan must be based on the requirements of section 111 of the Clean Air Act including any increased risks to human health and the environment and must also be based on the unique circumstances related to remote power generation, climatic conditions, and serious economic impacts resulting from implementation of 40 CFR part 60, subpart IIII. If EPA approves by rulemaking process an alternative plan, the provisions as approved by EPA under that plan shall apply to the diesel engines used in new stationary internal combustion engines subject to this paragraph.

§ 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

(a) Owners and operators of stationary CI ICE that do not use diesel fuel, or who have been given authority by the Administrator under §60.4207(d) of this subpart to use fuels that do not meet the fuel requirements of paragraphs (a) and (b) of §60.4207, may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4202 or §60.4203 using such fuels.

(b) [Reserved]

General Provisions

§ 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

§ 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means either:

(1) The calendar year in which the engine was originally produced, or

(2) The annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

Useful life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for useful life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for useful life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007–2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

(600≤HP≤750)					
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
Engine power	**Model year(s)**	**NO_X+ NMHC**	**CO**	**PM**
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

[As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:]

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)

	2011+[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

[1]For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[2]For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3]In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed[1]	Torque (percent)[2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1]Engine speed: ±2 percent of point.

[2]Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder	a. Reduce NO_Xemissions by 90 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for NO_Xconcentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO_Xconcentration.
		iv. Measure NO_Xat the inlet and outlet of the control device	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by	(d) NO_Xconcentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each	Complying with the requirement to	You must	Using	According to the following requirements
			reference, see §60.17)	
	b. Limit the concentration of NO_X in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location; and,	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2 concentration must be made at the same time as the measurement for NO_X concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_X concentration.
		iv. Measure NO_X at the exhaust of the stationary internal combustion engine	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine and moisture content must be made at

For each	Complying with the requirement to	You must	Using	According to the following requirements
		and outlet of the control device; and		the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Attachment C – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Db] [326 IAC 12]

Source Description and Location	
Source Name:	Alcoa Power Generating, Inc. Warrick Power Plant
Source Location:	4700 Darlington Road, Newburgh, IN 47630
County:	Warrick
SIC Code:	4931
Permit Renewal No.:	T173-29684-00002
Permit Reviewer:	Kimberley Malley/Ghassan Shalabi

NSPS [40 CFR Part 60, Subpart Db]

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Source: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the particulate matter (PM) and nitrogen oxides (NO_X) standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are subject to the PM and NO_X standards under this subpart and to the sulfur dioxide (SO_2) standards under subpart D (§60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the NO_X standards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are also subject to the NO_X standards under this subpart and the PM and SO_2 standards under subpart D (§60.42 and §60.43).

(c) Affected facilities that also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; §60.104) are subject to the PM and NO_X standards under this subpart and the SO_2 standards under subpart J (§60.104).

(d) Affected facilities that also meet the applicability requirements under subpart E (Standards of performance for incinerators; §60.50) are subject to the NO_X and PM standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; §60.40Da) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing total reduced sulfur (TRS) as defined under §60.281 is not considered a modification under §60.14 and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

(h) Any affected facility that meets the applicability requirements and is subject to subpart Ea, subpart Eb, or subpart AAAA of this part is not covered by this subpart.

(i) Heat recovery steam generators that are associated with combined cycle gas turbines and that meet the applicability requirements of subpart GG or KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, §60.40).

(k) Any affected facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart Cb or subpart BBBB of this part is not covered by this subpart.

§ 60.41b Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels listed in §60.42b(a), §60.43b(a), or §60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants, petroleum refineries, or pulp and paper mills (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide (CO_2) levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purpose of this subpart.

Chemical manufacturing plants mean industrial plants that are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified

coal, coal-oil mixtures, coke oven gas, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct of coal mining or coal cleaning operations with an ash content greater than 50 percent, by weight, and a heating value less than 13,900 kJ/kg (6,000 Btu/lb) on a dry basis.

Cogeneration , also known as combined heat and power, means a facility that simultaneously produces both electric (or mechanical) and useful thermal energy from the same primary energy source.

Coke oven gas means the volatile constituents generated in the gaseous exhaust during the carbonization of bituminous coal to form coke.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a steam generating unit.

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2 control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under §60.49b(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Gaseous fuel means any fuel that is present as a gas at ISO conditions.

Gross output means the gross useful work performed by the steam generated. For units generating only electricity, the gross useful work performed is the gross electrical output from the turbine/generator set. For cogeneration units, the gross useful work performed is the gross electrical or mechanical output plus

75 percent of the useful thermal output measured relative to ISO conditions that is not used to generate additional electrical or mechanical output (i.e., steam delivered to an industrial process).

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hr) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

Heat transfer medium means any material that is used to transfer heat from one point to another point.

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3).

ISO Conditions means a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals.

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

Natural gas means: (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical SO_2 emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Pulp and paper mills means industrial plants that are classified by the Department of Commerce under North American Industry Classification System (NAICS) Code 322 or Standard Industrial Classification (SIC) Code 26.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units. Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste and produces steam or heats water or any other heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Very low sulfur oil means for units constructed, reconstructed, or modified on or before February 28, 2005, an oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2 emission control, has a SO_2 emission rate equal to or less than 215 ng/J (0.5 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005, *very low sulfur oil* means an oil that contains no more than 0.3 weight percent sulfur or that, when combusted without SO_2 emission control, has a SO_2 emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input.

Wet flue gas desulfurization technology means a SO_2 control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

§ 60.42b Standard for sulfur dioxide (SO2).

(a) Except as provided in paragraphs (b), (c), (d), or (k) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction) and the emission limit determined according to the following formula:

Where:

E_s= SO_2 emission limit, in ng/J or lb/MMBtu heat input;

K_a= 520 ng/J (or 1.2 lb/MMBtu);

K_b= 340 ng/J (or 0.80 lb/MMBtu);

H_a= Heat input from the combustion of coal, in J (MMBtu); and

H_b= Heat input from the combustion of oil, in J (MMBtu).

Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) or 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable.

(c) On and after the date on which the performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of SO_2 emissions, shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 50 percent of the potential SO_2 emission rate (50 percent reduction) and that contain SO_2 in excess of the emission limit determined according to the following formula:

Where:

E_s= SO_2 emission limit, in ng/J or lb/MM Btu heat input;

K_c= 260 ng/J (or 0.60 lb/MMBtu);

K_d= 170 ng/J (or 0.40 lb/MMBtu);

H_c= Heat input from the combustion of coal, in J (MMBtu); and

H_d= Heat input from the combustion of oil, in J (MMBtu).

Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 and listed in paragraphs (d)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.5 lb/MMBtu)

heat input if the affected facility combusts oil other than very low sulfur oil. Percent reduction requirements are not applicable to affected facilities under paragraphs (d)(1), (2), (3) or (4) of this section.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from the exhaust gases entering the duct burner; or

(4) The affected facility burns coke oven gas alone or in combination with natural gas or very low sulfur distillate oil.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section and §60.45b(a), the SO_2 emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential SO_2 emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential SO_2 emissions and

(2) Emissions from the pretreated fuel (without combustion or post-combustion SO_2 control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the SO_2 control system is not being operated because of malfunction or maintenance of the SO_2 control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in §60.45b(c) or §60.45b(d), and following the monitoring procedures as described in §60.47b(a) or §60.47b(b) to determine SO_2 emission rate or fuel oil sulfur content; or (2) maintaining fuel records as described in §60.49b(r).

(k)(1) Except as provided in paragraphs (k)(2), (k)(3), and (k)(4) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO_2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.

(2) Units firing only very low sulfur oil and/or a mixture of gaseous fuels with a potential SO_2 emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO_2 emissions limit in paragraph 60.42b(k)(1).

(3) Units that are located in a noncontinental area and that combust coal or oil shall not discharge any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.50 lb/MMBtu) heat input if the affected facility combusts oil.

(4) As an alternative to meeting the requirements under paragraph (k)(1) of this section, modified facilities that combust coal or a mixture of coal with other fuels shall not cause to be discharged into the atmosphere any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.

§ 60.43b Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 that combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input, (i) If the affected facility combusts only coal, or

(ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(3) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal or coal and other fuels and

(i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less,

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and

(iv) Construction of the affected facility commenced after June 19, 1984, and before November 25, 1986.

(4) An affected facility burning coke oven gas alone or in combination with other fuels not subject to a PM standard under §60.43b and not using a post-combustion technology (except a wet scrubber) for reducing PM or SO_2 emissions is not subject to the PM limits under §60.43b(a).

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce SO_2 emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if (i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood;

(ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood; and

(iii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input;

(i) If the affected facility combusts only municipal-type solid waste; or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less;

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less;

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for municipal-type solid waste, or municipal-type solid waste and other fuels; and

(iv) Construction of the affected facility commenced after June 19, 1984, but on or before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(g) The PM and opacity standards apply at all times, except during periods of startup, shutdown or malfunction.

(h)(1) Except as provided in paragraphs (h)(2), (h)(3), (h)(4), and (h)(5) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of

these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input,

(2) As an alternative to meeting the requirements of paragraph (h)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity of 73 MW (250 MMBtu/h) or less shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum heat input capacity greater than 73 MW (250 MMBtu/h) shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 37 ng/J (0.085 lb/MMBtu) heat input.

(5) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.3 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture of these fuels) in combination with other fuels not subject to a PM standard under §60.43b and not using a post-combustion technology (except a wet scrubber) to reduce SO_2 or PM emissions is not subject to the PM limits under §60.43b(h)(1).

§ 60.44b Standard for nitrogen oxides (NOX).

(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X(expressed as NO_2) in excess of the following emission limits:

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
	ng/J	lb/MMBTu
(1) Natural gas and distillate oil, except (4):		
(i) Low heat release rate	43	0.10
(ii) High heat release rate	86	0.20

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
	ng/J	lb/MMBTu
(2) Residual oil:		
(i) Low heat release rate	130	0.30
(ii) High heat release rate	170	0.40
(3) Coal:		
(i) Mass-feed stoker	210	0.50
(ii) Spreader stoker and fluidized bed combustion	260	0.60
(iii) Pulverized coal	300	0.70
(iv) Lignite, except (v)	260	0.60
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace	340	0.80
(vi) Coal-derived synthetic fuels	210	0.50
(4) Duct burner used in a combined cycle system:		
(i) Natural gas and distillate oil	86	0.20
(ii) Residual oil	170	0.40

(b) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X in excess of a limit determined by the use of the following formula:

Where:

E_n= NO_X emission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas or distillate oil, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(c) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil, or a mixture of these

fuels with natural gas, and wood, municipal-type solid waste, or any other fuel shall cause to be discharged into the atmosphere any gases that contain NO_X in excess of the emission limit for the coal or oil, or mixtures of these fuels with natural gas combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section, unless the affected facility has an annual capacity factor for coal or oil, or mixture of these fuels with natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, or a mixture of these fuels with natural gas.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural gas with wood, municipal-type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X in excess of 130 ng/J (0.30 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for natural gas.

(e) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal, oil, or natural gas with byproduct/waste shall cause to be discharged into the atmosphere any gases that contain NO_X in excess of the emission limit determined by the following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less:

Where:

E_n= NO_X emission limit (expressed as NO_2), ng/J (lb/MMBtu);

EL_{go}= Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

H_{go}= Heat input from combustion of natural gas, distillate oil and gaseous byproduct/waste, J (MMBtu);

EL_{ro}= Appropriate emission limit from paragraph (a)(2) for combustion of residual oil and/or byproduct/waste, ng/J (lb/MMBtu);

H_{ro}= Heat input from combustion of residual oil, J (MMBtu);

EL_c= Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

H_c= Heat input from combustion of coal, J (MMBtu).

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility to establish a NO_X emission limit that shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include sufficient and appropriate data, as determined by the Administrator, such as NO_X emissions from the affected facility, waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific NO_X emission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, by conducting a 30-day performance test as provided in §60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, when gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this section.

(2) The NO_X emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific NO_X emission limit will be established at the NO_X emission level achievable when the affected facility is combusting oil or natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing NO_X emissions. In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_X limit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40 CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the affected facility for a waiver from compliance with the NO_X emission limit that applies specifically to that affected facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on NO_X emissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the affected facility is able to comply with the NO_X emission limits required by this section. The owner or operator of the affected facility shall demonstrate that when hazardous waste is combusted in the affected facility, thermal destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement preclude compliance with the NO_X emission limits of this section. The NO_X emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, are applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70 for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).) In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NO_X limit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(h) For purposes of paragraph (i) of this section, the NO_X standards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j)(1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 MMBtu/hr) or less, are not subject to the NO_X emission limits under this section.

(l) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction or reconstruction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X (expressed as NO_2) in excess of the following limits:

(1) If the affected facility combusts coal, oil, or natural gas, or a mixture of these fuels, or with any other fuels: A limit of 86 ng/J (0.20 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas; or

(2) If the affected facility has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the following formula:

Where:

E_n= NO_X emission limit, (lb/MMBtu);

H_{go}= 30-day heat input from combustion of natural gas or distillate oil; and

H_r= 30-day heat input from combustion of any other fuel.

(3) After February 27, 2006, units where more than 10 percent of total annual output is electrical or mechanical may comply with an optional limit of 270 ng/J (2.1 lb/MWh) gross energy output, based on a 30-day rolling average. Units complying with this output-based limit must demonstrate compliance according to the procedures of §60.48Da(i) of subpart Da of this part, and must monitor emissions according to §60.49Da(c), (k), through (n) of subpart Da of this part.

§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The SO_2 emission standards under §60.42b apply at all times. Facilities burning coke oven gas alone or in combination with any other gaseous fuels or distillate oil and complying with the fuel based limit under §60.42b(d) or §60.42b(k)(2) are allowed to exceed the limit 30 operating days per calendar year for by-product plant maintenance.

(b) In conducting the performance tests required under §60.8, the owner or operator shall use the methods and procedures in appendix A (including fuel certification and sampling) of this part or the methods and procedures as specified in this section, except as provided in §60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential SO_2 emission rate (% P_s) and the SO_2 emission rate (E_s) pursuant to §60.42b following the procedures listed below, except as provided under paragraph (d) and (k) of this section.

(1) The initial performance test shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the SO_2 standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal, only oil, or a mixture of coal and oil is combusted, the following procedures are used:

(i) The procedures in Method 19 of appendix A of this part are used to determine the hourly SO_2 emission rate (E_{ho}) and the 30-day average emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the continuous emission monitoring system (CEMS) of §60.47b (a) or (b).

(ii) The percent of potential SO_2 emission rate (%P_s) emitted to the atmosphere is computed using the following formula:

Where:

%P_s= Potential SO_2 emission rate, percent;

%R_g= SO_2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

%R_f= SO_2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly SO_2 emission rate (E_{ho}^{o}) is used in Equation 19–19 of Method 19 of appendix A of this part to compute an adjusted 30-day average emission rate (E_{ao}^{o}). The Eho° is computed using the following formula:

Where:

E_{ho}^{o} = Adjusted hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_{ho}= Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w= SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted; and

X_k= Fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(ii) To compute the percent of potential SO_2 emission rate ($\%P_s$), an adjusted $\%R_g$($\%R_g^o$) is computed from the adjusted E_{ao}^o from paragraph (b)(3)(i) of this section and an adjusted average SO_2inlet rate (E_{ai}^o) using the following formula:

To compute E_{ai}^o , an adjusted hourly SO_2 inlet rate (E_{hi}^o) is used. The E_{hi}^o is computed using the following formula:

Where:

E_{hi}^o = Adjusted hourly SO_2 inlet rate, ng/J (lb/MMBtu); and

E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu).

(4) The owner or operator of an affected facility subject to paragraph (b)(3) of this section does not have to measure parameters E_w or X_ki f the owner or operator elects to assume that X_k = 1.0. Owners or operators of affected facilities who assume X_k= 1.0 shall:

(i) Determine $\%P_s$ following the procedures in paragraph (c)(2) of this section; and

(ii) Sulfur dioxide emissions (E_s) are considered to be in compliance with SO_2emission limits under §60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of §60.42b(d) does not have to measure parameters E_w or X_k under paragraph (b)(3) of this section if the owner or operator of the affected facility elects to measure SO_2 emission rates of the coal or oil following the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(d) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility that combusts only very low sulfur oil, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a CEMS is used, or based on a daily average if Method 6B of appendix A of this part or fuel sampling and analysis procedures under Method 19 of appendix A of this part are used.

(e) The owner or operator of an affected facility subject to §60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under §60.8, compliance with the SO_2emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average

percent reduction for SO_2 for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under §60.8, compliance with the SO_2 emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for SO_2 for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for SO_2 are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraph (c), of this section whether or not the minimum emissions data requirements under §60.46b are achieved. All valid emissions data, including valid SO_2 emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating $\%P_s$ and E_{ho} pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the SO_2 control systems when oil is combusted as provided under §60.42b(i), emission data are not used to calculate $\%P_s$ or E_s under §60.42b(a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under §60.42b(i).

(j) The owner or operator of an affected facility that combusts very low sulfur oil is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).

(k) The owner or operator of an affected facility seeking to demonstrate compliance under §§60.42b(d)(4), 60.42b(j), and 60.42b(k)(2) shall follow the applicable procedures under §60.49b(r).

§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The PM emission standards and opacity limits under §60.43b apply at all times except during periods of startup, shutdown, or malfunction. The NO_X emission standards under §60.44b apply at all times.

(b) Compliance with the PM emission standards under §60.43b shall be determined through performance testing as described in paragraph (d) of this section, except as provided in paragraph (i) of this section.

(c) Compliance with the NO_X emission standards under §60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

(d) To determine compliance with the PM emission limits and opacity limits under §60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, using the following procedures and reference methods:

(1) Method 3B of appendix A of this part is used for gas analysis when applying Method 5 or 17 of appendix A of this part.

(2) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 of appendix A of this part may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (32 °F). The procedures of sections 2.1 and 2.3 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A of this part after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part is to be used only after wet FGD systems.

(3) Method 1 of appendix A of this part is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5 of appendix A of this part, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160±14 °C (320±25 °F).

(5) For determination of PM emissions, the oxygen (O_2) or CO_2 sample is obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(6) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rate expressed in ng/J heat input is determined using:

(i) The O_2 or CO_2 measurements and PM measurements obtained under this section;

(ii) The dry basis F factor; and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(7) Method 9 of appendix A of this part is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for NO_X required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO_X under §60.48(b).

(1) For the initial compliance test, NO_X from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_X emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility which combusts coal or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the NO_X emission standards under §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity greater than 73 MW (250 MMBtu/hr) and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the NO_X standards under §60.44b on a continuous basis through the use of a 30-day rolling average emission rate.

A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the NO_X standards under §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_X emissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_X emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility that combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in §60.49b(e), the requirements of §60.48b(g)(1) apply and the provisions of §60.48b(g)(2) are inapplicable.

(f) To determine compliance with the emissions limits for NO_X required by §60.44b(a)(4) or §60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

(1) The owner or operator of an affected facility shall conduct the performance test required under §60.8 as follows:

(i) The emissions rate (E) of NO_X shall be computed using Equation 1 in this section:

Where:

E = Emissions rate of NO_X from the duct burner, ng/J (lb/MMBtu) heat input;

E_{sg} = Combined effluent emissions rate, in ng/J (lb/MMBtu) heat input using appropriate F factor as described in Method 19 of appendix A of this part;

H_g = Heat input rate to the combustion turbine, in J/hr (MMBtu/hr);

H_b = Heat input rate to the duct burner, in J/hr (MMBtu/hr); and

E_g = Emissions rate from the combustion turbine, in ng/J (lb/MMBtu) heat input calculated using appropriate F factor as described in Method 19 of appendix A of this part.

(ii) Method 7E of appendix A of this part shall be used to determine the NO_X concentrations. Method 3A or 3B of appendix A of this part shall be used to determine O_2 concentration.

(iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.

(iv) Compliance with the emissions limits under §60.44b(a)(4) or §60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the CEMS specified under §60.48b for measuring NO_X and O_2 and meet the

requirements of §60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NO_X emissions rate at the outlet from the steam generating unit shall constitute the NO_X emissions rate from the duct burner of the combined cycle system.

(g) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method described in sections 5 and 7.3 of the ASME *Power Test Codes* 4.1 (incorporated by reference, see §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of §60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in §60.44b(j) that has a heat input capacity greater than 73 MW (250 MMBtu/hr) shall:

(1) Conduct an initial performance test as required under §60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the NO_X emission standards under §60.44b using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the NO_X emission standards under §60.44b over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, 7E of appendix A of this part, or other approved reference methods.

(i) The owner or operator of an affected facility seeking to demonstrate compliance under paragraph §60.43b(h)(5) shall follow the applicable procedures under §60.49b(r).

(j) In place of PM testing with EPA Reference Method 5, 5B, or 17 of appendix A of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using EPA Method 5, 5B, or 17 of appendix A of this part shall comply with the requirements specified in paragraphs (j)(1) through (j)(13) of this section.

(1) Notify the Administrator one month before starting use of the system.

(2) Notify the Administrator one month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of the CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (j) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraphs (j)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (j)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (j)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2(or CO_2) data shall be collected concurrently (or within a 30-to 60-minute period) by both the continuous emission monitors and the test methods specified in paragraphs (j)(7)(i) of this section.

(i) For PM, EPA Reference Method 5, 5B, or 17 of appendix A of this part shall be used.

(ii) For O_2 (or CO_2), EPA reference Method 3, 3A, or 3B of appendix A of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours per 30-day rolling average.

§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b), (f), and (h) of this section, the owner or operator of an affected facility subject to the SO_2 standards under §60.42b shall install, calibrate, maintain, and operate CEMS for measuring SO_2 concentrations and either O_2 or CO_2 concentrations and shall record the output of the systems. For units complying with the percent reduction standard, the SO_2 and either O_2 or CO_2 concentrations shall both be monitored at the inlet and outlet of the SO_2 control device. If the owner or operator has installed and certified SO_2 and O_2 or CO_2 CEMS according to the requirements of §75.20(c)(1) of this chapter and appendix A to part 75 of this chapter, and is continuing to meet the ongoing quality assurance requirements of §75.21 of this chapter and appendix B to part 75 of this chapter, those CEMS may be used to meet the requirements of this section, provided that:

(1) When relative accuracy testing is conducted, SO_2 concentration data and CO_2 (or O_2) data are collected simultaneously; and

(2) In addition to meeting the applicable SO_2 and CO_2 (or O_2) relative accuracy specifications in Figure 2 of appendix B to part 75 of this chapter, the relative accuracy (RA) standard in section 13.2 of

Performance Specification 2 in appendix B to this part is met when the RA is calculated on a lb/MMBtu basis; and

(3) The reporting requirements of §60.49b are met. SO_2 and CO_2 (or O_2) data used to meet the requirements of §60.49b shall not include substitute data values derived from the missing data procedures in subpart D of part 75 of this chapter, nor shall the SO_2 data have been bias adjusted according to the procedures of part 75 of this chapter.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate, or

(2) Measuring SO_2 according to Method 6B of appendix A of this part at the inlet or outlet to the SO_2 control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and CO_2 measurement train operated at the candidate location and a second similar train operated according to the procedures in section 3.2 and the applicable procedures in section 7 of Performance Specification 2. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 or 3B of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily SO_2 emission rate, E_D ,shall be determined using the procedure described in Method 6A of appendix A of this part, section 7.6.2 (Equation 6A–8) and stated in ng/J (lb/MMBtu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/MMBtu) for 30 successive steam generating unit operating days using equation 19–20 of Method 19 of appendix A of this part.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average SO_2 emission rates measured by the CEMS required by paragraph (a) of this section and required under §60.13(h) is expressed in ng/J or lb/MMBtu heat input and is used to calculate the average emission rates under §60.42(b). Each 1-hour average SO_2 emission rate must be based on 30 or more minutes of steam generating unit operation. The hourly averages shall be calculated according to §60.13(h)(2). Hourly SO_2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a given clock hour and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) Except as provided for in paragraph (e)(4) of this section, all CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Except as provided for in paragraph (e)(4) of this section, quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the SO_2 CEMS at the inlet to the SO_2 control device is 125 percent of the maximum estimated hourly potential SO_2 emissions of the fuel combusted, and the span value of the CEMS at the outlet to the SO_2 control device is 50 percent of the maximum estimated hourly potential SO_2 emissions of the fuel combusted. Alternatively, SO_2 span values determined according to section 2.1.1 in appendix A to part 75 of this chapter may be used.

(4) As an alternative to meeting the requirements of requirements of paragraphs (e)(1) and (e)(2) of this section, the owner or operator may elect to implement the following alternative data accuracy assessment procedures:

(i) For all required CO_2 and O_2 monitors and for SO_2 and NO_X monitors with span values less than 100 ppm, the daily calibration error test and calibration adjustment procedures described in sections 2.1.1 and 2.1.3 of appendix B to part 75 of this chapter may be followed instead of the CD assessment procedures in Procedure 1, section 4.1 of appendix F to this part. If this option is selected, the data validation and out-of-control provisions in sections 2.1.4 and 2.1.5 of appendix B to part 75 of this chapter shall be followed instead of the excessive CD and out-of-control criteria in Procedure 1, section 4.3 of appendix F to this part. For the purposes of data validation under this subpart, the excessive CD and out-of-control criteria in Procedure 1, section 4.3 of appendix F to this part shall apply to SO_2 and NO_X span values less than 100 ppm;

(ii) For all required CO_2 and O_2 monitors and for SO_2 and NO_X monitors with span values greater than 30 ppm, quarterly linearity checks may be performed in accordance with section 2.2.1 of appendix B to part 75 of this chapter, instead of performing the cylinder gas audits (CGAs) described in Procedure 1, section 5.1.2 of appendix F to this part. If this option is selected: The frequency of the linearity checks shall be as specified in section 2.2.1 of appendix B to part 75 of this chapter; the applicable linearity specifications in section 3.2 of appendix A to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.2.3 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.2.4 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the cylinder gas audits described in Procedure 1, section 5.1.2 of appendix F to this part shall be performed for SO_2 and NO_X span values less than or equal to 30 ppm; and

(iii) For SO_2, CO_2, and O_2 monitoring systems and for NO_X emission rate monitoring systems, RATAs may be performed in accordance with section 2.3 of appendix B to part 75 of this chapter instead of following the procedures described in Procedure 1, section 5.1.1 of appendix F to this part. If this option is selected: The frequency of each RATA shall be as specified in section 2.3.1 of appendix B to part 75 of this chapter; the applicable relative accuracy specifications shown in Figure 2 in appendix B to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.3.2 of appendix B to part 75 of this chapter shall be followed instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.3.3 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the relative accuracy specification in section 13.2 of Performance Specification 2 in appendix B to this part shall be met on a lb/MMBtu basis for SO_2 (regardless of the SO_2 emission level during the RATA), and for NO_X when the average NO_X emission rate measured by the reference method during the RATA is less than 0.100 lb/MMBtu.

(f) The owner or operator of an affected facility that combusts very low sulfur oil or is demonstrating compliance under §60.45b(k) is not subject to the emission monitoring requirements under paragraph (a) of this section if the owner or operator maintains fuel records as described in §60.49b(r).

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility subject to the opacity standard under §60.43b shall install, calibrate, maintain, and operate a CEMS for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NO_X standard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and shall record the output of the system; or

(2) If the owner or operator has installed a NO_X emission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

(c) The CEMS required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average NO_X emission rates measured by the continuous NO_X monitor required by paragraph (b) of this section and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for NO_X is determined using one of the following procedures:

(i) Except as provided under paragraph (e)(2)(ii) of this section, NO_X span values shall be determined as follows:

Fuel	**Span values for NO_X (ppm)**
Natural gas	500.
Oil	500.
Coal	1,000.
Mixtures	500 (x + y) + 1,000z.

Where:

x = Fraction of total heat input derived from natural gas;

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

(ii) As an alternative to meeting the requirements of paragraph (e)(2)(i) of this section, the owner or operator of an affected facility may elect to use the NO_X span values determined according to section 2.1.2 in appendix A to part 75 of this chapter.

(3) All span values computed under paragraph (e)(2)(i) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under paragraph (e)(2)(ii) of this section shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.

(f) When NO_X emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or

(2) Monitor steam generating unit operating conditions and predict NO_X emission rates as specified in a plan submitted pursuant to §60.49b(c).

(h) The owner or operator of a duct burner, as described in §60.41b, that is subject to the NO_X standards of §60.44b(a)(4) or §60.44b(l) is not required to install or operate a continuous emissions monitoring system to measure NO_X emissions.

(i) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) is not required to install or operate a CEMS for measuring NO_X emissions.

(j) The owner or operator of an affected facility that meets the conditions in either paragraph (j)(1), (2), (3), (4), or (5) of this section is not required to install or operate a COMS for measuring opacity if:

(1) The affected facility uses a PM CEMS to monitor PM emissions; or

(2) The affected facility burns only liquid (excluding residual oil) or gaseous fuels with potential SO_2 emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and does not use a post-combustion technology to reduce SO_2 or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under §60.49b(r); or

(3) The affected facility burns coke oven gas alone or in combination with fuels meeting the criteria in paragraph (j)(2) of this section and does not use a post-combustion technology to reduce SO_2 or PM emissions; or

(4) The affected facility does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a steam generating unit operating day average basis. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (j)(4)(i) through (iv) of this section.

(i) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (j)(4)(i)(A) through (D) of this section.

(A) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(B) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(C) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. At least two data points per hour must be used to calculate each 1-hour average.

(D) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(ii) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(iii) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(iv) You must record the CO measurements and calculations performed according to paragraph (j)(4) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(5) The affected facility burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the appropriate delegated permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

(k) Owners or operators complying with the PM emission limit by using a PM CEMS monitor instead of monitoring opacity must calibrate, maintain, and operate a CEMS, and record the output of the system, for PM emissions discharged to the atmosphere as specified in §60.46b(j). The CEMS specified in paragraph §60.46b(j) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by §60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility;

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i);

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired; and

(4) Notification that an emerging technology will be used for controlling emissions of SO_2. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may

require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2, PM, and/or NO_X emission limits under §§60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B of this part. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the NO_X standard of §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored under §60.48b(g)(2) and the records to be maintained under §60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_X emission rates (*i.e.* , ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (*i.e.* , the ratio of primary air to secondary and/or tertiary air) and the level of excess air (*i.e.* , flue gas O_2 level);

(2) Include the data and information that the owner or operator used to identify the relationship between NO_X emission rates and these operating conditions; and

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(j).

(d) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§60.46b(e)(4), 60.44b(j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content for the reporting period. The nitrogen content shall be determined using ASTM Method D4629 (incorporated by reference, see §60.17), or fuel suppliers. If residual oil blends are being combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For facilities subject to the opacity standard under §60.43b, the owner or operator shall maintain records of opacity.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the NO_X standards under §60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The average hourly NO_X emission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

(3) The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

(7) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions that occurred during the reporting period.

(1) Any affected facility subject to the opacity standards under §60.43b(e) or to the operating parameter monitoring requirements under §60.13(i)(1).

(2) Any affected facility that is subject to the NO_X standard of §60.44b, and that:

(i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less; or

(ii) Has a heat input capacity of 73 MW (250 MMBtu/hr) or less and is required to monitor NO_X emissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2).

(3) For the purpose of §60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under §60.43b(f).

(4) For purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO_X emission rate, as determined under §60.46b(e), that exceeds the applicable emission limits in §60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for NO_X under §60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

(j) The owner or operator of any affected facility subject to the SO_2 standards under §60.42b shall submit reports.

(k) For each affected facility subject to the compliance and performance testing requirements of §60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period;

(2) Each 30-day average SO_2 emission rate (ng/J or lb/MMBtu heat input) measured during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Each 30-day average percent reduction in SO_2 emissions calculated during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which SO_2 or diluent (O_2 or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken;

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(6) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(7) Identification of times when hourly averages have been obtained based on manual sampling methods;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3;

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part; and

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of §60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average SO_2 emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which $S0_2$ or diluent (O_2 or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and description of corrective action taken;

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(5) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(6) Identification of times when hourly averages have been obtained based on manual sampling methods;

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(8) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Procedure 1 of appendix F 1 of this part. If the owner or operator elects to implement the alternative data assessment procedures described in §§60.47b(e)(4)(i) through (e)(4)(iii), each data assessment report shall include a summary of the results of all of the RATAs, linearity checks, CGAs, and calibration error or drift assessments required by §§60.47b(e)(4)(i) through (e)(4)(iii).

(m) For each affected facility subject to the SO_2 standards under §60.42(b) for which the minimum amount of data required under §60.47b(f) were not obtained during the reporting period, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates;

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19 of appendix A of this part, section 7;

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19 of appendix A of this part, section 7; and

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19 of appendix A of this part, section 7.

(n) If a percent removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) is used to determine the overall percent reduction (*i.e.* , $\%R_o$) under §60.45b, the owner or operator of the affected facility shall submit a signed statement with the report.

(1) Indicating what removal efficiency by fuel pretreatment (*i.e.* , $\%R_f$) was credited during the reporting period;

(2) Listing the quantity, heat content, and date each pre-treated fuel shipment was received during the reporting period, the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the reporting period;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit; and

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 of appendix A of this part and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in §60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The number of hours of operation; and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator a report containing:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the reporting period, if residual oil was fired; and

(3) If the affected facility meets the criteria described in §60.44b(j), the results of any NO_X emission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last NO_X emission test.

(r) The owner or operator of an affected facility who elects to use the fuel based compliance alternatives in §60.42b or §60.43b shall either:

(1) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil under §60.42b(j)(2) or §60.42b(k)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier that certify that the oil meets the definition of distillate oil as defined in §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition and/or pipeline quality natural gas was combusted in the affected facility during the reporting period; or

(2) The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:

(i) The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;

(ii) The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;

(iii) The ratio of different fuels in the mixture; and

(iv) The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

(s) Facility specific NO_X standard for Cytec Industries Fortier Plant's C.AOG incinerator located in Westwego, Louisiana:

(1) *Definitions* .

Oxidation zone is defined as the portion of the C.AOG incinerator that extends from the inlet of the oxidizing zone combustion air to the outlet gas stack.

Reducing zone is defined as the portion of the C.AOG incinerator that extends from the burner section to the inlet of the oxidizing zone combustion air.

Total inlet air is defined as the total amount of air introduced into the C.AOG incinerator for combustion of natural gas and chemical by-product waste and is equal to the sum of the air flow into the reducing zone and the air flow into the oxidation zone.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in §60.44b(a) applies.

(ii) When natural gas and chemical by-product waste are simultaneously combusted, the NO_X emission limit is 289 ng/J (0.67 lb/MMBtu) and a maximum of 81 percent of the total inlet air provided for combustion shall be provided to the reducing zone of the C.AOG incinerator.

(3) *Emission monitoring* . (i) The percent of total inlet air provided to the reducing zone shall be determined at least every 15 minutes by measuring the air flow of all the air entering the reducing zone and the air flow of all the air entering the oxidation zone, and compliance with the percentage of total inlet air that is provided to the reducing zone shall be determined on a 3-hour average basis.

(ii) The NO_X emission limit shall be determined by the compliance and performance test methods and procedures for NO_X in §60.46b(i).

(iii) The monitoring of the NO_X emission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of the C.AOG incinerator shall submit a report on any excursions from the limits required by paragraph (a)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the C.AOG incinerator shall keep records of the monitoring required by paragraph (a)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of the C.AOG incinerator shall perform all the applicable reporting and recordkeeping requirements of this section.

(t) Facility-specific NO_X standard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:

(1) *Definitions* .

Air ratio control damper is defined as the part of the low NO_X burner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

Flue gas recirculation line is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_X emission limit is 473 ng/J (1.1 lb/MMBtu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) *Emission monitoring for nitrogen oxides* . (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(ii) The NO_X emission limit shall be determined by the compliance and performance test methods and procedures for NO_X in §60.46b.

(iii) The monitoring of the NO_X emission limit shall be performed in accordance with §60.48b.

(4) *Reporting and recordkeeping requirements* . (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(u) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia* . (1) This paragraph (u) applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site") and only to the natural gas-fired boilers installed as part of the powerhouse conversion required pursuant to 40 CFR 52.2454(g). The requirements of this paragraph shall apply, and the requirements of §§60.40b through 60.49b(t) shall not apply, to the natural gas-fired boilers installed pursuant to 40 CFR 52.2454(g).

(i) The site shall equip the natural gas-fired boilers with low NO_X technology.

(ii) The site shall install, calibrate, maintain, and operate a continuous monitoring and recording system for measuring NO_X emissions discharged to the atmosphere and opacity using a continuous emissions monitoring system or a predictive emissions monitoring system.

(iii) Within 180 days of the completion of the powerhouse conversion, as required by 40 CFR 52.2454, the site shall perform a performance test to quantify criteria pollutant emissions.

(2) [Reserved]

(v) The owner or operator of an affected facility may submit electronic quarterly reports for SO_2 and/or NO_X and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(w) The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

(x) Facility-specific NO_X standard for Weyerhaeuser Company's No. 2 Power Boiler located in New Bern, North Carolina:

(1) *Standard for nitrogen oxides* . (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NO_X emission limit is 215 ng/J (0.5 lb/MMBtu).

(2) *Emission monitoring for nitrogen oxides* . (i) The NO_X emissions shall be determined by the compliance and performance test methods and procedures for NO_X in §60.46b.

(ii) The monitoring of the NO_X emissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the No. 2 Power Boiler shall submit a report on any excursions from the limits required by paragraph (x)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of the No. 2 Power Boiler shall keep records of the monitoring required by paragraph (x)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the No. 2 Power Boiler shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(y) Facility-specific NO_X standard for INEOS USA's AOGI located in Lima, Ohio:

(1) *Standard for* NO_X. (i) When fossil fuel alone is combusted, the NO_X emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical byproduct/waste are simultaneously combusted, the NO_X emission limit is 645 ng/J (1.5 lb/MMBtu).

(2) *Emission monitoring for* NO_X. (i) The NO_X emissions shall be determined by the compliance and performance test methods and procedures for NO_X in §60.46b.

(ii) The monitoring of the NO_X emissions shall be performed in accordance with §60.48b.

(3) *Reporting and recordkeeping requirements* . (i) The owner or operator of the AOGI shall submit a report on any excursions from the limits required by paragraph (y)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the AOGI shall keep records of the monitoring required by paragraph (y)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the AOGI shall perform all the applicable reporting and recordkeeping requirements of this section.

This document was downloaded from the following source on January 9, 2008:

Subpart DB--STANDARDS OF PERFORMANCE FOR INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Part 70 Operating Permit Renewal

Source Description and Location

Source Name:	Alcoa Power Generating, Inc. Warrick Power Plant
Source Location:	4700 Darlington Road, Newburgh, IN 47630
County:	Warrick
SIC Code:	4931
Permit Renewal No.:	T173-29684-00002
Permit Reviewer:	Ghassan Shalabi

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application, submitted by Alcoa Power Generating, Inc. - Warrick Power Plant on September 15, 2010, relating to the operation of a stationary electric utility generating station.

Public Notice Information

On June 16, 2011, the Office of Air Quality (OAQ) had a notice published in Boonville Standard, Boonville, Indiana, stating that Alcoa Power Generating, Inc. – Warrick Power Plant had applied for a Part 70 Operating Permit Renewal for a stationary electric utility generating station. The notice also stated that the OAQ proposed to issue a permit renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Changes to the permit are noted as follows: ~~struck~~ language has been deleted; **bold** language has been added. Remaining conditions have been renumbered accordingly and the Table of Contents has been modified to reflect these changes. No changes have been made to the TSD, however, because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice.

Comments and IDEM's Responses

Upon further review, IDEM has made the following changes:

Change #1: IDEM, OAQ has decided to move most of the requirements of Condition C.11 into Condition D.1.13(d), since both conditions cover the Permittee's requirement for COM. However, condition C.1.11(d) was not included in the renewal permit. Condition D.1.13 is amended as follows:

D.1.13 Continuous Emissions Monitoring [326 IAC 3-5]

…

(d) The Permittee shall comply with the following for Boiler No. 4:

(1) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), the Permittee shall install calibrate, certify, operate, and maintain all necessary continuous opacity monitoring systems (COMS) and related equipment for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.

(2) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.

(3) In the event that a breakdown of a COMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.

(4) Whenever a COMS is malfunctioning or is down for maintenance or repairs for a four (24) hours of shutdown or malfunction of the primary COMS, the Permittee shall provide a certified opacity reader, who may be an employee of the Permittee or an independent contractor, to self-monitor the emissions from the emission unit stack.

(A) Visible emission readings shall be performed in accordance with 40 CFR 60, Appendix A, Method 9, for a minimum of five (5) consecutive six (6) minute averaging periods beginning not more than twenty-four (24) hours after the start of the malfunction or down time.

(B) Method 9 opacity readings shall be repeated for a minimum of five (5) consecutive six (6) minute averaging periods at least twice per day during daylight operations, with at least four (4) hours between each set of readings, until a COMS is online.

(C) Method 9 readings may be discontinued once a COMS is online.

(D) Any opacity exceedances determined by Method 9 readings shall be reported with the Quarterly Opacity Exceedances Reports.

(~~4~~**5**) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 60 and/or 40 CFR 63.

Change No. 2: IDEM, OAQ is changing Condition D.1.6 in order to incorporate the requirements of Condition D.1.13 of 173-29294-00002. Condition D.1.6 is changed as follows:

D.1.6 Sulfur Dioxide (SO_2) [326 IAC 7-4-10]

Pursuant to 326 IAC 7-4-10 (Warrick County Sulfur Dioxide Emission Limitations), the SO_2 emissions from Boilers No. 1, No. 2, No. 3 and No. 4 each shall not exceed 5.11 pounds per million Btu (lbs/MMBtu) **using a thirty (30) day rolling weighted average**.

Continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 shall be used as the means for determining compliance with the emission limitations in 326 IAC

7 and this condition.

Change No. 3: IDEM, OAQ is changing Section D.4 in order to incorporate the PSD minor limits (D.6.2) and the reporting requirements (D.6.5) conditions of 173-29294-00002. Section D.4 is changed as follows:

SECTION D.4 FACILITY OPERATION CONDITIONS - Diesel Engines

…

Emission Limitations and Standards [326 IAC 2-7-5(1)]

…

D.4.2 Prevention of Significant Deterioration (PSD) Minor Limit for NO_x [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following :

(a) The NO_x emissions from any rental unit with a rated output capacity equal to or less than six hundred (600) horsepower (hp) shall not exceed 0.60 lb of NO_x per gallon of diesel fuel combusted.

(b) The NO_x emissions from any rental unit with a rated output capacity greater than six hundred (600) horsepower (hp) shall not exceed 0.43 lb of NO_x per gallon of diesel fuel combusted.

(c) The total NO_x emissions from the two (2) rental units (Engine1 and Engine2) shall be less than forty (40.0) tons per twelve (12) consecutive month period with compliance determined at the end of each month. The following equation shall be utilized to determine compliance:

NO_x Emissions (tons per month) = (A x 0.60 + B x 0.43) / 2000

Where:

A = Diesel fuel usage (gallons) used by units with a rated capacity less than or equal to six hundred (600) horsepower (hp)

B = Diesel fuel usage (gallons) used by units with a rated capacity greater than six hundred (600) horsepower (hp)

Compliance with the above limit shall limit the NO_x from the rental units to less than forty (40) tons per twelve (12) consecutive month period and render 326 IAC 2-2 (PSD) not applicable to the installation of the rental units.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.~~2~~**3** Record Keeping Requirements

(a) The Permittee shall maintain records of the dates of installation and removal of units identified as the Y-pit Pump, Engine1 and Engine2 as each unit is installed and removed.

(b) The Permittee shall maintain records of the make, and horsepower of each rental diesel unit brought onto the site.

(c) The Permittee shall maintain records of the fuel type and usage of units Y-pit Pump,

Engine1 and Engine2.

(d) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

D.4.4 Reporting Requirements

The Permittee shall report a quarterly summary of the information to document compliance with Condition D.4.2 to the addresses listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Change No. 4: IDEM is correcting the typographical error in D.1.8 as follows:

D.1.8 PSD Minor Limit for Sulfur Dioxide [326 IAC 2-2]

(a) Pursuant to the August 12, 1996 Administrative Amendment to Condition 7 of CP ~~(~~173~~)~~-2087-00002, issued on December 9, 1991, sulfur dioxide emissions from Boilers No. 1, No. 2, No. 3 and No. 4 shall not exceed a total of 157,206 tons per twelve (12) consecutive month period with compliance determined at the end of each month, equivalent to a total of 79,074 tons of sulfur input per year, based on:

Change No. 5: To remove repeated language and to correct inconsistencies, IDEM is changing Condition D.1.15, D.1.17, D.1.20, D.1.21, D.1.22 and, D.1.23, and D.1.24 as follows:

D.1.15 Wet Scrubbers [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

For each of the dedicated wet scrubbers for Boiler No. 1, No. 2, and No. 3, the ~~Permittee shall comply with the following:~~ **Permittee shall continuously monitor and determine SO_2 emissions reduction by SO_2 CEMS. Whenever the SO_2 reduction fall below ninety percent (90%), the Permittee shall take response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A SO2 emissions reduction of less than ninety percent (90%) is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.**

Compliance with this percent SO2 reduction requirement will be determined on a twenty-four (24) hour daily (block) average.

~~(a) Monitor the exhaust air stream pressure drop, the recirculation pH, and the pump motor amperage for each pump of the respective wet scrubber at least once per day when the associated boiler is in operation. When for any one reading, the pump motor amperage indicates that the scrubber liquid inlet rate is less than the minimum value established during the latest stack test, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A flow rate that is less than a value established during the latest stack test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~

~~The instrument used for determining pump motor amperage shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.~~

~~(b) The Permittee shall continuously monitor and determine SO_2 emissions reduction by SO_2 CEMS. Whenever the SO_2 reduction fall below ninety percent (90%), the Permittee shall take response steps. Section C – Response to Excursions and Exceedances contains~~

~~the Permittee's obligation with regard to the reasonable response steps required by this condition. A SO2 emissions reduction of less than ninety percent (90%) is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~

~~Compliance with this percent SO2 reduction requirement will be determined on a twenty-four (24) hour daily (block) average.~~

~~Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligations with regard to responding to the reasonable response steps required by this condition.~~

~~The instruments used for determining the pump motor amperage shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.~~

D.1.17 SO_2 Monitoring System Downtime [326 IAC 2-7-6] [326 IAC 2-7-5(3)]

The following shall apply to the wet scrubbers for Boiler No. 1, Boiler No. 2, Boiler No. 3, and Boiler No. 4 respectively:

(a) At any time the wet scrubber for Boiler No. 1, Boiler No. 2, Boiler No. 3, and Boiler No. 4 is operating, if the respective SO2 continuous emission monitoring system (CEMS) is malfunctioning or down for repairs or adjustments for twenty-four (24) hours or more, the Permittee shall monitor and record ~~boiler load~~ exhaust air stream pressure drop, recirculation pH, ~~slurry feed rate~~ **pump motor amperage**, and number of recirculation pumps in service, to demonstrate that the operation of the wet scrubber continues in a manner typical for the boiler load and sulfur content of the coal fired.

…

D.1.20 Monitoring Requirements for the Wet Scrubber for **Boiler No.1, Boiler No.2, Boiler No.3, and** Boiler No.4. [326 IAC 2-7-6(1)]
[326 IAC 2-7-5(1)]

For the dedicated wet scrubber for **Boiler No.1, Boiler No.2, Boiler No.3. and** Boiler No.4, the Permittee shall comply with the following:

(a) The Permittee shall monitor the pH of the scrubbing liquid, exhaust air stream pressure drop and pump motor amperage for each pump of the dedicated wet scrubber for **Boiler No. 1, Boiler No. 2, Boiler No. 3 and** Boiler No. 4 at least once per day when the wet scrubber is in operation.

(b) When for any one reading, the pH of the scrubbing liquid is less than 4.7 or a value established during the latest Relative Accuracy Test Audit (RATA), the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pH reading that is less than 4.7 or a value established during the latest RATA is not a deviation from this permit.

(c) When for any one reading, the exhaust air stream pressure drop is outside the initial compliance demonstration range of 3.0 and 10.0 inches of water or a range established during the latest Relative Accuracy Test Audit (RATA), the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure drop reading that is outside the normal range or a range established during the latest RATA is not a deviation from this permit.

(d) When for any one reading, the scrubber inlet rate indicates that the scrubber liquid input rate is less than 329 gallons per minute or a value established during the latest Relative

Accuracy Test Audit (RATA), the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A flow rate reading that is less than 329 gallons per minute or a rate established during the latest RATA is not a deviation from this permit.

…

D.1.21 Record Keeping Requirements

(a) For each of the wet scrubbers and ESP's for Boiler No. 1, Boiler No. 2, ~~and~~ Boiler No. 3, **and Boiler No. 4** the following shall apply:

~~(1) To document the compliance status with Conditions D.1.13 (a) - Continuous Emissions Monitoring, and D.1.14 - Transformer-Rectifier (T-R) Sets, the Permittee shall maintain records in accordance with (A) through (B) below.~~

~~(A) Data and results from the most recent stack test.~~

~~(B) All ESP parametric monitoring readings as specified by Condition D.14(a). The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).~~

(1~~2~~) To document the compliance status with SO2 Conditions D.1.6 - Sulfur Dioxide (SO2), D.1.8 - Sulfur Dioxide Limitations, D.1.13 - Continuous Emissions Monitoring, and D.1.17 - SO2 Monitoring Downtime, the Permittee shall maintain records in accordance with (A) through (~~B~~**D**) below. Records shall be complete and sufficient to establish the compliance status with the SO_2 limits as required in Conditions D.1.6- Sulfur Dioxide (SO2) and D.1.8 - Sulfur Dioxide Limitations. The Permittee shall maintain records in accordance with (~~B~~**C**) below during SO_2 CEMS downtime if a backup CEMS is not used.

(A) All SO_2 continuous emissions monitoring data, pursuant to 326 IAC 7-2-1(g),

~~(B) Actual fuel usage during each SO2 CEMs downtime.~~

(B) Calculated fuel usage during each SO_2 CEMS downtime for Unit(s) affected by CEM downtime lasting 24 hours or more.

(C) The recirculation pH, the exhaust air stream pressure drop, and the pump motor amperage for each pump of the respective wet scrubber and number of recirculation pumps in service.

(D) The substitute data used for the missing data periods if data substitution pursuant to 40 CFR Part 75 Subpart D is used to provide data for the SO_2 CEM downtime, in accordance with Condition D.1.17.

(2) To document the compliance status with NOx Condition D.1.1 (b), the Permittee shall maintain records of all NOx and CO_2 or O_2 continuous emissions monitoring data, pursuant to 326 IAC 3-5-6. Records shall be complete and sufficient to establish compliance with the NOx limit as required in Condition D.2.1 (b).

(3) To document the compliance status with Condition D.1.1(c), the Permittee shall keep records that verify the emissions rates of H_2SO_4 from Boiler

No.1, Boiler No. 2, Boiler No. 3, and Boiler No. 4. These shall be made available upon request to IDEM, OAQ and the US EPA.

(4) To document the compliance status with Condition D.1.19, the Permittee shall maintain records of corrective actions taken in response to excursions as required by the CAM Plan for the ESP (if any are required).

(5) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

(b) The following shall apply for Boiler No. 1, Boiler No. 2 and Boiler No. 3:

(1) To document the compliance status with Conditions D.1.13 (a) - Continuous Emissions Monitoring, and D.1.14 - Transformer-Rectifier (T-R) Sets, the Permittee shall maintain records in accordance with (A) through (B) below.

(A) Data and results from the most recent stack test.

(B) All ESP parametric monitoring readings as specified by Condition D.14(a). The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).

(~~3~~**2**) To document the compliance status with Conditions D.1.13- Continuous Emissions Monitoring, D1.14 - Transformer-Rectifier (T-R) Sets, D.1.15 - Wet Scrubbers, ~~and~~ D.1.18 - Particulate (PM) Monitoring System Downtime, **and D.1.20 – Monitoring Requirement for the Wet Scrubber,** the Permittee shall maintain records in accordance with (A) through (D) below. The Permittee shall maintain records in accordance with (D) below during PM CEMS downtime if a backup CEMS is not used.

(A) All continuous emissions monitoring data for SO2 emissions reduction, as a twenty-four (24) hour daily (block) average, in accordance with Condition D.1.15 ~~(b)~~.

(B) All ESP parametric monitoring readings, in accordance with Condition D.1.14. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).

(C) All wet scrubber liquid inlet flow rate readings measured by pump amperage, in accordance with Condition **D.1.20** ~~D.1.15 (a)~~. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).

(D) All ESP and scrubber parametric monitor readings, in accordance with Conditions D.1.14 (a) and **D.1.20**~~D1.15 (a)~~.

(c) The following shall apply for Boiler No. 4:

To document the compliance status with Section C - Opacity and Conditions D.1.1 - PSD Minor Limits, D.1.4 - Particulate Emission Limitations for Sources of Indirect Heating, D.1.5 - Startup, Shutdown and Other Opacity Limits, D.1.13 - Continuous Emissions Monitoring, D.1.14(a) - Transformer-Rectifier (T-R) Sets, D.1.24 - Wet

Scrubber, and D.1.16- Opacity Readings, the Permittee shall maintain records in accordance with (A) through (E) below.

Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and in Conditions D.1.1 - PSD Minor Limits, D.1.4 - Particulate Emission Limitations for Sources of Indirect Heating, D.1.5 - Startup, Shutdown and Other Opacity Limits.

(A) Data and results from the most recent stack test.

(B) All continuous opacity monitoring data, pursuant to 326 IAC 3-5.

(C) The results of all Method 9 visible emission readings taken during any periods of COMS downtime.

(D) Daily records of the number of T-R sets in service, the primary and secondary voltages, and the currents of the T-R sets. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).

(E) All wet scrubber pH, exhaust air stream pressure drop, and pump motor current readings, in accordance with Conditions D.1.17 and D.1.20. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).

~~(4) To document the compliance status with SO2 Conditions D.1.6- Sulfur Dioxide (SO2), D.1.8- Sulfur Dioxide Limitations, D.1.13(a) - Continuous Emissions Monitoring, and D.1.17 - SO2 Monitoring Downtime, the Permittee shall maintain records in accordance with (A) through (B) below. Records shall be complete and sufficient to establish the compliance status with the SO2 limits as required in Conditions D.1.6 and D.1.8. The Permittee shall maintain records in accordance with (B) below during SO2 CEMS downtime if a backup CEMS is not used.~~

~~(A) All SO2 continuous emissions monitoring data, pursuant to 326 IAC 7-2-1(g),~~

~~(B) All wet scrubber parametric monitoring and boiler load readings taken during any periods of SO2 CEMS downtime, in accordance with Conditions D.1.17 and D.1.21 (a) (2) (B).~~

~~D.1.23 Record Keeping Requirements for Boiler No. 4~~

~~(a) The following shall apply for Boiler No. 4:~~

~~(1) To document the compliance status with Section C - Opacity and Conditions D.1.1 - PSD Minor Limits, D.1.4 - Particulate Emission Limitations for Sources of Indirect Heating, D.1.5 - Startup, Shutdown and Other Opacity Limits, D.1.13 - Continuous Emissions Monitoring, D.1.14(a) - Transformer-Rectifier (T-R) Sets, D.1.24 - Wet Scrubber, and D.1.16- Opacity Readings, the Permittee shall maintain records in accordance with (A) through (E) below.~~

~~Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and in Conditions D.1.1 - PSD Minor Limits, D.1.4 - Particulate Emission Limitations for Sources of Indirect Heating, D.1.5 - Startup, Shutdown and Other Opacity Limits.~~

~~(A) Data and results from the most recent stack test.~~

~~(B) All continuous opacity monitoring data, pursuant to 326 IAC 3-5.~~

~~(C) The results of all Method 9 visible emission readings taken during any periods of COMS downtime.~~

~~(D) Daily records of the number of T-R sets in service, the primary and secondary voltages, and the currents of the T-R sets. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).~~

~~(E) All wet scrubber pH, exhaust air stream pressure drop, and pump motor current readings, in accordance with Conditions D.1.17 and D.1.20. The Permittee shall include in its daily record when a reading is not taken and the reason for the lack of a recorded reading (e.g. the process did not operate that day).~~

~~(2) To document the compliance status with SO_2 Conditions D.1.6 - Sulfur Dioxide (SO_2), D.1.8 - Sulfur Dioxide Limitations, D.1.13(a) - Continuous Emissions Monitoring, D.1.17 - SO_2 Monitoring Downtime, the Permittee shall maintain records in accordance with (A) through (B) below. Records shall be complete and sufficient to establish compliance with the SO_2 limits as required in Conditions D.1.6 and D.1.8.~~

~~The Permittee shall maintain records in accordance with (B) below during SO_2 CEMS downtime if a backup CEMS is not used.~~

~~(A) All SO_2 continuous emissions monitoring data, pursuant to 326 IAC 7-2-1(g),~~

~~(B) All wet scrubber parametric monitoring and boiler load readings taken during any periods of SO_2 CEMS downtime, in accordance with Condition D.1.17.~~

~~(b) To document the compliance status with NOx Condition D.1.1 (b), the Permittee shall maintain records of all NOx and CO_2 or O_2 continuous emissions monitoring data, pursuant to 326 IAC 3-5-6. Records shall be complete and sufficient to establish compliance with the NOx limit as required in Condition D.2.1 (b).~~

~~(c) To document the compliance status with Condition D.1.1(c), the Permittee shall keep records that verify the emissions rates of H_2SO_4 from Boiler No. 4. These shall be made available upon request to IDEM, OAQ and the US EPA.~~

~~(d) To document the compliance status with Condition D.1.19, the Permittee shall maintain records of corrective actions taken in response to excursions as required by the CAM Plan for the ESP (if any are required).~~

~~(e) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.~~

D.1.22 Reporting Requirements

(a) **The following shall apply for Boiler No. 1, Boiler No. 2, and Boiler No. 3:**
A quarterly report of the information to document the compliance status with Conditions D.1.1, D.1.2, D.1.7, and D.1.8 (a) and (c) shall be submitted not later than thirty (30) days

after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1 (34).

(b) The following shall apply for Boiler No. 4:
A quarterly report of opacity exceedances and a quarterly summary of the information to document the compliance status with Conditions D.1.1, D.1.2, D.1.6, and D.1.8(a) and (b) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(~~b~~**c**) **The following shall apply to Boiler No. 1, Boiler No. 2, Boiler No. 3, and Boiler No. 4:**
Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

(1) Date of downtime.

(2) Time of commencement.

(3) Duration of each downtime.

(4) Reasons for each downtime.

(5) Nature of system repairs and adjustments.

The report submitted by the Permittee does require the certification by a "responsible official" as defined by 326 IAC 2-7-1(34).

~~D.1.24 Reporting Requirements for Boiler No. 4~~

~~(a) A quarterly report of opacity exceedances and a quarterly summary of the information to document the compliance status with Conditions D.1.1, D.1.2, D.1.6, and D.1.8(a) and (b) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(b) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:~~

~~(1) Date of downtime.~~

~~(2) Time of commencement.~~

~~(3) Duration of each downtime.~~

~~(4) Reasons for each downtime.~~

~~(5) Nature of system repairs and adjustments.~~

~~The report submitted by the Permittee does require a certification by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

CLARIFICATION: IDEM would like to clarify that the diesel emergency firewater pump engine, identified as 249 is not considered affected unit under 40 CFR 60, Subpart IIII because this unit was ordered in 2005 and was manufactured prior to July 01, 2006.

Alcoa Power Generating, Inc. Comments

ALCOA COMMENT #1:
Alcoa requested that the three SO2 reporting forms be consolidated into two forms only.

IDEM RESPONSE:
The SO2 reporting forms are changed as follows:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boiler No. 1, 2, 3**, and 4**
Parameter: SO2 Emissions (Condition D.1.6~~ and D.1.8(c)~~)
Limit: ~~(a) Total shall not exceed 249.5 tons per day with compliance determined at the end of each day.~~
~~(b)~~ Each unit shall not exceed 5.11 lb SO2 per MMBtu

QUARTER: _____ YEAR: _____

Date	Daily Average, lb SO2 / MMBtu				~~**SO2 ton/day Units 1, 2, 3**~~
	Unit 1	Unit 2	Unit 3	**Unit 4**	
.....					

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: ALCOA Power Generating, Inc - Warrick Power Plant
Source Address: 4700 Darlington Road, Newburgh, Indiana 47630
Part 70 Permit No.: T173-29684-00002
Facility: Boiler No. 1, 2, 3 and 4

Parameter: SO2 Emissions (Condition **D.1.8 (a),** D.1.8(b) and D.1.8(c))

Limit:
(a) Total of all units shall not exceed 157,206 tons per twelve consecutive month period with compliance determined at the end of each month based on 365 day rolling average.
(b) Unit 4 shall not exceed 181.2 tons per day with compliance determined at the end of each day.
(c) Total from Boilers No.1, No.2 and No.3 shall not exceed 249.5 tons/day with compliance determined at the end of each day

QUARTER: _____ YEAR: _____

Date	Units 1-3 SO2 Daily Tons	Unit 4 SO2 Daily Tons	Units 1-4 SO2 Daily Tons	365-day Rolling Average SO2 Total Tons
.....				

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~COMPLIANCE AND ENFORCEMENT BRANCH~~

~~Part 70 Quarterly Report~~

~~Source Name: ALCOA Power Generating, Inc - Warrick Power Plant~~
~~Source Address: 4700 Darlington Road, Newburgh, Indiana 47630~~
~~Part 70 Permit No.: T173-29684-00002~~
~~Facility: Boiler No. 4~~
~~Parameter: SO2 Emissions (Condition D.1.6)~~
~~Limit: Unit 4 shall not exceed 5.11 lb SO2 per MMBtu~~

~~**QUARTER: _____ YEAR: _____**~~

~~Date~~	~~Daily Average lb SO2 / MMBtu~~	~~SO2 tons per day~~	~~365-day rolling average total SO2 Units 1, 2, 3 and 4~~
.....			

ALCOA COMMENT #2:

Alcoa Power Generating Inc. requests clarification on page8 of the TSD, item C, which states Warrick County is non-attainment for all criteria pollutants not described in item (a) – Ozone Standards and item (b) – PM2.5. This statement conflicts with the table on page 7. Since the table on page 7 is correct, Alcoa requests that item C on page 8 be amended to agree with page 7

IDEM RESPONSE:

IDEM is correcting the County Attainment Status section of the tsd as follows:

(c) Other Criteria Pollutants
~~Warrick County has been classified as nonattainment in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.~~

Warrick County has been classified as attainment or unclassifiable in Indiana for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

IDEM Contact

Questions regarding this proposed permit can be directed to:

Ghassan Shalabi
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension (4-5378)
Or dial directly: (317) 234-5378
gshalabi@idem.in.gov

Please reference permit number T173-29684-00002 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD)
for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Alcoa Power Generating, Inc. Warrick Power Plant
Source Location:	4700 Darlington Road, Newburgh, IN 47630
County:	Warrick
SIC Code:	4931
Permit Renewal No.:	T173-29684-00002
Permit Reviewer:	Kimberley Malley/Ghassan Shalabi

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Alcoa Power Generating, Inc. - Warrick Power Plant relating to the operation of a stationary electric utility generating station. On September 15, 2010, Alcoa Power Generating, Inc. - Warrick Power Plant submitted an application to the OAQ requesting to renew its operating permit. Alcoa Power Generating, Inc. - Warrick Power Plant was issued its Part 70 Operating Permit T173-29684-00002 on June 13, 2006.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 1, construction commenced on July 26, 1956, with an on-line date of April 1960, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-1, which is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NO_x), carbon dioxide (CO_2), sulfur dioxide (SO_2), and particulate matter (PM). Boiler No. 1 was configured with a low NO_x burner and over-fire air in 2003. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 1 were installed in 2008.

Note: Boiler No. 1 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(b) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 2, construction commenced on July 26, 1956, with an on-line date of January 1964, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-2, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 2 was configured with a low NOx burner and over-fire air in 2004. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 2 were installed in 2008.

Note: Boiler No. 2 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(c) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 3, construction commenced on July 26, 1956, with an on-line date of October 1965, with a nominal heat input capacity of 1,589 million Btu per hour (MMBtu/hr), with an electrostatic precipitator (ESP) for control of particulate matter and exhausting to Stack 241-3, is equipped with continuous emissions monitors (CEMS) for nitrogen oxides (NOx), carbon dioxide (CO2), sulfur dioxide (SO2), and particulate matter (PM). Boiler No. 3 was configured with a low NOx burner and over-fire air in 2002. A dedicated wet limestone slurry absorber scrubber for control of particulate and sulfur dioxide, and modifications to Boiler No. 3 were installed in 2008.

Note: Boiler No. 3 is capable of burning non-hazardous carbon anode production waste from Alcoa Inc. - Warrick Operations (Plt. ID 173-00007).

Under the Standards of Performance for Industrial-Commercial Steam Generating Units (40 CFR Part 60, Subpart Db), this boiler is considered an affected facility due to a modification occurring after February 28, 2005.

(d) One (1) dry bottom, pulverized coal-fired boiler, identified as Boiler No. 4, construction commenced on March 16, 1968, with an electrostatic precipitator (ESP) for control of particulate matter. Boiler No. 4 was configured with a low NOx burner in 1998, a Selective Catalytic Reduction (SCR) system permitted and constructed in 2004, a wet FGD scrubber, which commenced operation in 2008, and a reagent injection system that will reduce sulfuric acid emissions exiting the SCR, constructed in 2009. Boiler No. 4 has a nominal heat input capacity of 2,958 MMBtu/hr, and vents to Stack 243, which has continuous emissions monitors (CEMs) for nitrogen oxides (NOx), carbon dioxide (CO2), and sulfur dioxide (SO2), and a continuous opacity monitor (COM). Boiler No. 4 has a natural gas burner for start-up and may be fired in conjunction with the coal-fired capability. Construction of a dedicated wet limestone slurry absorber scrubber began in 2005.

This unit is not an affected facility under NSPS Da because it did not commence construction, modification, or reconstruction after September 18, 1978, or after June 19, 1984. The low NO_x burner constructed in 1998, the SCR system constructed in 2004, and the wet FGD scrubber, constructed in 2008 do not qualify as modifications as defined by 40 CFR 60, Subpart A. Specifically, the physical change did not result in increases to the atmosphere of any air pollutant (to which a standard applies) or result in any air pollutant not previously emitted.

(e) One (1) gas-fired boiler, identified as Emergency Rolling Mill Boiler, constructed in 1979, with a nominal heat input capacity of 79 million Btu per hour (MMBtu/hr) and exhausting to Stack 242.

This unit is not an affected facility under NSPS Db because it did not commence construction, modification or reconstruction after June 19, 1984.

(f) One (1) unloading station for barges, constructed prior to 1974, consisting of a clamshell bucket that transfers coal and limestone from the barge to a spud hopper, with a nominal throughput of 1,300 tons of coal per hour or 800 tons of limestone per hour, a pipe conveyor will transfer the material to a hopper used for loading trucks, with emissions from the drop points controlled by a baghouse, exhausting through Stack 244. The spud hopper and the baghouse were installed in 2008 in order to accommodate the transfer of limestone. The unloading station is not considered an affected facility under 40 CFR 60, Subpart OOO when unloading and transferring limestone because it is not physically connected to the crushing/grinding operations.

(g) A coal transfer system, constructed prior to 1974, with a nominal throughput of 1,300 tons of coal per hour, consisting of the following equipment:

(1) One (1) unloading station for trucks, adjacent to the 211 railcar dumper, with a drop point to an underground conveyor, with the drop point, identified as DP-1, equipped with wet suppression, and exhausting to the ambient air.

(2) The 211 rail car dumper, with an enclosed drop point to an underground conveyor, with the drop point, identified as DP-3, equipped with wet suppression and exhausting to the ambient air.

(3) One (1) 9.0 acre coal storage pile, having an estimated storage capacity of 300,000 tons, with fugitive emissions controlled by periodic watering by truck, and exhausting to the ambient air.

(4) The 210H truck hopper, with a drop point on a coal storage pile identified as F-1, uncontrolled and exhausting to the ambient air.

(5) Multiple unloading stations for trucks, with drop points to a coal storage pile, identified as F-1, uncontrolled and exhausting to the ambient air.

(6) Enclosed conveyor (4), with a drop point to the F-1 coal pile stacking tower, uncontrolled and exhausting to the ambient air.

(7) Enclosed conveyors 5 and 5A with each transfer point enclosed.

(8) Nineteen (19) coal bunkers (four (4) coal bunkers per unit for units 1-3, and seven (7) for unit 4). Bunkers are loaded via a conveyor tripper system servicing Boilers No. 1, No. 2, No. 3 and No. 4. Particulate matter generated from loading bunkers is controlled by rotoclones or water sprays and exhausts to the ambient air.

(9) Two (2) enclosed coal crushers, operating in parallel, constructed in 1960, with each transfer point equipped with wet suppression, and exhausting to the ambient air.

(h) A limestone transfer and handling system were installed in 2008, with a nominal throughput of 500 tons of limestone per hour, consisting of the following equipment:

(1) One (1) 1.42 acre limestone storage pile, having an estimated storage capacity of 22,000 tons, with fugitive emissions controlled by periodic watering by truck. Under 40 CFR 60, Subpart OOO, this is not an affected unit since it is not directly connected to the product line of the nonmetallic mineral processing plant.

(2) One (1) limestone hopper, receiving limestone from the stockpiles via front end loaders, emissions uncontrolled and exhausting to ambient air.

(3) One (1) enclosed pipe conveyor, transferring limestone from the limestone hopper to one (1) of the three (3) limestone day silos, emissions controlled by the limestone day silos bin vent filters.

(4) Three (3) limestone day silos No. 1 - No. 3, each with maximum throughput capacity of 20.0 tons per hour, each equipped with a bin vent filter for particulate control, exhausting to vents 245, 246, and 247, respectively.

(5) Three (3) weigh scales, each with a maximum capacity of 20.0 tons per hour, each receiving material from one of the limestone day silos and transferring limestone to one (1) of three (3) gravity discharge chutes, all emissions control by the limestone day silos' bin vent filters, and exhausting to vents 245, 246, 247.

(6) Three (3) wet ball mill crushers, receiving limestone from weigh scales via the three (3) gravity discharge chutes, the transfer point is enclosed and emissions are controlled by the limestone day silos' bin vent filters, and exhausting to vents 245, 246, and 247.

Under 40 CFR 60, Subpart OOO, the one (1) limestone hopper, one (1) pipe conveyor, three (3) limestone day silos, three (3) weigh scales, three (3) gravity discharge chutes, and three (3) wet ball mill crushers are considered affected units.

(i) One (1) dry flyash storage and loadout system, consisting of the following equipment:

(1) Three (3) pneumatic conveyors with filter/separators, Units #1, #2, and #3 Pneumatic Conveyor Air Filter/Separators, were installed 2009; each of a capacity of 14.0 tons per hour, each equipped with a baghouse for particulatecontrol, and venting to stacks 283A1, 283A2, and 283A3, respectively.

(2) One (1) pneumatic conveyor with filter/separator, Unit #4 Pneumatic Conveyor Air Filter/Separator, installed in 2009; with a capacity of 30.0 tons per hour, equipped with a baghouse for particulate control, and venting to stack 283B1.

(3) One (1) intermediate silo, Units #1 - #3 Intermediate Flyash Silo installed in 2009, with a capacity of 42.0 tons per hour, equipped with a baghouse for particulate control, and exhausting to stack 283A.

(4) One (1) intermediate silo, Unit #4 Intermediate Flyash Silo installed in 2009, with a capacity of 30.0 tons per hour, equipped with a baghouse for particulate control, and exhausting to stack 283B.

(5) One (1) dry flyash storage silo, Flyash Loadout Silo installed in 2009, with a capacity of 72.0 tons per hour, equipped with a baghouse for particulate control, exhausting to stack 283C.

(j) A gypsum transfer and handling system installed in 2008, with a nominal throughput of 72 tons of gypsum per hour, consisting of the following equipment:

(1) One (1) gypsum vacuum belt press dewatering system installed in 2008, with a nominal capacity of 72 tons of gypsum per hour, emissions are uncontrolled and exhausting through vent 248 to ambient atmosphere.

(2) One (1) saturated gypsum enclosed pipe conveyor installed in 2008, with a nominal capacity of 72 tons of saturated gypsum per hour.

Under 40 CFR 60, Subpart OOO, these units are not considered affected units.

(k) One (1) diesel emergency firewater pump engine, identified as 249, built in 2005 and approved for construction in 2008, rated at 465 horsepower, using no controls. Under 40 CFR 63, Subpart ZZZZ, the diesel emergency firewater pump engine is considered to be a stationary internal combustion engine.

Nonroad Engines [326 IAC 12] [40 CFR 60, Subpart IIII] [326 IAC 20-82] [40 CFR 63, Subpart ZZZZ] [40 CFR 1068.30]

(l) Various diesel engine driven pumps, each with a rated capacity of less than 500 horsepower, identified as Y-pit Pumps approved for construction in 2008, provided the total combined horsepower of all diesel engine driven pumps does not exceed 1000 horsepower, located at the Y-pit for the purpose of removing rainwater. Pursuant to 40 CFR 1068.30, these Ypit Pumps are considered nonroad engines. Therefore, under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, these Y-pit Pumps are not considered to be stationary internal combustion engines.

(m) Two (2) rental diesel units that shall not exceed 775 hp each, permitted in 2008, identified as Engine1 and Engine2. Pursuant to 40 CFR 1068, the rental diesel units are considered nonroad engines. Therefore, under 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, the engines are not considered to be stationary internal combustion engines.

Note: These rental diesel units will be installed on an as-needed basis.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

The source does not have any emission units that were constructed and/or are operating without a permit.

Emission Units and Pollution Control Equipment Removed From the Source

This source does not have any emission units that have been removed from the source since issuance of the previous permit.

Insignificant Activities

The source also consists of the following insignificant activities:

(1) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu/hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour.

(2) Combustion source flame safety purging on startup.

(3) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(4) A petroleum fuel, other than gasoline, dispensing facility having a storage capacity less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(5) The following VOC and HAP storage containers:

(A) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons.
(B) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(6) Machining where an aqueous cutting coolant continuously floods the machine interface.

(7) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3]

(8) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3-2]

(9) Closed loop heating and cooling systems.

(10) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.

(11) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner/operator, that is, an onsite sewage treatment facility.

(12) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(13) Heat exchanger cleaning and repair.

(14) Paved and unpaved roads and parking lots with public access [326 IAC 6-4].

(15) Underground conveyors [326 IAC 6-3-2]

(16) Coal bunker and coal scale exhausts and associated dust collector vents. [326 IAC 6-3-2]

(17) Asbestos abatement projects regulated by 326 IAC 14-10.

(18) Purging of gas lines and vessels that is related to routing maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

(19) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

(20) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(21) On-site fire and emergency response training approved by the department.

(22) Four (4) Non-Road Engine emergency generators as follows:
(A) Diesel generators not exceeding 1600 horsepower.

(23) Stationary fire pumps.

(24) Purge double block and bleed valves

(25) Vents from ash transport systems not operated at positive pressure.

(26) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(27) Two (2) emergency generators, each rated at 201 HP. Under 40 CFR 63, Subpart ZZZZ, the emergency generators are considered to be a stationary internal combustion engines.

Existing Approvals

Since the issuance of the Part 70 Operating Permit T173-6630-00002 on June 13, 2006, the source has constructed or has been operating under the following additional approvals:

(a) Significant Source Modification No. 173-22006-00002 issued on April 18, 2008;
(b) Significant Permit Modification No. 173-22581-00002 issued on May 5, 2008;
(c) Acid Rain 2nd Renewal No. AR173-25840-00002 issued on June 6, 2008;
(d) Significant Permit Modification No. 173-26580-00002 issued on December 30, 2008;
(e) Significant Source Modification No. 173-27393-00002 issued on May 18, 2009;
(f) Significant Permit Modification No. 173-27432-00002 issued on June 2, 2009;
(g) Temporary Operations No. 173-28407-00002 issued on September 8, 2009;
(h) Significant Permit Modification No. 173-28215-00002 issued on October 6, 2009; and
(i) Significant Permit Modification No. 173-29294-00002 issued on October 14, 2010.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Warrick County.

Pollutant	Designation
SO_2	Cannot be classified.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective January 30, 2006, for the Evansville area, including Warrick County, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Basic nonattainment designation effective federally April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Warrick County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Warrick County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a lawsuit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for $PM_{2.5}$ promulgated on May 8, 2008. These rules became effective on July 15, 2008. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Warrick County has been classified as nonattainment in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

Fugitive Emissions

Since this source is classified as a fossil fuel-fired steam power plant with an input of more than 250 MMBtu/hr, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM_{10}, SO_2, NOx, CO and VOC are greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions as reported by the source. This information reflects the 2008 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM/PM_{10}	3,520
$PM_{2.5}$	982
SO_2	56,693
VOC	53
CO	488
NO_x	9,041
Ammonia	1
Lead	0.52

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)							
	PM	PM_{10}*	$PM_{2.5}$	SO_2	NOx	VOC	CO	Total HAPs
Boiler No. 1	1060.0	4490.0	4490.0	157,206.0	13,720.0	13.95	2,099.8	677.0
Boiler No. 2						13.95		
Boiler No. 3						13.95		
Boiler No. 4	1425.0					30.41	30.41	
Emergency Rolling Mill Boiler	0.66	2.63	2.63	0.21	34.60	1.90	29.07	0.65
Unit #1 - Unit #4 Conveyor/Separato r	1.90	1.90	1.90	--	--	--	--	--
Unit #1 - Unit #4 Intermediate Fly Ash Silo	0.91	0.91	0.91	--	--	--	--	--
Flyash Storage/Loadout System	2.40	2.40	2.40	--	--	--	--	--
Gypsum Transfer & Handling System	2.06	1.96	1.96	--	--	--	--	--
Firewater Pump	0.10	0.10	0.10	0.24	2.00	0.29	0.67	
Limestone Handling	53.98	48.85	48.85	--	--	--	--	neg.
Insignificant Activities	--	--	--	--	--	<5.0	--	<1
Fugitive Emissions	372.86	92.70	92.70	--	--	--	--	--
Total PTE of Entire Source	**2919.9**	**4641.5**	**4641.5**	**157206.5**	**13756.6**	**81.62**	**2159.9**	**677.7**
Title V Major Source Thresholds	NA	100	NA	100	100	100	100	10/25
PSD Major Source Thresholds	100	100	NA	NA	100	100	100	NA
Nonattainment NSR Major Source Thresholds	NA	NA	100	100	NA	NA	NA	NA

negl. = negligible

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), not particulate matter (PM), is considered as a "regulated air pollutant".

(a) This existing stationary source is major for PSD because the emissions of at least one criteria pollutant are greater than one hundred (>100) tons per year, and it is in one of the twenty-eight (28) listed source categories.

(b) This existing stationary source is major for Nonattainment NSR because the emissions of the nonattainment pollutant, $PM_{2.5}$ and SO2 are greater than one hundred (>100) tons per year.

Federal Rule Applicability

Compliance Assurance Monitoring (CAM)

Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following tables are used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Boilers No. 1, No. 2, and No. 3 (each)							
PM_{10}	Wet Scrubber & ESP	Y	7,964.78 each	63.72 each	100	Y	N
$PM_{2.5}$	Wet Scrubber & ESP	Y	7,964.78 each	63.72 each	100	Y	N
PM	Wet Scrubber & ESP	Y	34,629.49 each	277.04 each	100	Y	Y
SO2	Wet Scrubber	Y	30,008.51 each	900.26 each	100	Y	Y
NOx	None	Y	3,069.50 each	> 100 each	100	N	N
CO	None	Y	13.95 each	<100	100	N	N
H_2SO_4	Wet Scrubber	Y	>10 each	>10 each	10	Y	Y

* Low NOx Burners do not meet the definition of a "control device" per 40 CFR 64.1.

Pursuant to 40 CFR 64.2(b)(1)(vi), the requirements of 40 CFR Part 64 (CAM) shall not apply to emission limitations or standards for which a Part 70 permit specifies a continuous compliance determination method. Since compliance with the particulate, SO_2 and NO_X emission limitations in the Part 70 permit is specified to be determined by continuous emissions monitoring systems (CEMS), CAM is not applicable to Boilers 1-3 for PM, SO_2 and NO_X emissions.

The requirements of 40 CFR Part 64, CAM are applicable to Boilers No. 1, No. 2, and No. 3 for H2SO4 because there is a PSD Minor Limits and there is a control device.

The requirements of 40 CFR Part 64, CAM are not applicable to Boilers 1-3 for CO since a control device is not used.

The requirements of 40 CFR Part 64, CAM are not applicable to Boilers 1-3 for lead, mercury, and beryllium, since the uncontrolled potential to emit of each pollutant is less than the major source thresholds.

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Boiler No. 4							
PM_{10}	Wet Scrubber & ESP	Y	17,361.70	138.89	100	Y	Y
$PM_{2.5}$	Wet Scrubber & ESP	Y	17,361.70	138.89	100	Y	Y
PM	Wet Scrubber & ESP	Y	75,485.66	603.89	100	Y	Y
SO_2	Wet Scrubber	Y	65,412.80	1962.38	100	Y	Y
NOx	None	Y	6,690.91	> 100	100	N	N
CO	None	Y	<100	<100	100	N	N
H_2SO_4	Wet Scrubber	Y	>10/25	>10/25	10/25	Y	Y

* Low NOx Burners do not meet the definition of a "control device" per 40 CFR 64.1.

The requirements of 40 CFR Part 64, CAM are applicable to Boiler 4 for PM10 and H2SO4 because there are PSD Minor Limits and there are control devices.

Boiler No. 4 is a large unit. The CAM requirement for particulate is satisfied by COMS on Boiler No. 4.

Pursuant to 40 CFR 64.2(b)(1)(vi), the requirements of 40 CFR Part 64(CAM) shall not apply to emission limitations or standards for which a Part 70 permit specifies a continuous compliance determination method. Since compliance with the SO_2 emission limitations in the Part 70 permit is specified to be determined by a continuous emissions monitoring system (CEMS) of particulate, CAM is not applicable to Boiler 4 for SO_2 emissions.

The requirements of 40 CFR Part 64, CAM are not applicable to Boiler 4 for NOx and CO since control devices are not used.

The requirements of 40 CFR Part 64, CAM are not applicable to Boiler 4 for lead, mercury, and beryllium, since the uncontrolled potential to emit of each pollutant is less than the major source thresholds.

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Unloading Station for Barges & 3 Limestone Day Silos No. 1 - No. 3							
PM_{10}	Baghouse or Bin Vent Filters	Y	< 100 each	< 100 each	100	N	N
$PM_{2.5}$							
Units #1 - #4 Flyash Transfer							
PM_{10}	Baghouse	Y	47.31	1.9	100	N	N
$PM_{2.5}$							
Units #1 - #4 Intermediate Storage							
PM_{10}	Baghouse	Y	47.31	0.91	100	N	N
$PM_{2.5}$							
Flyash Storage/Loadout Silo							
PM_{10}	Baghouse	Y	47.30	2.40	100	N	N
$PM_{2.5}$							

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to the Unloading Station for Barges & 3 Limestone Day Silos No. 1 - No. 3, for PM, PM_{10} and $PM_{2.5}$.

The requirements of 40 CFR Part 64, CAM are not applicable to the Units #1 - #4 Flyash Transfer, Units #1 - #4 Intermediate Storage, and the flyash storage silo since the uncontrolled potential to emit is less than the major source thresholds for each applicable pollutant emitted.

The requirements of 40 CFR Part 64, CAM are not applicable to the following units, since the uncontrolled potential to emit is less than the major source thresholds for each applicable pollutant emitted and a control device is not used (units are not shown in above table):

- Gypsum dewatering system and slurry conveyor, exhuasting through Vent 248
- One (1) limestone hopper, receiving limestone from the from the limestone stockpiles
- One (1) diesel emergency firewater pump, identified as 249

New Source Performance Standards (NSPS)

(i) Boilers No. 1, No. 2, and No. 3 are subject to the New Source Performance Standard for Industrial-Commercial-Institutional Steam Generating Units 40 CFR 60, Subpart Db, which is incorporated by reference as 326 IAC 12. Boilers No. 1, No. 2, and No. 3 are subject because they are steam generating units that commenced construction, modification, or reconstruction after June 19, 1984, and they have a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

Boilers No. 1, No. 2, and No. 3 are subject to the following portions of Subpart Db:

(1) 40 CFR 60.40b(a)
(2) 40 CFR 60.40b(g)
(3) 40 CFR 60.40b(j)
(4) 40 CFR 60.41b
(5) 40 CFR 60.42b(e)
(6) 40 CFR 60.42b(g)
(7) 40 CFR 60.42b(h)
(8) 40 CFR 60.42b (k)(1)
(9) 40 CFR 60.42b (k)(4)
(10) 40 CFR 60.43b(e)
(11) 40 CFR 60.43b(f)
(12) 40 CFR 60.43b(g)
(13) 40 CFR 60.43b(h)
(14) 40 CFR 60.44b(a)
(15) 40 CFR 60.44b(b
(16) 40 CFR 60.44b(c)
(17) 40 CFR 60.44b(h)
(18) 40 CFR 60.44b(i)
(19) 40 CFR 60.44b(l)
(20) 40 CFR 60.45b(a)
(21) 40 CFR 60.45b(b)
(22) 40 CFR 60.45b (c)(1)
(23) 40 CFR 60.45b (c)(2)
(24) 40 CFR 60.45b (c)(3)
(25) 40 CFR 60.45b (c)(4)
(26) 40 CFR 60.45b (c)(5)
(27) 40 CFR 60.45b(f)
(28) 40 CFR 60.45b(g)
(29) 40 CFR 60.45b(h)
(30) 40 CFR 60.45b(i)
(31) 40 CFR 60.46b(a)
(32) 40 CFR 60.46b(b)
(33) 40 CFR 60.46b(c)
(34) 40 CFR 60.46b (d)(7)
(35) 40 CFR 60.46b (e)(1)
(36) 40 CFR 60.46b (e)(2)
(37) 40 CFR 60.46b (e)(3)
(38) 40 CFR 60.46b(j)
(39) 40 CFR 60.47b(a)
(40) 40 CFR 60.47b(c)
(41) 40 CFR 60.47b(d)
(42) 40 CFR 60.47b(e)
(43) 40 CFR 60.48b(b)
(44) 40 CFR 60.48b(c)
(45) 40 CFR 60.48b(d)

(46) 40 CFR 60.48b(e)
(47) 40 CFR 60.48b(f)
(48) 40 CFR 60.48b (j)(1)
(49) 40 CFR 60.48b(k)
(50) 40 CFR 60.49b(a)
(51) 40 CFR 60.49b(b)
(52) 40 CFR 60.49b(d)
(53) 40 CFR 60.49b(f)
(54) 40 CFR 60.49b(g)
(55) 40 CFR 60.49b (h)(1)
(56) 40 CFR 60.49b (h)(2)
(57) 40 CFR 60.49b (h)(3)
(58) 40 CFR 60.49b(i)
(59) 40 CFR 60.49b(j)
(60) 40 CFR 60.49b(k)
(61) 40 CFR 60.49b(l)
(62) 40 CFR 60.49b(n)
(63) 40 CFR 60.49b(o)
(64) 40 CFR 60.49b(v)
(65) 40 CFR 60.49b(w)

(ii) The requirements of Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, 40 CFR 60, Subpart Da, are not included in the permit for Boiler #4. Construction of this unit commenced prior to September 18, 1978. Boiler #4 is a steam electric generating unit, as defined by 40 CFR 60.2, since it has a heat input capacity greater than 73 megawatts (250 million Btu/hr), supplies greater than one-third of its potential electric output and greater than 25 MW net-electrical output to a utility power distribution system for sale. Although upgrades were made to the turbines at Boiler No. 4 in 2008, the heat input capacity and steam output capacity were not affected, and there was no increase in emissions from the modification. Therefore, the turbine upgrade does not qualify as a modification pursuant to 40 CFR 60.2 and is not subject to the requirements of the Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978 (326 IAC 12 and 40 CFR 60, Subpart Da).

(iii) The one (1) limestone hopper, one (1) enclosed pipe conveyor, three (3) limestone day silos, three (3) weigh scales, and three (3) wet ball mill crushers are subject to the New Source Performance Standard for Nonmetallic Mineral Processing Plants 40 CFR 60, Subpart OOO, which is incorporated by reference as 326 IAC 12. The one (1) limestone hopper, one (1) pipe conveyor, three (3) limestone day silos, three (3) weigh scales, and three (3) wet ball mill crushers are subject because they comprise of a product line for the crushing of a non-metallic mineral (limestone) and will be constructed after August 31, 1983.

The one (1) limestone hopper, one (1) enclosed pipe conveyor, three (3) limestone day silos, three (3) weigh scales, and three (3) wet ball mill crushers are subject to the following portions of Subpart OOO:

(1) 40 CFR 60.670(a)
(2) 40 CFR 60.670(d)
(3) 40 CFR 60.670(e)
(4) 40 CFR 60.670(f)
(5) 40 CFR 60.671
(6) 40 CFR 60.672
(7) 40 CFR 60.673(b)
(8) 40 CFR 60.675(a)

(9) 40 CFR 60.675(b)
(10) 40 CFR 60.675(c)
(11) 40 CFR 60.675(d)
(12) 40 CFR 60.675(e)
(13) 40 CFR 60.675(f)
(14) 40 CFR 60.675(g)
(15) 40 CFR 60.675 (h)(1)
(16) 40 CFR 60.676(a)
(17) 40 CFR 60.676(f)
(18) 40 CFR 60.676(g)
(19) 40 CFR 60.676(h)
(20) 40 CFR 60.676 (i)(1)
(21) 40 CFR 60.676(j)
(22) Table 1 to 40 CFR 60, Subpart OOO

(iv) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII are not included in the permit for the Y-pit Pump1, and Y-pit Pump2, and the two rental diesel units, Engine1 and Engine2.

Pursuant to 40 CFR 60.4219, stationary internal combustion engines (ICE) differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition). 40 CFR 1068.30 defines a non-road engine as any internal combustion engine that, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.

However, 40 CFR 1068.30 also requires that a non-road engine, as defined in the previous paragraph, not remain at a site for more than twelve (12) consecutive months. Any engine (or engines) that replace the engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. Additionally, 40 CFR 1068.30 defines a location as any single site at a building, structure, facility, or installation.

Therefore, provided that either Y-pit Pump1, Y-pit Pump2, Engine1 or Engine2 does not remain at one site for a period greater than twelve (12) months each shall meet the definition of nonroad engines and not be subject to the requirements of 40 CFR 60, Subpart IIII. Therefore, emissions from the Y-pit Pump1, Y-pit Pump2, Engine1 or Engine2 have been removed from the emission summary.

A condition of record keeping is included to document use at a single location for no more than 12 consecutive months.

(v) The one (1) diesel emergency firewater pump engine, identified as 249 is subject to the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII, which is incorporated by reference as 326 IAC 12. The one (1) diesel emergency firewater pump engine, identified as 249, is subject because it is considered to be a stationary internal combustion engine.

The one (1) diesel emergency firewater pump engine, identified as 249 is subject to the following portions of Subpart IIII:

(1) 40 CFR 60.4200(a)(1)(ii)
(2) 40 CFR 60.4200(a)(2)(ii)
(3) 40 CFR 60.4205(c)
(4) 40 CFR 60.4206
(5) 40 CFR 60.4207 (a), (b), (c), and (e)
(6) 40 CFR 60.4208 (a), (b), (g), and (h)
(7) 40 CFR 60.4209
(8) 40 CFR 60.4211 (c) and (e)
(9) 40 CFR 60.4214 (b) and (c)
(10) 40 CFR 60.4217
(11) 40 CFR 60.4218
(12) 40 CFR 60.4219
Table 2 to Subpart IIII of Part 60
Table 3 to Subpart IIII of Part 60
Table 4 to Subpart IIII of Part 60
Table 5 to Subpart IIII of Part 60
Table 8 to Subpart IIII of Part 60

(vi) The requirements of the New Source Performance Standard for Coal Preparation and Processing Plants, 40 CFR 60, Subpart Y, are not included in the permit for the coal crusher, coal processing and conveying equipment, storage systems, and transfer and loading systems. Construction of these units commenced prior to October 24, 1974.

(vii) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc, are not included in the permit for the Emergency Rolling Mill Boiler. Construction of this unit commenced prior to June 9, 1989.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(i) Pursuant to 40 CFR 63.6590(c), the Permittee shall comply with the requirements of 40 CFR Part 63, Subpart ZZZZ (National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines), which are incorporated by reference as 326 IAC 20-81, for the diesel fired emergency firewater pump engine (249) by complying with the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under this 40 CFR 63, Subpart ZZZZ.

(ii) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Subpart ZZZZ are not included in the permit for Y-pit Pump1, Y-pit Pump2, and the two rental diesel units, Engine1 and Engine 2. Y-pit Pump1, Y-pit Pump2 engines, and the two rental diesel units, Engine1 and Engine 2 are considered nonroad engines, as defined in 40 CFR 1068.30 - General Compliance Provisions for Nonroad Program, Subpart A—Applicability and Miscellaneous Provisions. Therefore, pursuant to 40 CFR 63.6568(a) the engines are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) (326 IAC 20 and 40 CFR Part 63, Subpart ZZZZ).

State Rule Applicability - Entire Source

326 IAC 2-1.1-5 (Nonattainment New Source Review)
This existing source is a major stationary source, under Nonattainment New Source Review (326 IAC 2-1.1-5), because the potential to emit of $PM_{2.5}$ and SO_2 are greater than 100 tons per year. A 326 IAC 2-1.1-5-2 (Nonattainment New Source Review (NSR) Minor Limit was added during Significant Source Modification No. 173-220006-00002. This limit was required to ensure the requirements of 326 IAC 2-1.1-5-2 did not apply. The minor limit is shown below:

The $PM_{2.5}$ emissions from Boilers No. 1, No. 2, No. 3, and Boiler No. 4, combined, shall not exceed 4490.00 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the $PM_{2.5}$ emissions from Boilers No. 1, No. 2, No. 3 and No. 4 shall be a value established during the latest compliant stack test for the respective boiler. The following equation shall be utilized to determine compliance:

$PM_{2.5}$ emissions = [($PM_{2.5}$ E.F. No. 1 x H.E. No. 1) + ($PM_{2.5}$ E.F. No. 2 x H.E. No. 2) + (PM2.5 E.F. No. 3 x H.E. No. 3) + (PM2.5 E.F. No. 4 x H.E. No. 4) + (PM2.5 SCR E.F. No. 4 x SCR H.E. No. 4) + ($PM_{2.5}$ SCR reduced E.F. No. 4 x SCR reduced H.E. No. 4)] / 2000 lb/ton

Where:

$PM_{2.5}$ E.F. No. 1 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 1 established during the latest compliance stack test

$PM_{2.5}$ E.F. No. 2 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 2 established during the latest compliance stack test

$PM_{2.5}$ E.F. No. 3 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 3 established during the latest compliance stack test

$PM_{2.5}$ E.F. No. 4 =lb $PM_{2.5}$/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is not in operation

$PM_{2.5}$ SCR E.F. No. 4 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is operating but the reagent injection system is not operating

PM2.5 SCR Reduced E.F. No. 4 = lb PM2.5/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is not in operation

SCR H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is operating but the reagent injection system is not operating

Compliance with the above $PM_{2.5}$ limits and Condition D.4.3 shall render the requirements of 326 IAC 2-1.1-5-2 (Nonattainment New Source Review (NSR)) not applicable to Significant Source Modifications No.: 173-22006-00002.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD)
This source was constructed prior to August 7, 1977, (PSD applicability date). This source is a major stationary source because emissions of all regulated pollutants are greater than 100 tons per year and it is one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, this is a major source for PSD.

NOx Emission Reduction for Boilers #1 - #4
In November 2002, (Significant Source Modification, 173-16275-00002) prior to the installation of low NOx burners for Boilers #1 - #3, Alcoa Power Generating Inc. - Warrick power plant established NOx emissions in pounds per million British thermal units as measured by CEMS at stack 241-1 to average 0.64 lb/MMBtu, and 0.61 lb/MMBtu at stack 241-2. After the installation of low NOx burners for Boilers #1 - #3, the source established a NOx emission reduction to 0.38 lb/MMBtu at both stacks. Therefore, the source fulfilled the condition to show a reduction in NO_x emissions from Boilers #1 - #3 and render the requirements of 326 IAC 2-2 not applicable.

In April 2004, (Significant Source Modification, 173-18485-00002) prior to the installation of a selective catalytic reduction (SCR) for Boiler No. 4, Alcoa Power Generating Inc. - Warrick power plant established NOx emissions at stack 243 to average 0.494 lb/MMBtu. After the installation of the selective catalytic reduction (SCR) for Boiler No. 4, the source established a NOx emission reduction to 0.3966 lb/MMBtu at stack 243. Therefore, the source fulfilled the condition to show a reduction in NO_x emissions from Boiler #4 and render the requirements of 326 IAC 2-2 not applicable.

Manufacturer's Guaranteed Conversion Rate - H_2SO_4
A one-time submission of manufacturer's guaranteed conversion rate of SO_2 to SO_3 shall meet the requirements of this condition. Therefore, the source fulfilled the condition to calculate the H_2SO_4 emissions increase due to the installation and operation of the selective catalytic reduction (SCR) for Boiler No. 4 and render the requirements of 326 IAC 2-2 not applicable.

April 2008 Modification

(a) PSD Minor Limits
The boiler optimization project for Boilers No. 1, No. 2, No. 3 and No. 4, had uncontrolled PM, PM_{10} emissions greater than 25 and 15 tons per year respectively, NOx emissions greater than 40 tons per year, and H_2SO_4 emissions greater than 7 tons per year. Pursuant to Significant Source Modification No. 173-22006-00002, issued on April 18, 2008, the source elected to limit the potential to emit of PM, PM_{10}, NOx, and H_2SO_4 emissions below the significant levels. These limits are as follows:

(1) Particulate Matter (PM and PM10)

(A) The PM emissions from Boilers No. 1, No. 2, and No. 3, combined, shall not exceed a total of 1060.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) The PM emissions from Boiler No. 4 shall not exceed 1425.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The following equation shall be utilized to determine compliance:

PM emissions = [(PM E.F. No. 1 x H.E. No. 1) + (PM E.F. No. 2 x H.E. No. 2) + (PM E.F. No. 3 x H.E. No. 3) + (PM E.F. No. 4 x H.E. No. 4) + (PM SCR E.F. No. 4 x SCR H.E. No. 4) + (PM SCR reduced E.F. No. 4 x SCR reduced H.E. No. 4)] / 2000 lb/ton

Where:

PM E.F. No. 1 = lb PM/MMBtu heat input to the Boiler No. 1 established during the latest compliance stack test for this operating condition.

PM E.F. No. 2 = lb PM/MMBtu heat input to the Boiler No. 2 established during the latest compliance stack test for this operating condition

PM E.F. No. 3 = lb PM/MMBtu heat input to the Boiler No. 3 established during the latest compliance stack test for this operating condition

PM E.F. No. 4 = lb PM/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is not in operation

PM SCR E.F. No. 4 = lb PM/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is operating but the reagent injection system is not operating

PM SCR Reduced E.F. No. 4 = lb PM/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is not in operation

SCR H.E. No. 4 =Heat Input (MMBtu) to Boiler No. 4 when the SCR is operating but the reagent injection system is not operating

H.E. SCR No. 4 Reduced = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection rate is at or above the rate established during the reagent injection compliance tests and the SCR is operating.

APGI periodically subjects its boilers to a chemical cleaning process. Natural gas is used to provide some boiler heat to assist in the cleaning process. During start-up conditions, which are not regulated by 40 CFR 60, Subpart Db, the heat input is only 104.5 mm Btu/hr., compared to the nominal capacity of 1589 mm Btu/hr. It is estimated that the heat load for chemical cleaning would be similar to a start-up condition. PM loadings during start-ups have been as high as 6.4 lb. /mm Btu.

(C) The PM10 emissions from Boilers No. 1, No. 2, and No. 3, and Boiler No. 4 combined, shall not exceed 4490.00 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the PM10 emissions from Boilers No. 1, No. 2, and No. 3 shall be a value established during the latest compliant stack test for the respective boiler.

The following equation shall be utilized to determine compliance:

PM_{10} emissions = [(PM_{10} E.F. No. 1 x H.E. No. 1) + (PM_{10} E.F. No. 2 x H.E. No. 2) + (PM_{10} E.F. No. 3 x H.E. No. 3) + (PM_{10} E.F. No. 4 x H.E. No. 4) + (PM_{10} SCR E.F. No. 4 x SCR H.E. No. 4) + (PM_{10} SCR reduced E.F. No. 4 x SCR reduced H.E. No. 4)] / 2000 lb/ton

Where:

PM10 E.F. No. 1 = lb PM10/MMBtu heat input to the Boiler No. 1 established during the latest compliance stack test for this operating condition.

PM10 E.F. No. 2 = lb PM10/MMBtu heat input to the Boiler No. 2 established during the latest compliance stack test for this operating condition

PM10 E.F. No. 3 = lb PM10/MMBtu heat input to the Boiler No. 3 established during the latest compliance stack test for this operating condition

PM10 E.F. No. 4 = lb PM10/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is not in operation

PM10 SCR E.F. No. 4 = lb PM10/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is operating but the reagent injection system is not operating

PM10 SCR Reduced E.F. No. 4 = lb PM10/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is not in operation

SCR H.E. No. 4 =Heat Input (MMBtu) to Boiler No. 4 when the SCR is operating but the reagent injection system is not operating

H.E. SCR No. 4 Reduced = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection rate is at or above the rate established during the reagent injection compliance tests and the SCR is operating.

(D) The PM/ PM10 emissions shall not exceed the following:

Process Description	Control (Stack/Vent)	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)
Unloading Station for Barges Spud Hopper, Truck Loading Hopper, and conveyance points	Unloading Station for Barges Baghouse (244)	9.43	9.43
Limestone Day Silos No. 1, No. 2, and No. 3, and associated weight scales and conveyance drop points.	Limestone Day Silos Bin Vent Filters (245), (246), (247)	0.96	0.96
Unit #1 Flyash Transfer	Unit #1 Conveyor Baghouse (283A1)	0.09	0.09
Unit #2 Flyash Transfer	Unit #2 Conveyor Baghouse (283A2)	0.09	0.09
Unit #3 Flyash Transfer	Unit #3 Conveyor Baghouse (283A3)	0.09	0.09
Unit #4 Flyash Transfer	Unit #4 Conveyor Baghouse (283B1)	0.17	0.17
Unit #1 - #3 Intermediate Storage	Unit #1 - #3 Intermediate Silo Baghouse (283A)	0.11	0.11
Unit #4 Intermediate Storage	Unit #4 Intermediate Silo Baghouse (283B)	0.10	0.10
Flyash Storage/Loadout Silo	Baghouse (283C)	0.55	0.55

Compliance with these limits, in conjunction with the PM/PM10 fugitive emissions from the associated road travel and storage piles, ensures the PM and PM10 emissions from the limestone transfer, handling, and storage, shall not exceed 429.13 tons and 145.93 tons per year, respectively.

(2) The NOx emissions from Boilers No. 1, No. 2, No. 3, and No. 4 shall not exceed a total of 13,720.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) The H_2SO_4 emissions from Boilers No. 1, No. 2, No. 3, and No. 4, combined, shall not exceed a total of 677.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the limits above will limit the PM, PM_{10} emissions to less than 25 and 15 tons per year respectively, NOx emissions to less than 40 tons per year, and H_2SO_4 emissions to less than 7 tons per year and render 326 IAC 2-2 not applicable to the 2008 modification (SSM173-22006-00002).

(b) Nonattainment NSR Minor Limits

Particulate Matter ($PM_{2.5}$)

(1) The $PM_{2.5}$ emissions from Boilers No. 1, No. 2, No. 3, and No. 4, combined, shall not exceed a total of 4,490.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The following equation shall be utilized to determine compliance:

$PM_{2.5}$ emissions = [($PM_{2.5}$ E.F. No. 1 x H.E. No. 1) + ($PM_{2.5}$ E.F. No. 2 x H.E. No. 2) + (PM2.5 E.F. No. 3 x H.E. No. 3) + (PM2.5 E.F. No. 4 x H.E. No. 4) + (PM2.5 SCR E.F. No. 4 x SCR H.E. No. 4) + ($PM_{2.5}$ SCR reduced E.F. No. 4 x SCR reduced H.E. No. 4)] / 2000 lb/ton

Where:

$PM_{2.5}$ E.F. No. 1 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 1 established during the latest compliance stack test

$PM_{2.5}$ E.F. No. 2 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 2 established during the latest compliance stack test

$PM_{2.5}$ E.F. No. 3 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 3 established during the latest compliance stack test

$PM_{2.5}$ E.F. No. 4 =lb $PM_{2.5}$/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is not in operation

$PM_{2.5}$ SCR E.F. No. 4 = lb $PM_{2.5}$/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is operating but the reagent injection system is not operating

PM2.5 SCR Reduced E.F. No. 4 = lb PM2.5/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is not in operation

SCR H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is operating but the reagent injection system is not operating

(2) In order to render 326 IAC 2-1.1-5 (Nonattainment New Source Review (NSR)) not applicable, the PM2.5 emissions shall not exceed the following:

Process Description	Control (Stack/Vent)	PM2.5 Emission Limit (lbs/hr)
Unloading Station for Barges Spud Hopper, Truck Loading Hopper, and conveyance points	Hopper Baghouse (244)	9.43

Process Description	Control (Stack/Vent)	PM2.5 Emission Limit (lbs/hr)
Limestone Day Silos No. 1, No. 2, and No. 3, and associated weight scales and conveyance drop points.	Limestone Day Silos Bin Vent Filters (245), (246), (247)	0.96
Unit #1 Flyash Transfer	Unit #1 Conveyor Baghouse (283A1)	0.09
Unit #2 Flyash Transfer	Unit #2 Conveyor Baghouse (283A2)	0.09
Unit #3 Flyash Transfer	Unit #3 Conveyor Baghouse (283A3)	0.09
Unit #4 Flyash Transfer	Unit #4 Conveyor Baghouse (283B1)	0.17
Unit #1 - #3 Intermediate Storage	Unit #1 - #3 Intermediate Silo Baghouse (283A)	0.11
Unit #4 Intermediate Storage	Unit #4 Intermediate Silo Baghouse (283B)	0.10
Flyash Storage/Loadout Silo	Baghouse (283C)	0.55

Compliance with these limits, in conjunction with the $PM_{2.5}$ fugitive emissions from the associated road travel and storage piles, ensures the $PM_{2.5}$ emissions from the limestone transfer, handling, and storage, shall not exceed 145.93 tons per year.

The modification (SPM 173-26580-00002) was considered to be part of the Scrubber & Boiler Optimization Project, and proposed changes to the methods for determining compliance with emission limitations, and revisions to throughput capacities. The limited potential emissions resulting from the Scrubber & Boiler Optimization Project are not affected by the modification and remain unchanged. Therefore, there was no increase in the potential to emit of any regulated pollutant associated with this modification.

2009 Modification

(i) The construction of the two intermediate silos and associated enclosed conveyors, constructed in 2009, has uncontrolled PM and PM_{10} emissions greater than 25 and 15 tons per year respectively. Pursuant to Significant Source Modification No. 173-27393-00002, issued on May 18, 2009, the Permittee has provided information as part of the application for the approval. Based on Actual to Projected Actual Test, under Nonattainment New Source Review (326 IAC 2-1.1-5) and Prevention of Significant Deterioration
(326 IAC 2-2-1), the 2009 modification was not major for PSD nor Nonattainment NSR.

(ii) The reagent injection system that will reduce sulfuric acid emissions exiting the SCR for Boiler No. 4, constructed in 2009, is not major for PSD because the PM/PM10 emissions are less than the PSD significant levels and not major for Nonattainment NSR because the PM2.5 emissions are less than the Nonattainment NSR significant levels. Therefore, pursuant to 326 IAC 2-2 and 326 IAC 2-1.1-5, the PSD requirements and Nonattainment NSR do not apply to this modification.

Part 70 Operating Permit Renewal [173-29684-00002]

In order to render PSD (Prevention of Significant Deterioration) not applicable, the following shall apply:

(a) The PM emissions from Boilers No. 1, No. 2, and No. 3, combined, shall not exceed 1060.0 tons per twelve (12) consecutive month period with compliance determined at the

end of each month and the PM emissions from Boiler No. 4 shall not exceed 1425.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

PM emissions from Boilers No. 1, No. 2, and No. 3 = [(PM E.F. No. 1 x H.E. No. 1) + (PM E.F. No. 2 x H.E. No. 2) + (PM E.F. No. 3 x H.E. No. 3)] / 2000 lb/ton

Where:

PM E.F. No. 1 = lb PM/MMBtu heat input to the Boiler No. 1 based on PM-CEMS output.

PM E.F. No. 2 = lb PM/MMBtu heat input to the Boiler No. 2 based on PM-CEMS output.

PM E.F. No. 3 = lb PM/MMBtu heat input to the Boiler No. 3 based on PM-CEMS output.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

PM emissions from Boiler No. 4 = [(PM E.F. No. 4 x H.E. No. 4) + (PM SCR E.F. No. 4 x SCR H.E. No. 4) + (PM SCR reduced E.F. No. 4 x SCR reduced H.E. No. 4)] / 2000 lb/ton

Where:

PM E.F. No. 4 = lb PM/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is not in operation

PM SCR E.F. No. 4 = lb PM/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is operating but the reagent injection system is not operating

PM SCR Reduced E.F. No. 4 = lb PM/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is not in operation

SCR H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is operating but the reagent injection system is not operating

H.E. SCR No. 4 Reduced = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection rate is at or above the rate established during the reagent injection compliance tests and the SCR is operating.

Compliance with the above PM limits and Condition D.4.2 shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modifications No. 173-22006-00002.

(b) The NOx emissions from Boilers No. 1, No. 2, No. 3 and Boiler No. 4, combined, shall not exceed 13,720.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above NOx limit and Condition D.5.1 (a), shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the Significant Source Modification No.: 173-22006-00002.

(c) The H_2SO_4 emissions from Boilers No. 1, No. 2, No. 3, and Boiler No. 4, combined, shall be less than 677.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the H_2SO_4 emissions from Boilers No. 1, No. 2, and No. 3, shall be a value established during the latest compliant stack test for the respective boiler. The following equation shall be utilized to determine compliance:

H_2SO_4 emissions = [(H_2SO_4 E.F. No. 1 x H.E. No. 1) + (H_2SO_4 E.F. No. 2 x H.E. No. 2) + (H_2SO_4 E.F. No. 3 x H.E. No. 3) + (H_2SO_4 E.F. No. 4 x H.E. No. 4) + (H2SO4 SCR E.F. No. 4 x SCR H.E. No. 4)] + (H2SO4 SCR reduced x H.E. No. 4 SCR reduced)] / 2000 lb/ton

Where:

H_2SO_4 E.F. No. 1 = lb H_2SO_4/MMBtu heat input to Boiler No. 1 established during the latest compliance stack test.

H_2SO_4 E.F. No. 2 = lb H_2SO_4/MMBtu heat input to Boiler No. 2 established during the latest compliance stack test.

H_2SO_4 E.F. No. 3 = lb H_2SO_4/MMBtu heat input to Boiler No. 3 established during the latest compliance stack test.

H2SO4 E.F. No. 4 =lb H2SO4/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the reagent injection system and the SCR are not in operation

H2SO4 SCR E.F. No. 4 = lb H2SO4/MMBtu heat input to Boiler No. 4 when the SCR is in operation but the reagent injection system is not in operation = a value established during the latest compliance stack test for this operating condition.

H2SO4 SCR Reduced E.F. No. 4 = lb H2SO4/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

H.E. No. 4 =Heat Input (MMBtu) to Boiler No. 4 when the reagent injection system and SCR are not in operation

H.E. SCR No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection system is not operating but the SCR is operating

H.E. SCR No. 4 Reduced = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection rate is at or above the rate established during the reagent injection compliance tests and the SCR is operating.

Compliance with the above H_2SO_4 limits shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modifications No.: 173-22006-00002.

(d) The PM_{10} emissions from Boilers No. 1, No. 2, and No. 3, and Boiler No. 4, combined, shall not exceed 4490.00 tons per twelve (12) consecutive month period with compliance determined at the end of each month and the PM_{10} emissions from Boilers No. 1, No. 2, No. 3 and No. 4 shall be a value established during the latest compliant stack test for the respective boiler. The following equation shall be utilized to determine compliance:

PM_{10} emissions = [(PM_{10} E.F. No. 1 x H.E. No. 1) + (PM_{10} E.F. No. 2 x H.E. No. 2) + (PM_{10} E.F. No. 3 x H.E. No. 3) + (PM_{10} E.F. No. 4 x H.E. No. 4) + (PM_{10} SCR E.F. No. 4 x SCR H.E. No. 4) + (PM_{10} SCR reduced E.F. No. 4 x SCR reduced H.E. No. 4)] / 2000 lb/ton

Where:

PM10 E.F. No. 1 = lb PM10/MMBtu heat input to the Boiler No. 1 established during the latest compliance stack test for this operating condition.

PM10 E.F. No. 2 = lb PM10/MMBtu heat input to the Boiler No. 2 established during the latest compliance stack test for this operating condition

PM10 E.F. No. 3 = lb PM10/MMBtu heat input to the Boiler No. 3 established during the latest compliance stack test for this operating condition

PM10 E.F. No. 4 = lb PM10/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is not in operation

PM10 SCR E.F. No. 4 = lb PM10/MMBtu heat input to Boiler No. 4 established during the latest compliance stack test when the SCR is operating but the reagent injection system is not operating

PM10 SCR Reduced E.F. No. 4 = lb PM10/MMBtu heat input to Boiler No. 4 when the reagent injection system and SCR are in operation, provided the reagent injection rate is at or above the rate established during the reagent injection compliance tests.

H.E. No. 1 = Heat Input (MMBtu) to Boiler No. 1
H.E. No. 2 = Heat Input (MMBtu) to Boiler No. 2
H.E. No. 3 = Heat Input (MMBtu) to Boiler No. 3

H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is not in operation

SCR H.E. No. 4 = Heat Input (MMBtu) to Boiler No. 4 when the SCR is operating but the reagent injection system is not operating

H.E. SCR No. 4 Reduced = Heat Input (MMBtu) to Boiler No. 4 when the reagent injection rate is at or above the rate established during the reagent injection compliance tests and the SCR is operating.

Compliance with the above PM_{10} limit and Condition D.4.2 shall render the requirements of [326 IAC 2-2] (Prevention of Significant Deterioration (PSD)) not applicable to Significant Source Modifications No.: 173-22006-00002.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC/PM10 is greater than 250 tons per year, and/or the potential to emit of CO/NOx/SO2 is greater than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission

statement shall be submitted by July 1, 2011 and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

326 IAC 21-1 (Acid Deposition Control)
Pursuant to 326 IAC 21 (Acid Deposition Control), the Permittee shall comply with all provisions of the Acid Rain permit AR 173-25840-00002 and revision(s) issued for this source.

Commissioner's Order #2008-01
The Permittee is operating fully certified PM-CEMS, the alternate monitoring plan are no longer required and therefore,has been removed from the permit and replace with new language as follows:

~~D.1.12 Continuous Emissions Monitoring [326 IAC 3-5]~~

~~(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and Condition 13 of CP 173-2087-00002, issued on December 9, 1991, and as revised by this SPM 173-22581-00002, the Permittee shall comply with the following:~~

~~(1) Continuous emission monitoring systems for Boilers No. 1, No. 2, and No. 3 shall be calibrated, maintained, and operated for measuring SO_2, NOx, and O_2 or CO_2.~~

~~(2) Upon start-up of each of the dedicated wet scrubbers for Boiler No. 1, No. 2, and No. 3, continuous emissions monitoring systems shall be calibrated, maintained, and operated for measuring SO_2 at the inlet of each scrubber.~~

~~(3) Continuous opacity monitoring systems for Boilers No. 1, No. 2, and No. 3 shall be calibrated, maintained, and operated for measuring opacity.~~

~~(b) Pursuant to Commissioner's Order #2008-01, in lieu of the requirement to monitor opacity at 326 IAC 3-5-1(c)(2)(A), the Permittee shall comply with the following alternative monitoring plan:~~

~~(1) Upon initial re-routing of the electrostatic precipitator exhaust from its existing exhaust stack(s) to its scrubber, it will cease to operate with an associated COMS;~~
~~(2) Upon scrubber start-up, its associated PM CEMS will also commence operation;~~

~~(3) During the interim period between scrubber start-up and successful demonstration of compliance with PS-11 by the associated PM CEMS, compliance with applicable PM and opacity requirements will be assured through monitoring of particulate removal device operating parameters. The Petitioner shall monitor the ability of the electrostatic precipitator (ESP) and the scrubber to control particulate emissions in accordance with the following:~~

~~Electrostatic Precipitator~~

~~(A) Conduct daily monitoring of the number of Transformer Rectifier (T-R) sets in operation.~~

~~(B) Conduct daily monitoring of the primary and secondary voltages and currents of the T-R sets.~~

~~(C) Whenever the percentage of T-R sets in service falls below ninety percent (90%), the Petitioner shall take reasonable response steps in accordance with Section C -- Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002. T-R set failure resulting in less than ninety percent (90%) availability is not a deviation from Permit No. T173-6630-00002 or a violation of this Order. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002 shall be considered a deviation from Permit No. T173-6630-00002 and this Order.~~

~~Scrubber~~

~~(D) Continuously monitor and determine SO_2 emissions reduction by SO_2 CEMS.~~

~~(i) Compliance with this percent SO_2 reduction requirement will be determined on a twenty-four (24) hour daily (block) average basis.~~

~~(E) Whenever the SO_2 reduction fall below ninety percent (90%), the Petitioner shall take response steps in accordance with Section C -- Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002. SO_2 reduction of less than ninety percent (90%) is not a deviation from Permit No. T173-6630-00002 or a violation of this Order. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002 shall be considered a deviation from Permit No. T173-6630-00002 and this Order.~~

~~(F) The Petitioner shall conduct daily monitoring of the recirculation slurry flow rate.~~

~~(G) Whenever the recirculation slurry flow rate falls below 250 gal./hr. or a value established during the latest stack test, the Petitioner shall take reasonable response steps in accordance with Section C -- Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002. Failure resulting in a recirculation slurry flow rate less than 250 gal./hr is not a deviation from Permit No. T173-6630-00002 or a violation of this Order. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002 shall be considered a deviation from Permit No. T173-6630-00002 and this Order.~~

~~(4) During the interim period between scrubber start-up and successful demonstration of compliance with PS-11 by the associated PM CEMS, PM CEMS downtime, except for calibration checks, and zero and span adjustments, shall be less than three percent (3%) of the total quarterly operating hours.~~

~~(5) Upon successful demonstration of compliance with PS-11, the monitoring described by Condition D.1.12(b)(3) and the PM CEMS downtime provision described by Condition D.1.12(b)(4) will be discontinued, and thereafter, PM compliance will be demonstrated by the associated PM CEMS;~~

~~(6) Upon successful completion of the certification of the PM CEMS, the Petitioner shall submit all required information to the IDEM Office of Air Quality; and~~

~~(7) Installation, operation, testing, monitoring, data reporting, data substitution, and other requirements for the PM CEMS shall be determined by NSPS, 40 CFR Part 60, Subpart Db and 326 IAC 3-5 (Continuous Monitoring of Emissions).~~

~~(c) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3, and shall meet all applicable performance specifications of 326 IAC 3-5-2.~~

D.1.14 Continuous Emissions Monitoring [326 IAC 3-5]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), the Permittee shall comply with the following:

(1) Continuous emission monitoring systems for Boiler No. 1, Boiler No. 2, Boiler No. 3 and Boiler No. 4 shall be calibrated, maintained, and operated for measuring SO_2, NOx, and O_2 or CO_2.

(2) The dedicated wet scrubbers for Boiler No. 1, Boiler No. 2, and Boiler No. 3 continuous emissions monitoring systems shall be calibrated, maintained, and operated for measuring SO_2 at the inlet of each scrubber.

(3) Whenever a NOx CEM is down for more than twenty-four (24) hours, the Permittee shall apply the data substitution procedures specified by 40 CFR Part 75.

(4) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5 or 40 CFR 75.

(b) The Permittee shall comply with the following for Boiler No. 1, Boiler No. 2, and Boiler No. 3:

(1) PM compliance will be demonstrated by the associated PM CEMS;

(2) Upon successful completion of the certification of the PM CEMS, the Petitioner shall submit all required information to the IDEM Office of Air Quality; and

(3) Installation, operation, testing, monitoring, data reporting, data substitution, and other requirements for the PM CEMS shall be determined by NSPS, 40 CFR Part 60, Subpart Db and 326 IAC 3-5 (Continuous Monitoring of Emissions).

(c) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3, and shall meet all applicable performance specifications of 326 IAC 3-5-2.

(d) The Permittee shall comply with the following for Boiler No. 4:

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), the Permittee shall install calibrate, certify, operate, and maintain all necessary continuous opacity monitoring systems (COMS) and related equipment for measuring opacity, which meet all applicable performance specifications of 326 IAC 3-5-2. For a boiler, the COMS shall be in operation at all times that the induced draft fan is in operation.

(b) All COMS shall meet the performance specifications of 40 CFR 60, Appendix B, Performance Specification No. 1, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5.

(c) In the event that a breakdown of a COMS occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.

(d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous opacity monitoring system pursuant to 326 IAC 3-5, 40 CFR 60 and/or 40 CFR 63.

State Rule Applicability – Individual Facilities

326 IAC 3-5 (Continuous Emissions Monitoring)

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions) and Condition 13 of CP 173-2087-00002, issued on December 9, 1991, continuous emission monitoring systems for Boilers No. 1, No. 2, No. 3 and No. 4 shall be calibrated, maintained, and operated for measuring opacity, SO_2, NO_X, and O_2 or CO_2, which meet all applicable performance specifications of 326 IAC 3-5-2.

(b) All continuous emission monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 326 IAC 3-5 or 40 CFR 75.

326 IAC 5-1-3 (Temporary Alternative Opacity Limitations)

Boilers No. 1, No. 2, No. 3 and No. 4 are subject to the Temporary Alternative Opacity Limitations specified in 326 IAC 5-1-3.

Energizing an Electrostatic Precipitator (ESP) when the flue gas temperature is below the sulfuric acid dew point can result in damage to the precipitator. Condensation of sulfuric acid in the ESP may cause corrosion. It may also condense on the dust in the unit causing hard deposits which reduce the PM collection efficiency of the ESP. During the ignition of a coal-fired boiler, there is also a risk of a fire or an explosion if the ESP is energized too early. Normal sparking can ignite any combustible gases in the unit. It is not reasonable to require the use of an ESP when the ESP cannot be safely energized. Therefore, less restrictive opacity requirements are commonly applied during startup and shutdown for boilers that rely on ESPs for opacity control.

Most of the old State operating permits for utilities with coal-fired boilers included alternative opacity limits for periods of startup and shutdown. These pre-existing alternative limits, also known as opacity exemptions, were not federally enforceable. The Part 70 operating permits for these sources include federally enforceable Temporary Alternative Opacity Limits (TAOLs). The new TAOLs are established using the Quarterly Excess Opacity Emissions Reports from each source. The State is bound by the provisions in 326 IAC 5-1-3(e) to establish limits which, among other things, “limit the duration and extent of excess emissions to the greatest degree practicable,” and “minimize the duration and extent of excess emissions.”

326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating)

Pursuant to CP 173-2087-00002, issued on December 9, 1991 and 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the PM emissions exhausted from Boiler No. 4 through Stack 243 shall not exceed 0.228 pound per million Btu heat input (lb/MMBtu).

Pursuant to 326 IAC 6-2-1(f), Boilers No. 1, No. 2, and No. 3 are not subject to 326 IAC 6-2-3 because Boilers No. 1, No. 2, and No. 3 are subject to the requirements of the New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Db] [326 IAC 12].

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, (Particulate Emission Limitations for Manufacturing Processes), the following limitations shall apply:

Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
Unloading Station (when handling coal)	1,300	81
Coal storage, handling drop points, crushers, and bunkers	1,300	81
Unloading Station (when handling limestone)	800	74.74
Limestone storage and handling drop points	500	68.96
Limestone wet ball mills	20	51
Dewatered gypsum transfer and handling system	72	48
Unit #1 Pneumatic Conveyor Air Filter/Separators	14	24
Unit #2 Pneumatic Conveyor Air Filter/Separators	14	24
Unit #3 Pneumatic Conveyor Air Filter/Separators	14	24
Unit #4 Pneumatic Conveyor Air Filter/Separator	30	40
Unit #1 Intermediate Flyash Silo	14	24
Unit #2 Intermediate Flyash Silo	14	24
Unit #3 Intermediate Flyash Silo	14	24
Unit #4 Intermediate Flyash Silo	30	40
Flyash Loadout Silo	72	48

These limits are determined by the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour.

When the process weight rate exceeds two hundred (200) tons per hour, the maximum allowable emission may exceed E pounds per hour, provided the concentration of particulate matter in the discharge gases to the atmosphere is less than 0.10 pounds per one thousand (1,000) pounds of gases.

The three (3) limestone day silos, bin vent filters shall be in operation at all times that limestone transfer and handling system is in operation since these bin vent filters control emissions from the following:

- One (1) enclosed pipe conveyor, transferring limestone from the limestone hopper to one (1) of the three (3) limestone day silos, emissions controlled by the limestone day silos bin vent filters.

- Three (3) limestone day silos No. 1 - No. 3, each with maximum throughput capacity of 40.0 tons per hour, each equipped with a bin vent filter for particulate control, exhausting to vents 245, 246, and 247, respectively.

- Three (3) weigh scales, each with a maximum capacity of 19.7, each receiving material from one of the limestone day silos and transferring limestone to one (1) of three (3) pipe conveyors, all emissions control by the limestone bin vent filters, and exhausting to vents 245, 246, 247.

- Three (3) wet ball mill crushers, receiving limestone from weigh scales via the three (3) pipe conveyors, the transfer point is enclosed and emissions are controlled by the limestone day silos bin vent filters, and exhausting to vents 245, 246, and 247.

The baghouses for the dry flyash storage and loadout system shall be in operation at all times that the dry flyash storage and loadout system is in operation since these baghouses control emissions from the following:

- Three (3) pneumatic conveyors with filter/separators, Units #1, #2, and #3 Pneumatic Conveyor Air Filter/Separators, constructed in 2008; each of a capacity of 14.0 tons per hour, each equipped with a baghouse for particulate control, and venting to stacks 283A1, 283A2, and 283A3, respectively.

- One (1) pneumatic conveyor with filter/separator, Unit #4 Pneumatic Conveyor Air Filter/Separator, constructed in 2008; with a capacity of 30.0 tons per hour, equipped with a baghouse for particulate control, and venting to stack 283B1.

- One (1) intermediate silo, Units #1 - #3 Intermediate Flyash Silo, constructed in 2008, with a capacity of 42.0 tons per hour, equipped with a baghouse for particulate control and exhausting to stack 283A.

- One (1) intermediate silo, Unit #4 Intermediate Flyash Silo, constructed in 2008, with a capacity of 30.0 tons per hour, equipped with a baghouse for particulate control and exhausting to stack 283B.

- One (1) dry flyash storage silo, Flyash Loadout Silo, approved for construction in 2008, with a capacity of 72.0 tons per hour, equipped with a baghouse for particulate control, exhausting to stack 283C.

326 IAC 7-4-10 (Warrick County Sulfur Dioxide Emission Limitations)
Pursuant to 326 IAC 7-4-10 (Warrick County Sulfur Dioxide Emission Limitations), the SO_2 emissions from Boilers No. 1, No. 2, No. 3, and No. 4 each shall not exceed 5.11 pounds per million Btu (lbs/MMBtu).

326 IAC 8-3-2 (Cold Cleaner Operations)
The cold cleaner degreasers are subject to the requirements of this rule because the degreasers were constructed after January 1, 1980.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)
This degreaser was constructed after July 1, 1990 and does not have a remote solvent reservoir. Therefore, it is subject to this rule.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit.
Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination requirements applicable to Boilers No. 1, 2, 3 & 4 are as follows:

Emission Unit	Pollutant	Timeframe for Testing	Control Device	Frequency of Testing	Requirement
Boiler No. 1, 2, & 3	CO	Before December 31 of the second calendar year	None	Every 2 years	326 IAC 2-2

Emission Unit	Pollutant	Testing Condition	Control Device	Frequency of Testing	Requirement
Boiler No. 4	H2SO4	Established during the latest compliance stack test	SCR	Every 5 years	326 IAC 2-2
		When the reagent injection system and the SCR are not in operation			
		When the reagent injection system is not in operation and the SCR is in operation			
		When the reagent injection system and the SCR is in operation			

Emission Unit	Pollutant	Testing Condition	Control Device	Frequency of Testing	Requirement
Boiler No. 1, 2 & 3	PM10	Established during the latest compliance stack test	Scrubber	Every 2 years	326 IAC 2-2
Boiler No. 4	PM10	When the SCR is not in operation	Scrubber	Every 2 years	326 IAC 2-2
		When the SCR is operating			
Boiler No. 1, 2 & 3	PM2.5	Established during the latest compliance stack test	Scrubber	Every 2 years	326 IAC 2-2
Boiler No. 4	PM2.5	When the SCR is not in operation	Scrubber	Every 2 years	326 IAC 2-2
		When the SCR is operating			

The compliance monitoring requirements applicable to the Coal Transfer Station, the Limestone Hopper, the Gypsum Transfer & Handling System, the Coal and Limestone Unloading Operations and the Dry Flyash System are as follows:

Emission Unit	Parameter	Frequency	Range/Value	Excursions and Exceedances	Requirement
Coal Drop Points, Coal Transfer Points, Coal Crushers, Limestone Hopper, Gypsum Transfer & Handling System (248)	Visible Emissions	Weekly	Normal - Abnormal	Response Steps	326 IAC 2-2 326 IAC 2-1.1-5-2 326 IAC 6-3-2
Coal & Limestone Unloading Station (244)					

Dry Flyash System: Unit #1 Conveyor Baghouse (283A1), Unit #2 Conveyor Baghouse (283A2), Unit #3 Conveyor Baghouse (283A3), Unit #4 Conveyor Baghouse (283B1), Unit #1-#3 Intermediate Silo Baghouse (283A), Unit #4 Intermediate Silo Baghouse (283B), Baghouse (283C)	Visible Emissions	Daily	Normal - Abnormal	Response Steps	326 IAC 2-2 326 IAC 2-1.1-5-2 326 IAC 6-3-2
	Water Pressure Drop		2 to 5 inches		

The compliance monitoring requirements applicable to Boilers No. 1, 2, 3 and 4 are as follows:

Emission Unit	Control	Parameter	Frequency	Range/Value	Excursions and Exceedances	Requirement
Boiler No. 1, 2, & 3	Electrostatic Precipitator	T-R set in service, primary and secondary voltages and currents of the T-R sets	Daily	>90 %	Response Steps	326 IAC 2-2 326 IAC 2-1.1-5-2 40 CFR 64
Boiler No. 1, 2, & 3	Wet Scrubber	Monitor pump amperage to determine inlet rate	Daily	>250 gallons/min	Response Steps	326 IAC 2-2 40 CFR 64
Boiler No. 1, 2, & 3	Wet Scrubber	SO_2 PM	Continuous	*CEMS*	Response Steps	326 IAC 2-2 40 CFR 64

Emission Unit	Control	Parameter	Frequency	Range/Value	Excursions and Exceedances	Requirement
Boiler No. 4	Electrostatic Precipitator	T-R set in service, primary and secondary voltages and currents of the T-R sets	Daily	>90%	Response Steps	326 IAC 2-2 326 IAC 2-1.1-5-2 40 CFR 64
Boiler No. 4	Wet Scrubber	pH of the scrubbing liquid	Daily	>4.7	Response Steps	326 IAC 2-2 40 CFR 64
		exhaust air stream pressure drop		3.0 - 10.0 inches		
		pump motor amperage		>329 gallons/min		
Boiler No. 4	Wet Scrubber	SO2	Continuous	*CEMS*	Response Steps	326 IAC 2-2 40 CFR 64

These monitoring conditions are necessary because the control measures for the facilities must operate properly to ensure compliance with applicable requirements.

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 15, 2010.

Conclusion

The operation of this stationary electric utility generating station shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T173-29684-00002.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ghassan Shalabi at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5378 or toll free at 1-800-451-6027 extension 4-5378.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov.

Indiana Department of Environmental Management
Office of Air Quality

Appendix A – Emission Calculations
Technical Support Document (TSD)

Source Description and Location

Company Name: ALCOA Power Generating, Inc.-Warrick Power Plant
Address City IN Zip: 4700 Darlington Road, Newburgh, IN 47630
County: Warrick
SIC / NAICS Code: 4931
Permit Number: T173-29684-00002
Permit Reviewer: Kimberley Malley
Date: August 31, 2011

Summary of Potential to Emit

	Uncontrolled Potential To Emit (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP Name**	**Combination HAPs**
Boiler No. 1 (1956)	40,549.94	9,326.49	9,326.49	35,138.92	3,594.27	16.34	16.34	>10	>25
Boiler No. 2 (1956)	40,549.94	9,326.49	9,326.49	35,138.92	3,594.27	16.34	16.34		
Boiler No. 3 (1956)	40,549.94	9,326.49	9,326.49	35,138.92	3,594.27	16.34	16.34		
Boiler No. 4 (1968)	75,485.66	17,361.70	17,361.70	65,412.80	6,690.91	30.41	30.41		
Emergency Rolling Mill Boiler	0.66	2.63	2.63	0.21	34.60	1.90	29.07	0.623 Hexane	0.65
Dry Flyash Storage:									
Unit #1 Pneumatic Conveyor / Separator	9.20	9.20	9.20	--	--	--	--	0.0022 Nickel	0.01
Unit #2 Pneumatic Conveyor / Separator	9.20	9.20	9.20	--	--	--	--	0.0022 Nickel	0.01
Unit #3 Pneumatic Conveyor / Separator	9.20	9.20	9.20	--	--	--	--	0.0022 Nickel	0.01
Unit #4 Pneumatic Conveyor / Separator	19.71	19.71	19.71	--	--	--	--	0.0051 Manganese	0.02
Unit #1 - #3 Intermediate Fly Ash Silo	27.59	27.59	27.59	--	--	--	--	0.0071 Manganese	0.03
Unit #4 Intermediate Fly Ash Silo	19.71	19.71	19.71	--	--	--	--	0.0051 Manganese	0.02
Flyash Storage/Loadout Silo	47.30	47.30	47.30	--	--	--	--	0.012 Manganese	0.05
Dewatered Gypsum Handling	49.19	55.56	55.56	--	--	--	--	0.012 Manganese	0.05
Firewater Pump	0.10	0.10	0.10	0.24	2.00	0.29	0.67	0.00	<1
Limestone Handling	53.98	48.85	48.85	--	--	--	--	0.00013 Lead	--
Insignificant Activities	--	--	--	--	--	<5	--	neg.	neg.
Fugitive Emissions	745.72	185.41	185.41	--	--	--	--	--	--
Totals:	**198,127.04**	**45,775.63**	**45,775.63**	**170,830.01**	**17,510.33**	**86.52**	**109.16**		**>25**

	Limited Potential To Emit (ton/yr)								
Process / Emission Unit	**PM**	**PM10**	**$PM_{2.5}$**	**SO2**	**NOX**	**VOC**	**CO**	**Single HAP Name**	**Combination HAPs**
Boiler No. 1 (1956)	1,060.00	4,490.00	4,490.00	157,206.00	13,720.00	16.34	2,099.80	>10	677.0 H_2SO_4
Boiler No. 2 (1956)						16.34			
Boiler No. 3 (1956)						16.34			
Boiler No. 4 (1968)	1,425.00					30.41	30.41		
Emergency Rolling Mill Boiler	0.66	2.63	2.63	0.21	34.60	1.90	29.07	0.623 Hexane	0.65
Dry Flyash Storage:									
Unit #1 Pneumatic Conveyor / Separator	0.39	0.39	0.39	--	--	--	--	0.0001 Manganese	0.0004
Unit #2 Pneumatic Conveyor / Separator	0.39	0.39	0.39	--	--	--	--	0.0001 Manganese	0.0004
Unit #3 Pneumatic Conveyor / Separator	0.39	0.39	0.39	--	--	--	--	0.0001 Manganese	0.0004
Unit #4 Pneumatic Conveyor / Separator	0.73	0.73	0.73	--	--	--	--	0.0002 Manganese	0.0007
Unit #1 - #3 Intermediate Fly Ash Silo	0.49	0.49	0.49	--	--	--	--	0.0001 Manganese	0.0005
Unit #4 Intermediate Fly Ash Silo	0.42	0.42	0.42	--	--	--	--	0.0001 Manganese	0.0004
Flyash Storage/Loadout Silo	2.40	2.40	2.40	--	--	--	--	0.0006 Manganese	0.0025
Dewatered Gypsum Handling	2.06	1.96	1.96	--	--	--	--	0.0001 Manganese	0.0021
Firewater Pump	0.10	0.10	0.10	0.24	2.00	0.29	0.67	--	--
Limestone Handling	53.98	48.85	48.85	--	--	--	--	0.00013 Lead	neg.
Insignificant Activities	--	--	--	--	--	<5	--	neg.	neg.
Fugitive Emissions	372.86	92.70	92.70	--	--	--	--	--	--
Totals:	**2,919.87**	**4,641.46**	**4,641.46**	**157,206.45**	**13,756.60**	**86.52**	**2,159.95**	**>10**	**677.66**

	Controlled Potential To Emit (ton/yr)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP Name**	**Combination HAPs**
Boiler No. 1 (1956)	324.40	74.61	74.61	157,206.00	13,720.00	16.34	2,099.80	>10	677.0 H2SO4
Boiler No. 2 (1956)	324.40	74.61	74.61			16.34			
Boiler No. 3 (1956)	324.40	74.61	74.61			16.34			
Boiler No. 4 (1968)	603.89	138.89	138.89			30.41	30.41		
Emergency Rolling Mill Boiler	0.66	2.63	2.63	0.21	34.60	1.90	29.07	0.623 Hexane	0.65
Dry Flyash Storage:									
Unit #1 Pneumatic Conveyor / Separator	0.39	0.39	0.39	--	--	--	--	0.0001 Manganese	0.0004
Unit #2 Pneumatic Conveyor / Separator	0.39	0.39	0.39	--	--	--	--	0.0001 Manganese	0.0004
Unit #3 Pneumatic Conveyor / Separator	0.39	0.39	0.39	--	--	--	--	0.0001 Manganese	0.0004
Unit #4 Pneumatic Conveyor / Separator	0.73	0.73	0.73	--	--	--	--	0.0002 Manganese	0.0007
Unit #1 - #3 Intermediate Fly Ash Silo	0.49	0.49	0.49	--	--	--	--	0.0001 Manganese	0.0005
Unit #4 Intermediate Fly Ash Silo	0.42	0.42	0.42	--	--	--	--	0.0001 Manganese	0.0004
Flyash Storage/Loadout Silo	2.40	2.40	2.40	--	--	--	--	0.0006 Manganese	0.0025
Dewatered Gypsum Handling	2.06	1.96	1.96	--	--	--	--	0.0001 Manganese	0.0021
Firewater Pump	0.10	0.10	0.10	0.24	2.00	0.29	0.67	--	--
Limestone Handling	53.98	48.85	48.85	--	--	--	--	0.00013 Lead	--
Insignificant Activities	--	--	--	--	--	<5	--	neg.	neg.
Fugitive Emissions	372.86	92.70	92.70	--	--	--	--	--	--
Totals:	**1,585.11**	**372.63**	**372.63**	**157,206.45**	**13,756.60**	**86.52**	**2,159.95**		**0.66**

Appendix A: Emission Calculations
Coal Combustion: Bituminous Coal for Boilers (Pulverized Dry Bottom)
Boiler No. 1

Company Name:	ALCOA Power Generating, Inc.-Warrick Power Plant
Address City IN Zip:	4700 Darlington Road, Newburgh, IN 47630
County:	Warrick
SIC / NAICS Code:	4931
Permit Number:	T173-29684-00002
Permit Reviewer:	Kimberley Malley
Date:	August 31, 2011

Heat Input Capacity MMBtu/hr	Heat Content of Coal Btu/lb of Coal	Potential Throughput tons/year	Weight % Sulfur in Fuel		
1589	10650	653504.23	S =	2.83	%
			A =	12.41	%

ESP Control Efficiency	0.992	%
Wet Scrubber Efficiency	0.97	%

	Pollutant					
	PM*	PM10*	SO2	Nox	VOC	CO
Emission Factor in lb/ton	124.1 (10A)	28.54 (2.3A)	107.5 (38S)	11.0	0.05	0.05
Potential Emission in tons/yr #1	40549.94	9326.49	35138.92	3594.27	16.34	16.34
Potential Emission in tons/yr	**40549.94**	**9326.49**	**35138.92**	**3594.27**	**16.34**	**16.34**
Controlled Emission in tons per year	**324.40**	**74.61**	**1054.17**			
Equivalent Controlled Emissions in lb/mmBtu	0.05					

Methodology

Emission Factors are from AP 42 (Update 9/98), Tables 1.1-4 and 1.1-3 (SCC 1-01-002-02/22, 1-02-002-02/22-06/2.

Potential Throughput (tons/year) = Heat Input Capacity (MMBtu/hr) x 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x 8,760 hrs/yr.

Heat Content of theCoal is taken from the application.
Additional emission factors for commerical/institutional and electric generation boilers are available in AP-42, Chapter 1.1.
Several HAPS emission factors are also available in AP-42, Chapter 1.1, depending on the type of boiler.
Emission (tons/yr) = Throughput tons per year x Emission Factor (lb/ton) / 2,000 lb/ton.
Emissions (lb/MMBtu) = 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x Emission Factor (lb/ton).

Appendix A: Emission Calculations
Coal Combustion: Bituminous Coal for Boilers (Pulverized Dry Bottom)
Boiler No. 2

Company Name: ALCOA Power Generating, Inc.-Warrick Power Plant
Address, City, IN, Zip: 4700 Darlington Road, Newburgh, IN 47630
County: Warrick
Permit Number: 4931
Plant Id: T173-29684-00002
Reviewer: Kimberley Malley
Date: August 31, 2011

Heat Input Capacity MMBtu/hr	Heat Content of Coal Btu/lb of Coal	Potential Throughput tons/year	Weight % Sulfur in Fuel		
1589	10650	653504.23	S =	2.83	%
			A =	12.41	%

ESP Control Efficiency	0.992	%
Wet Scrubber Efficiency	0.97	%

	Pollutant					
	PM*	PM10*	SO2	Nox	VOC	CO
Emission Factor in lb/ton	124.1 (10A)	28.54 (2.3A)	107.5 (38S)	11.0	0.05	0.05
Potential Emission in tons/yr #1	40549.94	9326.49	35138.92	3594.27	16.34	16.34
Potential Emission in tons/yr	**40549.94**	**9326.49**	**35138.92**	**3594.27**	**16.34**	**16.34**
Controlled Emission in tons per year	**324.40**	**74.61**	**1054.17**			
Equivalent Controlled Emissions in lb/mmBtu	0.05					

Methodology

Emission Factors are from AP 42 (Update 9/98), Tables 1.1-4 and 1.1-3 (SCC 1-01-002-02/22, 1-02-002-02/22-06/2.

Potential Throughput (tons/year) = Heat Input Capacity (MMBtu/hr) x 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x 8,760 hrs/yr.

Heat Content of theCoal is taken from the application.
Additional emission factors for commerical/institutional and electric generation boilers are available in AP-42, Chapter 1.1.
Several HAPS emission factors are also available in AP-42, Chapter 1.1, depending on the type of boiler.
Emission (tons/yr) = Throughput tons per year x Emission Factor (lb/ton) / 2,000 lb/ton.
Emissions (lb/MMBtu) = 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x Emission Factor (lb/ton).

Appendix A: Emission Calculations
Coal Combustion: Bituminous Coal for Boilers (Pulverized Dry Bottom)
Boiler No. 3

Company Name: ALCOA Power Generating, Inc.-Warrick Power Plant
Address, City, IN, Zip: 4700 Darlington Road, Newburgh, IN 47630
County: Warrick
Permit Number: 4931
Plant Id: T173-29684-00002
Reviewer: Kimberley Malley
Date: August 31, 2011

Heat Input Capacity MMBtu/hr	Heat Content of Coal Btu/lb of Coal	Potential Throughput tons/year	Weight % Sulfur in Fuel		
1589	10650	653504.23	S =	2.83	%
			A =	12.41	%

ESP Control Efficiency	0.992	%
Wet Scrubber Efficiency	0.97	%

	Pollutant					
	PM*	PM10*	SO2	Nox	VOC	CO
Emission Factor in lb/ton	124.1 (10A)	28.54 (2.3A)	107.5 (38S)	11.0	0.05	0.05
Potential Emission in tons/yr #1	40549.94	9326.49	35138.92	3594.27	16.34	16.34
Potential Emission in tons/yr	**40549.94**	**9326.49**	**35138.92**	**3594.27**	**16.34**	**16.34**
Controlled Emission in tons per year	**324.40**	**74.61**	**1054.17**			
Equivalent Controlled Emissions in lb/mmBtu	0.05					

Methodology

Emission Factors are from AP 42 (Update 9/98), Tables 1.1-4 and 1.1-3 (SCC 1-01-002-02/22, 1-02-002-02/22-06/2.

Potential Throughput (tons/year) = Heat Input Capacity (MMBtu/hr) x 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x 8,760 hrs/yr.

Heat Content of theCoal is taken from the application.
Additional emission factors for commerical/institutional and electric generation boilers are available in AP-42, Chapter 1.1.
Several HAPS emission factors are also available in AP-42, Chapter 1.1, depending on the type of boiler.
Emission (tons/yr) = Throughput tons per year x Emission Factor (lb/ton) / 2,000 lb/ton.
Emissions (lb/MMBtu) = 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x Emission Factor (lb/ton).

Appendix A: Emission Calculations
Coal Combustion: Bituminous Coal for Boilers (Pulverized Dry Bottom)
Boiler No. 4

Company Name: ALCOA Power Generating, Inc.-Warrick Power Plant
Address, City, IN, Zip: 4700 Darlington Road, Newburgh, IN 47630
County: Warrick
Permit Number: 4931
Plant Id: T173-29684-00002
Reviewer: Kimberley Malley
Date: August 31, 2011

Heat Input Capacity MMBtu/hr	Heat Content of Coal Btu/lb of Coal	Potential Throughput tons/year	Weight % Sulfur in Fuel		
2958	10650	1216529.58	S =	2.83	%
			A =	12.41	%

ESP Control Efficiency	0.992	%
Wet Scrubber Efficiency	0.97	%

	Pollutant					
	PM*	PM10*	SO2	Nox	VOC	CO
Emission Factor in lb/ton	124.1 (10A)	28.54 (2.3A)	107.5 (38S)	11.0	0.05	0.05
Potential Emission in tons/yr #1	75485.66	17361.70	65412.80	6690.91	30.41	30.41
Potential Emission in tons/yr	**75485.66**	**17361.70**	**65412.80**	**6690.91**	**30.41**	**30.41**
Controlled Emission in tons per year	**603.89**	**138.89**	**1962.38**			
Equivalent Controlled Emissions in lb/mmBtu	0.05					

Methodology

Emission Factors are from AP 42 (Update 9/98), Tables 1.1-4 and 1.1-3 (SCC 1-01-002-02/22, 1-02-002-02/22-06/2.

Potential Throughput (tons/year) = Heat Input Capacity (MMBtu/hr) x 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x 8,760 hrs/yr.

Heat Content of theCoal is taken from the application.
Additional emission factors for commerical/institutional and electric generation boilers are available in AP-42, Chapter 1.1.
Several HAPS emission factors are also available in AP-42, Chapter 1.1, depending on the type of boiler.
Emission (tons/yr) = Throughput tons per year x Emission Factor (lb/ton) / 2,000 lb/ton.
Emissions (lb/MMBtu) = 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x Emission Factor (lb/ton).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Emergency Rolling Mill Boiler

Company Name: **ALCOA Power Generating, Inc.-Warrick Power Plant**
Address City IN Zip: **4700 Darlington Road, Newburgh, IN 47630**
Permit Number: **T173-29684-00002**
Reviewer: **Kimberley Malley**
Date: **October 27, 2010**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
79.0	692.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.7	2.6	0.2	34.6	1.9	29.1

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See next page for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
HAPs Emissions

Company Name: ALCOA Power Generating, Inc.-Warrick Power Plant
Address City IN Zip: 4700 Darlington Road, Newburgh, IN 47630
Permit Number: T173-29684-00002
Reviewer: Kimberley Malley
Date: October 27, 2010

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	7.266E-04	4.152E-04	2.595E-02	6.228E-01	1.176E-03

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.730E-04	3.806E-04	4.844E-04	1.315E-04	7.266E-04
				Total HAPs	6.530E-01

Methodology is the same as previous page.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Summary of Emissions: Potential to emit

Company Name: Alcoa Power Generating, Inc - Warrick Power Plant
Address: Junction State Routes 66 and 61, Newburg IN 47630
Permit Number: T173-29684-00002
Reviewer: Kimberley Malley
Date: October 27, 2010

				Uncontrolled PTE														
				Pollutant			HAP's (tpy)											
Unit Description	stack	thruput: (ton/hr)	E_f (lb./ton)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	An (6.15ppm)	Ar (86.5ppm)	Be (27.7ppm)	Cd (2.82ppm)	Co (81.2ppm)	Cr (133ppm)	Pb (154ppm)	Mn (259ppm)	Hg (91.6ppb)	Ni (237ppm)	Se (37.0ppm)	Total HAP's
Unit #1 Pneumatic Conveyor / Separator	283A1	14.00	0.15	9.20	9.20	9.20	5.7E-05	8.0E-04	2.5E-04	2.6E-05	7.5E-04	1.2E-03	1.4E-03	2.4E-03	8.4E-07	2.2E-03	3.4E-04	9.4E-03
Unit #2 Pneumatic Conveyor / Separator	283A2	14.00	0.15	9.20	9.20	9.20	5.7E-05	8.0E-04	2.5E-04	2.6E-05	7.5E-04	1.2E-03	1.4E-03	2.4E-03	8.4E-07	2.2E-03	3.4E-04	9.4E-03
Unit #3 Pneumatic Conveyor / Separator	283A3	14.00	0.15	9.20	9.20	9.20	5.7E-05	8.0E-04	2.5E-04	2.6E-05	7.5E-04	1.2E-03	1.4E-03	2.4E-03	8.4E-07	2.2E-03	3.4E-04	9.4E-03
Unit #4 Pneumatic Conveyor / Separator	283B1	30.00	0.15	19.71	19.71	19.71	1.2E-04	1.7E-03	5.5E-04	5.6E-05	1.6E-03	2.6E-03	3.0E-03	5.1E-03	1.8E-06	4.7E-03	7.3E-04	2.0E-02
Unit #1 - #3 Intermediate Fly Ash Silo	283A	42.00	0.15	27.59	27.59	27.59	1.7E-04	2.4E-03	7.6E-04	7.8E-05	2.2E-03	3.7E-03	4.2E-03	7.1E-03	2.5E-06	6.5E-03	1.0E-03	2.8E-02
Unit #4 Intermediate Fly Ash Silo	283B	30.00	0.15	19.71	19.71	19.71	1.2E-04	1.7E-03	5.5E-04	5.6E-05	1.6E-03	2.6E-03	3.0E-03	5.1E-03	1.8E-06	4.7E-03	7.3E-04	2.0E-02
Flyash Storage/Loadout Silo	283C	72.00	0.15	47.30	47.30	47.30	2.9E-04	4.1E-03	1.3E-03	1.3E-04	3.8E-03	6.3E-03	7.3E-03	1.2E-02	4.3E-06	1.1E-02	1.8E-03	4.8E-02
Dewatered Gypsum Handling	-	72.00	0.15	47.30	47.30	47.30	2.9E-04	4.1E-03	1.3E-03	1.3E-04	3.8E-03	6.3E-03	7.3E-03	1.2E-02	4.3E-06	1.1E-02	1.8E-03	4.8E-02
	Total Uncontrolled △ PTE			**189**	**189**	**189**	**0.001**	**0.016**	**0.005**	**0.001**	**0.015**	**0.025**	**0.029**	**0.049**	**0.000**	**0.045**	**0.007**	**0.194**

Note - Source for emission factor E_f : SCC 3-05-015-04

					PTE - Limited														
					Pollutant			HAP's (tpy)											
	stack	cfm	gr/cfm	gr/lb	PM **(tpy)**	PM_{10} **(tpy)**	$PM_{2.5}$ **(tpy)**	An (6.15ppm)	Ar (86.5ppm)	Be (27.7ppm)	Cd (2.82ppm)	Co (81.2ppm)	Cr (133ppm)	Pb (154.0ppm)	Mn (259.0ppm)	Hg (91.6ppb)	Ni (237.0ppm)	Se (37.0ppm)	Total HAP's
Unit #1 Pneumatic Conveyor / Separator	283A1	1156	0.009	7000	0.39	0.39	0.39	2.4E-06	3.4E-05	1.1E-05	1.1E-06	3.2E-05	5.2E-05	6.0E-05	1.0E-04	3.6E-08	9.3E-05	1.4E-05	4.0E-04
Unit #2 Pneumatic Conveyor / Separator	283A2	1156	0.009	7000	0.39	0.39	0.39	2.4E-06	3.4E-05	1.1E-05	1.1E-06	3.2E-05	5.2E-05	6.0E-05	1.0E-04	3.6E-08	9.3E-05	1.4E-05	4.0E-04
Unit #3 Pneumatic Conveyor / Separator	283A3	1156	0.009	7000	0.39	0.39	0.39	2.4E-06	3.4E-05	1.1E-05	1.1E-06	3.2E-05	5.2E-05	6.0E-05	1.0E-04	3.6E-08	9.3E-05	1.4E-05	4.0E-04
Unit #4 Pneumatic Conveyor / Separator	283B1	2424	0.008	7000	0.73	0.73	0.73	4.5E-06	6.3E-05	2.0E-05	2.1E-06	5.9E-05	9.7E-05	1.1E-04	1.9E-04	6.7E-08	1.7E-04	2.7E-05	7.5E-04
Unit #1 - #3 Intermediate Fly Ash Silo	283A	1444	0.009	7000	0.49	0.49	0.49	3.0E-06	4.2E-05	1.4E-05	1.4E-06	4.0E-05	6.5E-05	7.5E-05	1.3E-04	4.5E-08	1.2E-04	1.8E-05	5.0E-04
Unit #4 Intermediate Fly Ash Silo	283B	1252	0.009	7000	0.42	0.42	0.42	2.6E-06	3.7E-05	1.2E-05	1.2E-06	3.4E-05	5.6E-05	6.5E-05	1.1E-04	3.9E-08	1.0E-04	1.6E-05	4.3E-04
Flyash Storage/Loadout Silo	283C	7090	0.009	7000	2.40	2.40	2.40	1.5E-05	2.1E-04	6.6E-05	6.8E-06	1.9E-04	3.2E-04	3.7E-04	6.2E-04	2.2E-07	5.7E-04	8.9E-05	2.5E-03
Dewatered Gypsum Handling	-	0	-	-	2.06	1.96	1.96	1.3E-05	1.8E-04	5.7E-05	5.8E-06	1.7E-04	2.7E-04	3.2E-04	5.3E-04	1.9E-07	4.9E-04	7.6E-05	2.1E-03
	PTE After Issuance =				7.27	7.17	7.17	4.5E-05	6.3E-04	2.0E-04	2.0E-05	5.9E-04	9.7E-04	1.1E-03	1.9E-03	6.7E-07	1.7E-03	2.7E-04	7.4E-03

Limits	PM **lb/hr**	PM10 **lb/hr**	PM2.5 **lb/hr**
Unit #1 Pneumatic Conveyor / Separator	0.09	0.09	0.09
Unit #2 Pneumatic Conveyor / Separator	0.09	0.09	0.09
Unit #3 Pneumatic Conveyor / Separator	0.09	0.09	0.09
Unit #4 Pneumatic Conveyor / Separator	0.17	0.17	0.17
Unit #1 - #3 Intermediate Fly Ash Silo	0.11	0.11	0.11
Unit #4 Intermediate Fly Ash Silo	0.10	0.10	0.10
Flyash Storage/Loadout Silo	0.55	0.55	0.55
Dewatered Gypsum Handling	0.47	0.45	0.45

Appendix A: Emission Calculations
Limestone, Flyash and Gypsum Emissions

Company Name: ALCOA Power Generating, Inc.-Warrick Power Plant
Address: 4700 Darlington Road, Newburgh, IN 47630
Significant Source Modification No.: T173-29684-00002
Reviewer: Kimberley Malley
Date: October 27, 2010

1. Summary of Emissions from Limestone Handling

	PM (ton/year)	PM 10 (ton/yr)
Flyash storage silo	0.84	0.84
Hopper Baghouse	20.65	20.65
Silo Bin filters (3 total)	12.64	12.64
Hopper to Truck loading	0.49	0.23
drop to stockpiles	2.43	1.15
loading from stockpiles	2.43	1.15
truck to hopper drop	0.24	0.12
open stockpile	1.86	1.86
gypsum slurry vent	8.26	8.26

2. PTE - Flyash Handling

One storage silo equipped with bin vent filters

air flow (acfm)	loading (grain/dcsf)	PTE PM/PM10 (lb/hr)	PTE PM/PM10 tpy	PTE Lead (tpy)	PTE Beryllium (tpy)
1500	0.015	0.19	0.84	1.30E-04	2.34E-05

Methodology

PTE PM/PM10 (lb/hr) = air flow (acfm) * loading (grain/dscf) * 60 (min/hr) * 1/7000 (gr/lb)
PTE PM/PM10 (tpyr) = PTE PM/PM10 (lb/hr) * 8760 hrs/yr * 1/2000 lb/ton
PTE Lead (tpy) = 154.4 lb lead / 1MM lb PM * PM tpy
PTE Beryllium (tpy) = 27.7 lb beryllium / 1MM lb PM * PM tpy

3. PTE - Limestone/Coal Receiving and Transfer System (Hopper Baghouse) & Limestone Storage Silos

- Limestone will be delivered by barge and unloaded from the barge by crane to a hopper, which will be controlled by a baghouse. Suppression sprays and a flexible rubber curtain will be used when loading from the hopper unto trucks and the loads will be covered with tarps. The loaded trucks will travel by unpaved roads to an open stockpile, where front end loaders will load a hopper, which will feed a pipe conveyor. The conveyor will be controlled by skirt enclosures. The pipe conveyor will take the limestone to three (3) day silos equipped with bin vent filters.

Emission Unit	air flow (acfm)	loading (grain/dcsf)	PTE PM (lb/hr)	1) PTE PM tpy
Hopper Baghouse	50000	0.022	9.43	20.65
2) Silo Bin filters (3 total)	15300	0.022	2.89	12.64
			Total	33.29

1) 50% of the emissions from the baghouse will be due to coal emissions.
2) acfm is for all 3 bin vents combined, grain loading is per bin vent, PTE is total for all 3.

Methodology

PTE Hopper Baghouse PM/PM10 (lb/hr) = air flow (acfm) * loading (grain/dscf) * 60 (min/hr) * 1/7000 (gr/lb)
PTE Hopper Baghouse PM/PM10 (tpy) = PTE Hopper Baghouse (lb/hr) *8760 hrs/yr * 1/2000 lb/ton * .5
PTE Storage Silos (3) PM/PM10 (lb/hr) = air flow (acfm) * loading (gr/dscf) * 60 (min/hr) * 1/7000 (gr/lb)
PTE Storage Silos (3) PM/PM10 (tpy) = PTE Storage Silos (3) PM/PM10 (lb/hr) * 8760 (days/yr) * 1/2000 (lb/ton)

Appendix A: Emission Calculations
Limestone, Flyash and Gypsum Emissions (continued)

4. PTE - Fugitive Emissions Annual throughput limit = 350,468 tons/yr limestone

a) Batch Drop Operations - Limestone

Loading from Hopper to truck using a dust suppression spray with a flexible rubber curtain - control efficiency = 80%
Batch drop to stockpile and loading from stockpile - control efficiency = 0% 0%
Stockpile discharge conveyor - control efficiency = 90% 90%

E = k*(0.0032)* ((U/5)^1.3)/((M/2)^1.4)
= *0.0139* lb PM/ton
= *0.0066* lb PM10/ton
where k = 0.74 PM (particle size multiplier)
k= 0.35 PM10 (particle size multiplier)
U = 6.29 mile/hr mean wind speed
M = 0.7 % material moisture content

	PM (ton/yr)		PM10 (ton/yr)	
	Uncontrolled	Controlled	Uncontrolled	Controlled
Hopper to truck	2.43	0.49	1.15	0.23
drop to stockpiles	2.43	2.43	1.15	1.15
truck loading from stockpiles	2.43	2.43	1.15	1.15
truck to hopper to conveyor transfer	2.43	0.24	1.15	0.12

Methodology
Equation for E from AP-42 Chp. 13.2.4 - Aggregate Handling and Storage Piles (11/06)

b) Limestone stockpile fugitive emissions - AP-42, Ch 12.3-5 (05/1983)

E = 1.7 * (s/1.5) [(365-p) / 235] (f/15)
= *7.1886* lb/day/acre
where s = 9 % silt content
f = 10.14 % of time that unobstructed wind speed exceeds 12 mph at the mean pile height
p = 120 number of days with >/= 0.01 in of precipitation

Storage capacity (sc) of site (acres) = 1.42

PM/PM10 = 1.86 tons/year

5. PTE - Gypsum Slurry Dewatering Exhaust Duct

air flow (acfm)	loading (grain/dcsf)	PTE PM/PM10 (lb/hr)	PTE PM/PM10 tpy
10000	0.022	1.89	8.26

Grain loading is based upon the allowable per 40 CFR 60, Subpart OOO

Methodology
PTE exhaust (PM/PM10 lb/hr) = air flow (acfm) * loading (grain/dscf) * 60 (min/hr) * 1/7000 (gr/lb)
PTE exhaust PM/PM10 (tpy) = PTE exhaust (lb/hr) *8760 hrs/yr * 1/2000 lb/ton * .5

Appendix A: Emission Calculations
Internal Combustion Engine - Emergency Fire Pump

Company Name: ALCOA Power Generating, Inc.-Warrick Power Plant
Address: 4700 Darlington Road, Newburgh, IN 47630
Significant Source Modification No.: T173-29684-00002
Reviewer: Kimberley Malley
Date: October 27, 2010

Emission Factors NSPS for Model Year 2007-2010 - Emergency Fire Pumps
Between 130 and 560 kw (175 to 750 hp)

Nox -+ NMHC	10.5	g/kwh	7.8	g/hp-hr
CO	3.5	g/kwh	2.6	g/hp-hr
PM-10/PM-2.5/TSP	0.54	lb/hp-hr	0.4	g/hp-hr

SOX Emission Factor	0.00205	lb/hp-hr	With ULSD fuel assume 90% reduction in emissions
VOC Emission Factor	0.00247	lb/hp-hr	

Criteria Pollutant Emissions

					Emissions @ 500 Annual Operating Hours				
Emission Calculations	**Horsepower (hp)**	**Maximum Operating Hours (hr/yr)**	**Maximum Operation (hp-hr/yr)**	**Fuel Usage (gal)**	**NOx (tons/yr)**	**CO (tons/yr)**	**SOx (tons/yr)**	**PM (tons/yr)**	**VOC (tons/yr)**
465 Hp Emergency Fire Pump	465	500	232,500	12,037	1.999	0.666	0.238	0.103	0.287

Methodology:
A factor of 453.54 g/lb was used to convert g/hp-hr to lb/hp-hr
VOC Emission Factor (lb/MMBtu) [AP-42 Gasoline and Diesel Industrial Engines, Table 3.3-1 (10-96)]
A factor of 7000 BTU/hp-hr was used to convert lb/MMBTU to lb/hp-hr
Emission (tons/yr) = [Maximum Operationg (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

Appendix A: Emission Calculations
Haul to Limestone Piles

Company Name: **ALCOA Power Generating, Inc.-Warrick Power Plant**
Address: **4700 Darlington Road, Newburgh, IN 47630**
Significant Source Modification No.: **T173-29684-00002**
Reviewer: **Kimberley Malley**
Date: **October 27, 2010**

Estimated Maximum Production (tons/yr) 350,468

Traffic	Product Weight (tons/round trip)	Round Trips/Yr	Miles per Round Trip	Vehicle Miles Traveled (VMT)/yr	Vehicle Weight (tons)
Loaded Trucks	25	14,019	0.35	4906.55	20.00
Unloaded Trucks	0	14,019	0.35	4906.55	20.00
			Total VMT/yr =	9813.10	

Unpaved Road Emission Factors: AP-42

According to AP-42, Section 13.2.2 Unpaved Roads, November 2006, the PM/PM10 emission factors for unpaved roads can be estimated from the following equation:

lbs/VMT Equation: $E= k (s/12)^a (W/3)^b [(365 - P)/365]$

Where:

Particle size multiplier	k	4.9	dimensionless (PM-30 or TSP)	1.5	dimensionless PM-10
surface material silt content (%)	s	12	Table 13.2.2-1		
mean vehicle weight	W	32.50	tons		
Equation constants	a	0.7	PM-30 or TSP Table 13.2.2-2	0.9	PM-10 Table 13.2.2-2
	b	0.45	PM-30 or TSP Table 13.2.2-2	0.45	PM-10 Table 13.2.2-2
days with at least 0.01" precipitation	P	120			

PM Emission Factor = $(4.9) \times (8.5/12)^{0.7} \times (5/3)^{0.45}$ [(365-120)/365] = **9.61** lbs/mile
PM10 Emission Factor = $(1.5) \times (8.5/12)^{0.9} \times (5/3)^{0.45}$ [(365-120)/365] = **2.94** lbs/mile

PTE PM = PM Emission Factor (lbs/mile) * VMT (miles/yr) x 1 ton/2000 lbs = 47.15 uncontrolled (tpy)
PTE PM10 = PM10 Emission Factor (lbs/mile) * VMT (miles/yr) x 1 ton/2000 lbs = 14.43 uncontrolled (tpy)

Haul Roads to Limestone Pits will be water resulting in 50% control
PM PTE Controlled = **23.58** controlled (tpy)
PM10 PTE Controlled = **7.22** controlled (tpy)

Methodology:
Vehicle Mile Traveled (miles/yr) = Trip Number (trips/hr) x Round-Trip Distance (mile/trip) x 8760 hrs/yr
Traffic Component (%) = VMT / Total VMT
Component Vehicle Weight = Ave. Weight of Vehicles (ton) x Traffic Component (%)
PTE of PM/PM10 before Control (tons/yr) = VMT (miles/yr) x PM/PM10 Emission Factors x 1 ton/2000 lbs

Appendix A: Emission Calculations
Y-pit Haul Roads

Company Name: **ALCOA Power Generating, Inc.-Warrick Power Plant**
Address: **4700 Darlington Road, Newburgh, IN 47630**
Significant Source Modification No.: **T173-29684-00002**
Reviewer: **Kimberley Malley**
Date: **October 27, 2010**

1. Summary of Emissions from Travel on Y-pit Haul Road

Haul roads will watered as necessary, providing an assumed control effeciency of 50%.

	Uncontrolled PTE (tpy)		Controlled PTE (tpy)	
	PM	PM10	PM	PM10
Travel on unpaved portion	463.42	125.10	231.71	62.55
Travel on paved portion	235.15	45.87	117.58	22.94
Totals:	**698.57**	**170.97**	**349.29**	**85.49**

2. Emissions from Travel on Unpaved Portion of Road

Traffic	Product Weight (tons/round trip)	[1)] Estimated Round Trips/Yr	Miles per Round Trip	Vehicle Miles Traveled (VMT)/yr	Vehicle Weight (tons)
Loaded Trucks	25	37,440	2	74,880	20.00
Unloaded Trucks	0	37,440	2	74,880	20.00

[1)] Estimated Round Trips/yr = 144 trips/day x 5 day/week x 52 weeks/yr

Total VMT/yr = 149,760

Unpaved Road Emission Factors: AP-42

According to AP-42, Section 13.2.2 Unpaved Roads, November 2006, the PM/PM10 emission factors for unpaved roads can be estimated from the following equation:

lbs/VMT Equation: $E = k\,(s/12)^a\,(W/3)^b\,[(365 - P)/365]$

Where:

Particle size multiplier	k	4.9	dimensionless (PM-30 or TSP)	1.5	dimensionless PM-10
surface material silt content (%)	s	6.4	Table 13.2.2-1		
mean vehicle weight	W	32.50	tons		
Equation constants	a	0.7	PM-30 or TSP Table 13.2.2-2	0.9	PM-10 Table 13.2.2-2
	b	0.45	PM-30 or TSP Table 13.2.2-2	0.45	PM-10 Table 13.2.2-2
days with at least 0.01" precipitation	P	120			

PM Emission Factor = **6.19** lbs/mile
PM10 Emission Factor = **1.67** lbs/mile

PTE PM = PM Emission Factor (lbs/mile) * VMT (miles/yr) x 1 ton/2000 lbs = **463.42** tpy
PTE PM10 = PM10 Emission Factor (lbs/mile) * VMT (miles/yr) x 1 ton/2000 lbs = **125.10** tpy

Appendix A: Emission Calculations
Y-pit Haul Roads (continued)

3. Emissions from Travel on Paved Portion of Road

Specifications per round trip

Traffic	Product Weight (tons/round trip)	Estimated Round Trips/Yr	Miles per Round Trip	Vehicle Miles Traveled (VMT)/yr	Vehicle Weight (tons)
Loaded Trucks	25	37,440	1	37,440	20.00
Unloaded Trucks	0	37,440	1	37,440	20.00

[1)] Estimated Round Trips/yr = 144 trips/day x 5 day/week x 52 weeks/yr

Total VMT/yr = 74,880

Paved Road Emission Factors: AP-42

According to AP-42, Section 13.2.1 Paved Roads, November 2006, the PM/PM10 emission factors for paved roads can be estimated from the following equation:

$$E = (k \times (sL/2)^a \times (w/3)^b - C) \times (1 - p/(4N))$$

where:

E =	emission factor (lb/vehicle mile traveled)			
sL =	sL (non-Winter) x 4 (g/m^2) =	7.4	(g/m^2) (AP-42, Table 13.2.1-3)	
w =	mean vehicle weight (tons) =	32.5	tons	
k =	empirical constant =	0.082	for PM	0.016 for PM10
a =	empirical constant =	0.65		
b =	empirical constant =	1.5		
C =	emission factor for exhaust, brake and tire wear	0.00047	for PM and PM10	
p =	number of days per year with 0.01 inches precipitation	120		
N =	number of days in the period	365		

PM Emission Factor	=	**6.28**	lbs/mile
PM10 Emission Factor	=	**1.23**	lbs/mile
PTE PM = PM Emission Factor (lbs/mile) * VMT (miles/yr) x 1 ton/2000 lbs	=	**235.15**	tpy
PTE PM10 = PM10 Emission Factor (lbs/mile) * VMT (miles/yr) x 1 ton/2000 lbs	=	**45.87**	tpy

PTE PM = PM Emission Factor (lbs/mile) * VMT (miles/yr) x 1 ton/2000 lbs
PTE PM10 = PM10 Emission Factor (lbs/mile) * VMT (miles/yr) x 1 ton/2000 lbs

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: August 31, 2011

RE: ALCOA Power Generating, Inc. – Warrick Power Plant / 173-29684-00002

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

In order to conserve paper and reduce postage costs, IDEM's Office of Air Quality is now sending many permit decisions on CDs in Adobe PDF format. The enclosed CD contains information regarding the company named above.

This permit is also available on the IDEM website at:
http://www.in.gov/ai/appfiles/idem-caats/

If you would like to request a paper copy of the permit document, please contact IDEM's central file room at:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Please Note: *If you feel you have received this information in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV.*

Enclosures
CD Memo.dot 11/14/08

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SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Sam Bruntz
ALCOA – Power Generating, Inc. – Warrick Power Plant
PO Box 10, Bldg 860 E
Newburgh, IN 46729

DATE: August 31, 2011

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Part 70 Operating Permit Renewal
173-29684-00002

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
John D. Martin – Power Plant Manager
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

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Governor

Thomas W. Easterly
Commissioner

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Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

August 31, 2011

TO: Newburgh Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: ALCOA Power Generating, Inc. – Warrick Power Plant
Permit Number: 173-29684-00002

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	GHOTOPP 8/31/2011 ALCOA - Warrick Power Plt, AGC Div of Alcoa Generating, Inc. 173-29684-00002 Fina			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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2		John D martin Power Plant Mgr ALCOA - Warrick Power Plt, AGC Div of Alcoa Genera 4700 Darlington Rd Newburgh IN 47630-0010 *(RO CAATS)*									
3		Warrick County Board of Commissioners 107 W. Locust Street Suite # 301 Boonville IN 47601-0585 *(Local Official)*									
4		Warrick County Health Department 107 W Locust, Suite 204 Boonville IN 47601-1701 *(Health Department)*									
5		Mr. Charles L. Berger Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 *(Affected Party)*									
6		Mr. Wendell Hibdon Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 *(Affected Party)*									
7		Mr. Don Mottley Save Our Rivers 6222 Yankeetown Hwy Boonville IN 47601 *(Affected Party)*									
8		Newburgh Public Library 30 West Water St Newburgh IN 47630 *(Library)*									
9		Newburgh Town Council and Town Manager P.O Box 6 Newburgh IN 47630 *(Local Official)*									
10		Kim Sherman 3355 Woodview Drive Newburgh IN 47630 *(Affected Party)*									
11		Joanne Alexandrovich Vanderburgh County Health Dept. 420 Mulberry ST. Evansville IN 47713 *(Affected Party)*									
12		Mr. Bill Musgrove PO Box 565 Boonville IN 47601 *(Affected Party)*									
13		Mr. Bil Musgrove PO Box 520 Chandler IN 47610 (Affected Party)									
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