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: July 30, 2010

RE: Liberty Green Renewables Indiana, LLC / 025-27957-00015

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

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New Source Construction and Part 70 Operating Permit OFFICE OF AIR QUALITY

Liberty Green Renewables Indiana, LLC
Intersection SR 64 and SR 66
Milltown, Indiana 47145

(herein known as the Permittee) is hereby authorized to construct and 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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Operation Permit No.: T 025-27957-00015	
Issued by: for Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: july 30. 2010 Expiration Date: July 30, 2015

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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 power generation source.

Source Address:	Intersection SR 64 and SR 66, Milltown, Indiana 47145
General Source Phone Number:	(812) 969-3250
SIC Code:	4911
County Location:	Crawford
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 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) biomass-fired bubbling fluidized bed boiler, approved for construction in 2010, identified as EU-01, with a design heat input capacity of 407 MMBtu/hr using biomass, with a liquid propane gas (LPG) startup burner rated at 168 MMBtu/hr, using selective non-catalytic reduction (SNCR) to control NOx emissions and an alkaline sorbent injection system for HCL control, if necessary. Opacity is monitored with a continuous opacity monitoring system (COM). CO, NOx and SO_2 are monitored with continuous emission monitors. Particulate matter emissions are controlled by a baghouse identified as C-01, exhausting to stack S-01. [Under 40 CFR 60, Subpart Db, EU-01 is a new affected source.]

(b) One (1) pneumatic bed sand receiving operation and storage silo, approved for construction in 2010, identified as EU-06, with a maximum throughput of 30 tons per hour and a maximum storage capacity of 7 tons, emissions are controlled with a cartridge vent filter, exhausting to stack S-02. [326 IAC 6-3-2]

(c) One (1) pneumatic ash truck loadout operation and one (1) wet ash loadout operation with a pug mill mixer, approved for construction in 2010, identified as EU-09, with a maximum throughput capacity of 50 dry tons per hour, emissions are controlled by a cartridge vent filter, exhausting to stack S-04. [326 IAC 6-3-2]

(d) One (1) pneumatic limestone receiving operation and storage silo, approved for construction in 2010, identified as EU-14, with a maximum throughput capacity of 10 tons per hour and a maximum storage capacity of 17 tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-06. [326 IAC 6-3-2]

(e) One (1) pneumatic alkaline sorbent receiving operation and storage silo, approved for construction in 2010, identified as EU-15, with a maximum throughput capacity of 10 tons/hr and a maximum storage capacity of 17 tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-09. [326 IAC 6-3-2]

(f) One (1) wood grinder, approved for construction in 2010, identified as EU-16, with a maximum capacity of 300 tons per hour, emissions are uncontrolled, located indoors without an exhaust stack. [326 IAC 6-3-2]

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) One (1) pneumatic ash conveying system and ash storage silo, approved for construction in 2010, identified as EU-08, with a maximum throughput capacity of 0.9 dry tons per hour and a maximum storage capacity of 65 dry tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-04. [326 IAC 6-3-2]

(b) One (1) wood receiving, conveying and handling operation consisting of fifteen (15) conveyors, approved for construction in 2010, identified as EU-02, the process has a maximum throughput rate of 300 tons/hr, emissions are uncontrolled. [326 IAC 6-3-2]

(c) One (1) wood storage pile, approved for construction in 2010, identified as EU-03, with a maximum throughput of 300 tons per hour, and a maximum storage capacity of 22,300 tons, emissions are uncontrolled. [326 IAC 6-4]

(d) One (1) sawdust receiving, conveying and handling operation consisting of six (6) conveyors, approved for construction in 2010, identified as EU-04, the process has a maximum throughput rate of 100 ton/hr, emissions are uncontrolled. [326 IAC 6-3-2]

(e) One (1) sawdust storage pile, approved for construction in 2010, identified as EU-05, with a maximum throughput of 100 tons per hour, and a maximum storage capacity of 3,200 tons, emissions are uncontrolled.
[326 IAC 6-4]

(f) One (1) pneumatic bottom ash surge handling operation and surge storage bin, approved for construction in 2010, identified as EU-07, with a maximum throughput capacity of 0.4 tons per hour and a maximum storage capacity of 3 tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-03. [326 IAC 6-3-2]

(g) One (1) diesel powered emergency generator, approved for construction in 2010, identified as EU-12, with a maximum rated capacity of 350 HP, emissions are uncontrolled, exhausting to stack S-07. [Under 40 CFR 60, Subpart IIII, EU-12 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-12 is considered a new affected source.]

(h) One (1) diesel powered firewater pump, approved for construction in 2010, identified as EU-13, with a maximum rated capacity of 250 HP, emissions are uncontrolled, exhausting to stack S-08. [Under 40 CFR 60, Subpart IIII, EU-13 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-13 is considered a new affected source.]

(i) Paved and unpaved roads and parking lots with public access. Paved haul roads without public access. [326 IAC 6-4]

(j) One (1) non-contact draft cooling tower system not regulated by a NESHAP, approved for construction in 2010, identified as EU-11, with a maximum circulation rate of 36,000 GPM, emissions are uncontrolled.

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

(l) Cleaners and solvents, subject to 326 IAC 8-3 and characterized as:

(1) having a vapor pressure equal to or less than two (2.0) kilo Pascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pound per square inch) measured at thirty-eight (38) degrees Centigrade (one hundred (100) degrees Fahrenheit); or

(2) having a vapor pressure equal to or less than seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty (20) degrees Centigrade (sixty-eight (68) degrees Fahrenheit);

the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months.

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 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 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, T 025-27957-00015, 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.5 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.6 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.7 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.8 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.9 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.10 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:

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

(ii) 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.11 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent 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.12 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) If required by specific condition(s) in Section D of this permit, 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.

(b) 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).

(c) 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.13 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 or Southeast 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,
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058.

(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.14 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.15 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 T 025-27957-00015 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 combined permit, all previous registrations and permits are superseded by this combined new source review and 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.16 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.17 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.18 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.19 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.20 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.21 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.22 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.23 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.24 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.25 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.26 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 by using ambient air quality modeling pursuant to 326 IAC 1-7-4. 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:

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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 prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

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no later than 180 days from the date on which this source commences operation.

The ERP 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) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) 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(b)(3), starting in 2006 and every three (3) years thereafter, the Permittee shall submit by July 1 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
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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]

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

(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
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(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) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. 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.

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

Emissions Unit Description:

(a) One (1) biomass-fired bubbling fluidized bed boiler, approved for construction in 2010, identified as EU-01, with a design heat input capacity of 407 MMBtu/hr using biomass, with a liquid propane gas (LPG) startup burner rated at 168 MMBtu/hr, using selective non-catalytic reduction (SNCR) to control NOx emissions and an alkaline sorbent injection system for HCL control, if necessary. Opacity is monitored with a continuous opacity monitoring system (COM). CO, NOx and SO_2 are monitored with continuous emission monitors. Particulate matter emissions are controlled by a baghouse identified as C-01, exhausting to stack S-01. [Under 40 CFR 60, Subpart Db, EU-01 is a new affected source.]

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

Construction Conditions

General Construction Conditions

D.1.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.1.2 Effective Date of the Permit [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance. Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

D.1.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operating Conditions

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

D.1.4 Best Available Control Technology (BACT) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 (New Facilities, General Reduction Requirements), the Best Available Control Technology (BACT) for the bubbling fluidized bed boiler, identified as EU-01 shall be as follows:

Good Combustion Practices to limit Volatile Organic Compounds (VOC) emissions and the corresponding VOC emission limit shall not exceed 0.019 lb/MMBtu and 7.7 pounds per hour.

D.1.5 Prevention of Significant Deterioration (PSD) Minor Limit [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) PM emissions, from EU-01, shall not exceed 12.21 lb PM/hr. PM includes filterable particulate matter but not condensible particulate matter.

(b) PM10 emissions, from EU-01, shall not exceed 37.00 lb PM10/hr. PM10 includes filterable and condensible particulate matter.

(c) NOx emissions, from EU-01, shall not exceed 245.0 tons per twelve consecutive month period with compliance determined at the end of each month.

(d) CO emissions, from EU-01, shall not exceed 248.0 tons per twelve consecutive month period with compliance determined at the end of each month.

(e) SO2 emissions, from EU-01, shall not exceed 248.69 tons per twelve consecutive month period with compliance determined at the end of each month.

(f) The Permittee shall use only the following materials as fuel:

(1) Clean wood, which includes only uncoated, unpainted, and untreated: wood scrap, sawdust, chips, millings or shavings, and natural growth wood materials;

(2) Switchgrass (Panicum virgatum); and

(3) Liquid Propane Gas using the 168 MMBtu/hr burner for startup purposes only.

Combined with Condition D.2.4 and PM, PM10, SO2, CO, and NOx emissions from other emission units, these emission limits will limit the potential to emit of PM, PM10, SO2, CO and NOx emissions to less than 250 tons per year each and will render the requirements of 326 IAC 2-2 not applicable to the entire source.

D.1.6 HAP Minor Limit [326 IAC 2-4.1]

HCL emissions from the biomass-fired bubbling fluidized bed boiler, identified as EU-01, shall not exceed 0.005 lb HCL/MMBtu. This emission limit, combined with HAP emissions from other emission units shall limit the potential to emit of a single HAP to less than ten (10) tons per year and the potential to emit of combined HAPs to less than twenty-five (25) tons per year and shall render the requirements of 326 IAC 2-4.1 (MACT) not applicable.

D.1.7 NOx Emission Limit Avoidance Limit [40 CFR 60]

Propane heat input to boiler EU-01 shall be limited to less than 356,532 MMBtu per twelve consecutive month period with compliance determined at the end of each month. Propane heat input shall be calculated with the following equation:

$$\text{Propane Heat Input Rate (MMBtu/month)} = \frac{\text{Y (gallon/month) x X (BTU/gallon)}}{\text{(1,000,000 BTU/MMBtu)}}$$

Where:

X = The heating value of propane, no less than 91,500 BTU/gallon
Y = Propane usage for the current month in gallons

Compliance with this limit shall limit boiler EU-01 to an annual capacity factor for propane of less than 10% and shall render the requirements of 40 CFR 60.44b(l)(1) not applicable to boiler EU-01.

D.1.8 Preventive Maintenance Plan [326 IAC 2-7-5(15)]

A Preventive Maintenance Plan is required for this facility and its control device. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.9 Operation of Control Devices [326 IAC 2-7-6(6)]

(a) In order to demonstrate the compliance status with Condition D.1.5, except as otherwise provided by statute or rule in this permit, the baghouse shall be in operation at all times that the boiler's induced draft fan is in operation.

(b) 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.

D.1.10 Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)] [40 CFR 64]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous opacity monitoring systems (COMS) and related equipment. 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 times and reasons of the breakdown and efforts made to correct the problem.

(d) Whenever a COMS is malfunctioning or is down for maintenance or repairs for a period of twenty-four (24) hours or more and a backup COMS is not online within twenty-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.

(1) 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.

(2) 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 and if weather allows, with at least four (4) hours between each set of readings, until a COMS is online.

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

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

(e) 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, and 40 CFR 60.

D.1.11 Maintenance of Continuous Emission Monitoring Equipment for NOx, SO2, and CO [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment. The CEMS shall be in operation at all times.

(b) All CEMS required by this permit shall meet all applicable performance specifications of 40 CFR 60 and 40 CFR 75 or any other applicable performance specifications, and are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(d) Whenever a NOx CEMS is down for more than twenty-four (24) hours, the Permittee shall:

(1) follow the best combustion practice; and

(2) 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.

(e) Whenever a CO CEMS is malfunctioning or down for repairs or adjustments for more than twenty-four (24) hours, the Permittee shall:

(1) follow best combustion practice; and

(2) 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.

(f) Whenever an SO2 CEMS is malfunctioning or down for repairs or adjustments for more than twenty-four (24) hours, the Permittee shall:

(1) follow best combustion practice; and

(2) shall comply with the relevant requirements of 40 CFR Part 75 Subpart D - Missing Data Substitution Procedures.

(g) 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, 40 CFR 60, 40 CFR 75 and 40 CFR 96.

D.1.12 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) In order to demonstrate the compliance status with Condition D.1.5 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, the Permittee shall conduct PM emissions stack testing of the emissions from stack S-01 utilizing methods as approved by the Commissioner at least once every two (2) 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 determine the compliance status with Condition D.1.5, the Permittee shall perform PM_{10} emissions stack testing of boiler EU-01 no later than 180 days of publication of the new or revised condensible PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008 or within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, whichever is later. This testing shall be conducted utilizing methods as approved by the Commissioner at least once every two (2) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with 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. PM10 includes filterable and condensible PM.

(c) In order to demonstrate the compliance status with Condition D.1.6 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, the Permittee shall conduct an emissions stack test of the emissions of stack S-01 for hydrogen chloride 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) In order to demonstrate the compliance status with Condition D.1.4 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, the Permittee shall conduct an emissions stack test of the emissions of stack S-01 for VOC 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.

(e) The compliance stack test as described in Conditions D.1.12(a) to (d) shall be conducted on clean wood.

(f) The compliance stack test as described in Condition D.1.12(a) to (d) for a clean wood and switchgrass fuel mixture shall be conducted at startup or no later than one hundred and eighty (180) days prior to burning switchgrass on a regular basis. The results of the test burn shall be approved by IDEM before the specific clean wood and switchgrass mixture may be used as a fuel.

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

D.1.13 Baghouse Parametric Monitoring Requirements [40 CFR 64]

The Permittee shall monitor the pressure drop across the baghouse used in conjunction with boiler EU-01 at least once per day when the unit is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 inches of water or a range established during the latest compliant stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range 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 the pressure drop 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.1.14 Alkaline Sorbent Parametric Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

If the uncontrolled emission rate of HCL is more than 0.005 lb/MMBtu in compliance testing, the Permittee shall monitor the alkaline sorbent injection rate used with boiler EU-01 at least once per day when the unit is in operation. When for any one reading, the alkaline sorbent injection rate is outside the normal range established during the latest compliant stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. An injection rate reading that is outside the normal range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. If the latest compliant stack test indicates the injection of alkaline sorbent is not required to comply with the HCL limitation in Condition D.1.6, the Permittee may discontinue the daily injection rate readings and the use of the injection system.

D.1.15 Wood Inspections

In order to demonstrate compliance with Condition D.1.5, the Permittee shall perform visual inspections of the wood received at this source for combustion at the time of each delivery. Inspections shall be conducted by trained plant personnel. The inspections shall be conducted to ensure that the material being delivered does not contain any of the following materials:

(1) Treated, painted or coated wood materials,

(2) Particle board or plywood; or

(3) Non-wood materials (i.e. plastic, metal, rubber, etc.).

Loads containing any of the materials listed above shall be rejected and returned to the supplier.

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

D.1.16 Record Keeping Requirements

(a) The Permittee shall record the output of the continuous monitoring systems and shall perform the required record keeping and reporting, pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

(b) In the event that a breakdown of the SO2, CO and NOx continuous emission monitoring systems (CEMS) occurs, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.

(c) To document the compliance status with Condition D.1.13, the Permittee shall maintain records of the pressure drop across the baghouse controlling EU-01. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) To document the compliance status with Section C - Opacity, Section C - Maintenance of Continuous Opacity Monitoring Equipment, and opacity conditions, the Permittee shall maintain records in accordance with (1) through (2) below. Records shall be complete and sufficient to establish compliance with the limits in Section C- Opacity.

(1) All continuous opacity monitoring data, pursuant to 326 IAC 3-5-6.

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

(e) To document the compliance status with Conditions D.1.4, D.1.5 and D.1.6, the Permittee shall maintain a copy of all contracts which indicates the biomass suppliers cannot deliver any type of fuel other than the fuels listed in Condition D.1.5(f).

(f) To document the compliance status with Condition D.1.5, the Permittee shall maintain a record of the monthly NOx, CO and SO2 emissions from boiler EU-01.

(g) To document the compliance status with Condition D.1.14, the Permittee shall maintain records of the alkaline sorbent injection rate used in conjunction with boiler EU-01. The Permittee shall include in its daily record when an injection rate reading is not taken and the reason for the lack of an injection rate reading (e.g. the process did not operate that day).

(h) To document the compliance status with Condition D.1.4, D.1.5 and D.1.6, the Permittee shall maintain all compliance testing results.

(i) To document the compliance status with Condition D.1.7, the Permittee shall maintain records of the propane and natural gas heat input rate to boiler EU-01, including all information required to make the calculations.

(j) To document the compliance status with Condition D.1.11(d) to (f), the Permittee shall maintain records of all monitoring data and supporting information, including raw data, required by 326 IAC 3-5-6, for any of the following events:

(1) a monitoring sample,

(2) a measurement,

(3) a test,

(4) a certification,

(5) a report,

(6) all other activities required by 326 IAC 3-5.

These records shall include:

(1) design, installation, and testing of all elements of the monitoring system,

(2) required corrective action or compliance plan activities,

(3) all maintenance logs, calibration checks, and other required quality assurance activities,

(4) all records of corrective and preventive actions,

(5) a log of plant operations, including:

(i) date of facility downtime,

(ii) time of commencement and completion of each downtime,

(iii) reason for each downtime.

(k) To document the compliance status with Condition D.1.15, the Permittee shall maintain the results of all clean wood inspections.

(l) To document the compliance status with Condition D.1.13, the Permittee shall maintain the results of all pressure gauge calibration checks and replacement gauge purchase records.

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

D.1.17 Reporting Requirements

(a) The Permittee shall prepare and submit to IDEM, OAQ a written report of the results of the calibration gas audits and relative accuracy test audits for each calendar quarter within thirty (30) calendar days after the end of each quarter. The report must contain the information required by 326 IAC 3-5-5(e)(2).

(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; and

(5) nature of system repairs and adjustments.

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

(c) A quarterly summary of the information to document the compliance status with Condition D.1.5(c), Condition D.1.5(d), Condition D.1.5(e) and Condition D.1.7 shall be submitted no 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 supporting 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).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) One (1) pneumatic bed sand receiving operation and storage silo, approved for construction in 2010, identified as EU-06, with a maximum throughput of 30 tons per hour and a maximum storage capacity of 7 tons, emissions are controlled with a cartridge vent filter, exhausting to stack S-02. [326 IAC 6-3-2]

(c) One (1) pneumatic ash truck loadout operation and one (1) wet ash loadout operation with a pug mill mixer, approved for construction in 2010, identified as EU-09, with a maximum throughput capacity of 50 dry tons per hour, emissions are controlled by a cartridge vent filter, exhausting to stack S-04. [326 IAC 6-3-2]

(d) One (1) pneumatic limestone receiving operation and storage silo, approved for construction in 2010, identified as EU-14, with a maximum throughput capacity of 10 tons per hour and a maximum storage capacity of 17 tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-06. [326 IAC 6-3-2]

(e) One (1) pneumatic alkaline sorbent receiving operation and storage silo, approved for construction in 2010, identified as EU-15, with a maximum throughput capacity of 10 tons/hr and a maximum storage capacity of 17 tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-09. [326 IAC 6-3-2]

(f) One (1) wood grinder, approved for construction in 2010, identified as EU-16, with a maximum capacity of 300 tons per hour, emissions are uncontrolled, located indoors without an exhaust stack. [326 IAC 6-3-2]

Insignificant Activities

(a) One (1) pneumatic ash conveying system and ash storage silo, approved for construction in 2010, identified as EU-08, with a maximum throughput capacity of 0.9 dry tons per hour and a maximum storage capacity of 65 dry tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-04. [326 IAC 6-3-2]

(b) One (1) wood receiving, conveying and handling operation consisting of fifteen (15) conveyors, approved for construction in 2010, identified as EU-02, the process has a maximum throughput rate of 300 tons/hr, emissions are uncontrolled. [326 IAC 6-3-2]

(c) One (1) sawdust receiving, conveying and handling operation consisting of six (6) conveyors, approved for construction in 2010, identified as EU-04, the process has a maximum throughput rate of 100 ton/hr, emissions are uncontrolled. [326 IAC 6-3-2]

(d) One (1) pneumatic bottom ash surge handling operation and surge storage bin, approved for construction in 2010, identified as EU-07, with a maximum throughput capacity of 0.4 tons per hour and a maximum storage capacity of 3 tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-03. [326 IAC 6-3-2]

(e) One (1) diesel powered emergency generator, approved for construction in 2010, identified as EU-12, with a maximum rated capacity of 350 HP, emissions are uncontrolled, exhausting to stack S-07. [Under 40 CFR 60, Subpart IIII, EU-12 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-12 is considered a new affected source.]

(f) One (1) diesel powered firewater pump, approved for construction in 2010, identified as EU-13, with a maximum rated capacity of 250 HP, emissions are uncontrolled, exhausting to stack S-08. [Under 40 CFR 60, Subpart IIII, EU-13 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-13 is considered a new affected source.]

(g) One (1) non-contact draft cooling tower system not regulated by a NESHAP, approved for construction in 2010, identified as EU-11, with a maximum circulation rate of 36,000 GPM, emissions are uncontrolled.

(The information describing the process contained in this emissions unit description box is descriptive

information and does not constitute enforceable conditions.)

Construction Conditions

General Construction Conditions

D.2.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.2.2 Effective Date of the Permit [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance. Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

D.2.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operating Conditions

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

D.2.4 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable, The Permittee shall comply with the following emission limitations:

(a) PM emissions from EU-06, shall not exceed 4.71 lb/hr.

(b) PM10 emissions from EU-06, shall not exceed 1.95 lb/hr.

(c) PM emissions from EU-09, shall not exceed 19.63 lb/hr.

(d) PM10 emissions from EU-09, shall not exceed 8.13 lb/hr.

(e) PM emissions from EU-14, shall not exceed 3.93 lb/hr.

(f) PM10 emissions from EU-14, shall not exceed 1.63 lb/hr.

(g) PM emissions from EU-15, shall not exceed 3.93 lb/hr.

(h) PM10 emissions from EU-15, shall not exceed 1.63 lb/hr.

Combined with Condition D.1.4 and potential emissions from other emission units, these emission limits will limit potential PM and PM10 to less than 250 tons per year each and will render the requirements of 326 IAC 2-2 not applicable to the entire source

D.2.5 Particulate Matter Emissions [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of the following operations shall not exceed the pound per hour limit listed in the table below:

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)	Equation Used
EU-06	Bed Sand Receiving	30.0	40.0	a
EU-09	Ash Loadout Operation	50.0	44.6	b
EU-14	Limestone Receiving	10.0	19.2	a
EU-15	Alkaline Sorbent Operation	10.0	19.2	a
EU-08	Ash Conveying System	0.9	3.8	a
EU-02	Wood Receiving	300.0	63.0	b or c
EU-04	Saw Dust Receiving	100.0	51.3	b
EU-07	Bottom Ash Surge Handling	0.4	2.2	a
EU-16	Wood Grinder	300.0	63.0	b or c

The pound per hour limitation was calculated with the following equations:

(a) Interpolation of the data for the process weight rate up to sixty thousand (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

(b) 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

(c) Pursuant to 326 IAC 6-3-2(e)(3), since the process weight rate of the wood receiving operation exceeds 200 tons per hour, EU-02 and EU-16 may exceed the emission limitation calculated using equation (b), as long as the concentration of particulate matter in the gas discharged to the atmosphere remains less than 0.1 pounds per 1,000 pounds of gases.

D.2.6 Preventive Maintenance Plan [326 IAC 2-7-5(15)]

A Preventive Maintenance Plan is required for this facility and its control device. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.7 Particulate Matter Control [326 IAC 2-7-6(6)]

In order to demonstrate the compliance status with Condition D.2.4, the cartridge vent filters for EU-06, EU-09, EU-14 and EU-15, shall be in use at all times these emission units are in operation.

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

D.2.8 Visible Emission Notations

(a) Visible emission notations of the bin vent exhausts (stacks S-02, S-04, S-06 and S-09) shall be performed once per week during normal daylight operations and as weather allows, while the emission units are operating. A trained employee or a trained contractor shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) 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.

(d) A trained employee or contractor is a person who has worked or trained 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.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

D.2.9 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.8, the Permittee shall maintain a weekly record of visible emission notations of the stack exhaust from stacks S-02, S-04, S-06 and S-09. 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 or weather conditions did not permit).

(b) Section C – General Record Keeping Requirements contains the Permittee’s obligation with regard to the records required by this condition.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Insignificant Activities:

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

(l) Cleaners and solvents, subject to 326 IAC 8-3 and characterized as:

(1) having a vapor pressure equal to or less than two (2.0) kilo Pascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pound per square inch) measured at thirty-eight (38) degrees Centigrade (one hundred (100) degrees Fahrenheit); or

(2) having a vapor pressure equal to or less than seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty (20) degrees Centigrade (sixty-eight (68) degrees Fahrenheit);

the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months.

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

Construction Conditions

General Construction Conditions

D.3.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.3.2 Effective Date of the Permit [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance. Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

D.3.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operating Conditions

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

D.3.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations) for cold cleaning operations after January 1, 1980, performing organic solvent degreasing operations located anywhere in the state, the owner or operator 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.3.5 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) The owner or operator of a cold cleaner degreaser facility 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°C) (one hundred twenty degrees Fahrenheit (120°F)):

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

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

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

(b) The owner or operator of a cold cleaning facility 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.1 SOURCE OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) biomass-fired bubbling fluidized bed boiler, approved for construction in 2010, identified as EU-01, with a design heat input capacity of 407 MMBtu/hr using biomass, with a liquid propane gas (LPG) startup burner rated at 168 MMBtu/hr, using selective non-catalytic reduction (SNCR) to control NOx emissions and an alkaline sorbent injection system for HCL control, if necessary. Opacity is monitored with a continuous opacity monitoring system (COM). CO, NOx and SO_2 are monitored with continuous emission monitors. Particulate matter emissions are controlled by a baghouse identified as C-01, exhausting to stack S-01. [Under 40 CFR 60, Subpart Db, EU-01 is a new affected source.]

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

New Source Performance Standards

E.1.1 General Provisions Relating to NSPS Db [326 IAC 12][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the boiler described in this section except when otherwise specified in 40 CFR Part 60, Subpart Db.

E.1.2 Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [326 IAC 12][40 CFR Part 60, Subpart Db]

The Permittee who operates a steam generating unit that will commence 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 MMBtu/hr) shall comply with the following provisions of 40 CFR Part 60, Subpart Db, included as Attachment A of this permit. The source is subject to the following portions of Subpart Db:

1) 40 CFR 60.40b(a)
2) 40 CFR 60.40b(j)
3) 40 CFR 60.41b
4) 40 CFR 60.42b(k)(2)
5) 40 CFR 60.43b(f)
6) 40 CFR 60.43b(g)
7) 40 CFR 60.43b(h)(1)
8) 40 CFR 60.45b(k)
9) 40 CFR 60.46b(a)
10) 40 CFR 60.46b(b)
11) 40 CFR 60.46b(d)
12) 40 CFR 60.47b(f)
13) 40 CFR 60.48b(a)
14) 40 CFR 60.48b(e)(1)
15) 40 CFR 60.48b(h)(5)
16) 40 CFR 60.49b(a)
17) 40 CFR 60.49b(b)
18) 40 CFR 60.49b(d)(1)
19) 40 CFR 60.49b(f)
20) 40 CFR 60.49b(h)(1)
21) 40 CFR 60.49b(h)(3)
22) 40 CFR 60.49b(o)
23) 40 CFR 60.49b(r)(1)
24) 40 CFR 60.49b(w)

SECTION E.2 SOURCE OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) diesel powered emergency generator, approved for construction in 2010, identified as EU-12, with a maximum rated capacity of 350 HP, emissions are uncontrolled, exhausting to stack S-07. [Under 40 CFR 60, Subpart IIII, EU-12 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-12 is considered a new affected source.]

(b) One (1) diesel powered firewater pump, approved for construction in 2010, identified as EU-13, with a maximum rated capacity of 250 HP, emissions are uncontrolled, exhausting to stack S-08. [Under 40 CFR 60, Subpart IIII, EU-13 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-13 is considered a new affected source.]

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

New Source Performance Standards

E.2.1 General Provisions Relating to NSPS IIII [326 IAC 12][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the boiler described in this section except when otherwise specified in 40 CFR Part 60, Subpart Db.

E.2.2 Standards of Performance for Stationary Compression Ingnition Internal Combustion Engines [326 IAC 12][40 CFR Part 60, Subpart IIII]

The Permittee who owns and operates stationary compression ignition (CI) internal combustion engines (ICE) shall comply with the following provisions of 40 CFR Part 60, Subpart IIII, included as Attachment B of this permit. The source is subject to the following portions of Subpart IIII:

1) 40 CFR 60.4200
2) 40 CFR 60.4205
3) 40 CFR 60.4206
4) 40 CFR 60.4207
5) 40 CFR 60.4208
6) 40 CFR 60.4209
7) 40 CFR 60.4211
8) 40 CFR 60.4212
9) 40 CFR 60.4213
10) 40 CFR 60.4214
11) 40 CFR 60.4218

SECTION E.3 SOURCE OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) diesel powered emergency generator, approved for construction in 2010, identified as EU-12, with a maximum rated capacity of 350 HP, emissions are uncontrolled, exhausting to stack S-07. [Under 40 CFR 60, Subpart IIII, EU-12 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-12 is considered a new affected source.]

(b) One (1) diesel powered firewater pump, approved for construction in 2010, identified as EU-13, with a maximum rated capacity of 250 HP, emissions are uncontrolled, exhausting to stack S-08. [Under 40 CFR 60, Subpart IIII, EU-13 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-13 is considered a new affected source.]

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

National Emissions Standards for Hazardous Air Pollutants

E.3.1 General Provisions Relating to NESHAP [326 IAC 20-82-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20-82-1, apply to the emission units described in this section except when otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

E.3.2 National Emissisions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-82-1][40 CFR 63, Subpart ZZZZ]

The Permittee owns and operates stationary reciprocating internal combustion engines (RICE) located at an area source of HAP emissions shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ, included as Attachment C of this permit. The source is subject to the following portions of Subpart ZZZZ:

1) 40 CFR 63.6585
2) 40 CFR 63.6590
3) 40 CFR 63.6595
4) 40 CFR 63.6645
5) 40 CFR 63.6650
6) 40 CFR 63.6655
7) 40 CFR 63.6660
8) 40 CFR 63.6665

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT

CERTIFICATION

Source Name: Liberty Green Renewables Indiana, LLC
Source Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Part 70 Permit No.: T 025-27957-00015

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

Part 70 Quarterly Report

Source Name: Liberty Green Renewables Indiana, LLC
Source Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Part 70 Permit No.: T 025-27957-00015
Facility: Boiler EU-01
Parameter: NOx Emissions
Limit: 245.00 tons per twelve 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: Liberty Green Renewables Indiana, LLC
Source Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Part 70 Permit No.: T 143-28314-00019
Facility: Boiler EU-01
Parameter: CO Emissions
Limit: 248.00 tons per twelve 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: Liberty Green Renewables Indiana, LLC
Source Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Part 70 Permit No.: T 143-28314-00019
Facility: Boiler EU-01
Parameter: SO2 Emissions
Limit: 248.69 tons per twelve 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: Liberty Green Renewables Indiana, LLC
Source Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Part 70 Permit No.: T 025-27957-00015
Facility: Boiler EU-01
Parameter: Propane Heat Input Limit
Limit: 356,532 MMBtu per twelve consecutive month period from propane fuel.

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
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: Liberty Green Renewables Indiana, LLC
Source Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Part 70 Permit No.: T 025-27957-00015

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**) daytime 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 OPERATING PERMIT

QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Liberty Green Renewables Indiana, LLC
Source Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Part 70 Permit No.: T 025-27957-00015

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: _____

Mail to: Permit Administration & Support Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Liberty Green Renewables Indiana, LLC
Intersection SR 64 and SR 66
Milltown, Indiana 47145

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)

4. I hereby certify that Liberty Green Renewables Indiana, LLC located at the Intersection of SR 64 and SR 66, Milltown, Indiana 47145, completed construction of the electric power generation facility on_____in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on May 19, 2009 and as permitted pursuant to New Source Construction Permit and Part 70 Operating Permit No. T 025-27957-00015, Plant ID No. 025-00015 issued on _____.

5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature_____

Date_____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana

Signature_____

Name_____ (typed or printed)

Indiana Department of Environmental Management
Office of Air Quality

Attachment A

40 CFR 60, Subpart Db — Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Source Description and Location

Source Name:	Liberty Green Renewables Indiana, LLC
Source Location:	Intersection of SR 64 and SR 66 Milltown, Indiana 47145
County:	Crawford
SIC Code:	4911
Operation Permit No.:	T 025-27957-00015
Permit Reviewer:	David J. Matousek

Complete Text of 40 CFR 60, Subpart Db

40 CFR 60, Subpart Db — Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32742, June 13, 2007, unless otherwise noted.

§ 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 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.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 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 not meeting the definition of natural gas, 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) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (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 a gas at ISO conditions. This includes, but is not limited to, natural gas and gasified coal (including coke oven gas).

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 or to enhance the performance of the unit (*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); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

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. For gasified coal or oil that is desulfurized prior to combustion, the *Potential sulfur dioxide emission rate* is the theoretical SO_2 emissions (ng/J or lb/MMBtu heat input) that would result from combusting fuel in a cleaned state without using any post combustion 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 heats any 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, 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 and not located in a noncontinental area, *very low sulfur oil* means oil that contains no more than 0.30 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. For units constructed, reconstructed, or modified after February 28, 2005 and located in a noncontinental area, *very low sulfur oil* means 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 (0.50 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.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.42b Standard for sulfur dioxide (SO2).

(a) Except as provided in paragraphs (b), (c), (d), or (j) 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:

$$E_s = \frac{(K_a H_a + K_b H_b)}{(H_a + H_b)}$$

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).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. 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. For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. 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.

(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:

$$E_s = \frac{\left(K_c H_c + K_d H_d\right)}{\left(H_c + H_d\right)}$$

Where:
E_s = SO2 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).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. 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. For facilities complying with paragraphs (d)(1), (2), or (3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. 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.

(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. For facilities complying with the percent reduction standard and paragraph (k)(3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in paragraph (k) of 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.

(2) Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with any other 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 (k)(1) of this section.

(3) Units that are located in a noncontinental area and that combust coal, oil, or natural gas 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 or natural gas.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 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 can combust 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. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph.

(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), (h)(5), and (h)(6) 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 not located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.30 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 in §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 in (h)(1) of this section.

(6) 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 located in a noncontinental area that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.5 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 in §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 in (h)(1) of this section.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5084, Jan. 28, 2009]

§ 60.44b Standard for nitrogen oxides (NO_X).

(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
(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

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
(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:

$$E_n = \frac{(EL_{go}H_{go}) + (EL_{ro}H_{ro}) + (EL_c H_c)}{(H_{go} + H_{ro} + H_c)}$$

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:

$$E_n = \frac{(EL_{go}H_{go}) + (EL_{ro}H_{ro}) + (EL_c H_c)}{(H_{go} + H_{ro} + H_c)}$$

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, natural gas, a mixture of these fuels, or a mixture of these fuels 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:

$$E_n = \frac{\left(0.10 \text{ x } H_{go}\right) + \left(0.20 \text{ x } H_r\right)}{\left(H_{go} + H_r\right)}$$

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.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The SO_2 emission standards in §60.42b apply at all times. Facilities burning coke oven gas alone or in combination with any other gaseous fuels or distillate oil are allowed to exceed the limit 30 operating days per calendar year for SO_2 control system 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–7 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 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:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

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:

$$E_{ho}^{o} = \frac{E_{ho} - E_w\left(1 - X_k\right)}{X_k}$$

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_2 inlet rate (E_{ai}^{o}) using the following formula:

$$\%R_g^{o} = 100\left(1.0 - \frac{E_{ao}^{o}}{E_{ai}^{o}}\right)$$

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:

$$E_{hi}^{o} = \frac{E_{hi} - E_w\left(1 - X_k\right)}{X_k}$$

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 (c)(3) of this section does not have to measure parameters E_w or X_k if 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_2 emission 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 in paragraph (c)(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 in Method 19 of appendix A–7 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, natural gas, or a mixture of these fuels, 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_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 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 only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO_2 standard 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 in §§60.42b(d)(4), 60.42b(j), 60.42b(k)(2), and 60.42b(k)(3) (when not burning coal) shall follow the applicable procedures in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 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 3A or 3B of appendix A–2 of this part is used for gas analysis when applying Method 5 of appendix A–3 of this part or Method 17 of appendix A–6 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–6 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 (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A–3 of this part may be used in Method 17 of appendix A–6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A–6 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 in §60.8, whichever date comes first, the owner or operator of an affected facility which combusts coal (except as specified under §60.46b(e)(4)) or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the NO_X emission standards in §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 for 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, gasified coal, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the NO_X standards in §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:

$$E = E_{sg} + \left(\frac{H_g}{H_b}\right)\left(E_{sg} - E_g\right) \qquad (Eq.1)$$

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 or the heat input 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 with the PM limit in paragraphs §60.43b(a)(4) or §60.43b(h)(5) shall follow the applicable procedures in §60.49b(r).

(j) In place of PM testing with Method 5 or 5B of appendix A–3 of this part, or Method 17 of appendix A–6 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 Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall comply with the requirements specified in paragraphs (j)(1) through (j)(14) 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 O2 (or CO2) data shall be collected concurrently (or within a 30-to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall be used; and

(ii) After July 1, 2010 or after Method 202 of appendix M of part 51 has been revised to minimize artifact measurement and notice of that change has been published in the Federal Register, whichever is later, for condensable PM emissions, Method 202 of appendix M of part 51 shall be used; and

(iii) For O2 (or CO2), Method 3A or 3B of appendix A–2 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.

(14) After July 1, 2011, within 90 days after completing a correlation testing run, the owner or operator of an affected facility shall either successfully enter the test data into EPA's Web FIRE data base located at http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main or mail a copy to: United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; Mail Code: D243–01; RTP, NC 27711.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§ 60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the SO_2 standards in §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 SO2 input rate, or

(2) Measuring SO2 according to Method 6B of appendix A of this part at the inlet or outlet to the SO2 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 SO2 and CO2 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_2emissions 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 greater than or equal to 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.

(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).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009]

§ 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 continuous opacity monitoring systems (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard under §60.43b and meeting the conditions under paragraphs (j)(1), (2), (3), (4), or (5) of this section who elects not to install a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43b and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. If during the initial 60 minutes of observation all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent, the observation period may be reduced from 3 hours to 60 minutes.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A–4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A–4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 30 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A–7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A–7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.* , 90 seconds per 30 minute period) the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is

equal to or less than 5 percent during a 30 minute observation (*i.e.* , 90 seconds) or conduct a new Method 9 of appendix A–4 of this part performance test using the procedures in paragraph (a) of this section within 30 calendar days according to the requirements in §60.46d(d)(7).

(ii) If no visible emissions are observed for 30 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243–02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(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 COMS 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, gasified coal, 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 in §60.44b(a)(4), §60.44b(e), 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), (5), or (6) of this section is not required to install or operate a COMS 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; or

(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. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(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 uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part; or

(6) 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 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 must calibrate, maintain, operate, 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.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5087, Jan. 28, 2009]

§ 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 in §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in §60.48b(g)(2) and the records to be maintained in §60.49b(g). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. An affected facility burning coke oven gas alone or in combination with other gaseous fuels or distillate oil shall submit this plan to the Administrator for approval within 360 days of the initial startup of the affected facility or by November 30, 2009, whichever date comes later. 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(g).

(d) Except as provided in paragraph (d)(2) of this section, the owner or operator of an affected facility shall record and maintain records as specified in paragraph (d)(1) of this section.

(1) 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.

(2) As an alternative to meeting the requirements of paragraph (d)(1) of this section, the owner or operator of an affected facility that is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions may elect to record and maintain records of the amount of each fuel combusted during 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 an affected facility subject to the opacity standard in §60.43b, the owner or operator shall maintain records of opacity. In addition, an owner or operator that elects to monitor emissions according to the requirements in §60.48b(a) shall maintain records according to the requirements

specified in paragraphs (f)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

(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 in §60.43b(f) or to the operating parameter monitoring requirements in §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, gasified coal, 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; For an exceedance due to maintenance of the SO_2 control system covered in paragraph 60.45b(a), the report shall identify the days on which the maintenance was performed and a description of the maintenance;

(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 in §60.42(b) for which the minimum amount of data required in §60.47b(c) 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, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in §60.42b(j) or §60.42b(k) 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 and gaseous fuel meets the definition of natural gas 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, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were 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.

[72 FR 32742, June 13, 2007, as amended at 74 FR 5089, Jan. 28, 2009]

Indiana Department of Environmental Management
Office of Air Quality

Attachment B

40 CFR 60, Subpart IIII — Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source Description and Location

Source Name:	Liberty Green Renewables Indiana, LLC
Source Location:	Intersection of SR 64 and SR 66 Milltown, Indiana 47145
County:	Crawford
SIC Code:	4911
Operation Permit No.:	T 025-27957-00015
Permit Reviewer:	David J. Matousek

Complete Text of 40 CFR 60, Subpart IIII

40 CFR 60, Subpart IIII — Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§ 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_X in 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_X emissions by 90 percent or more, or limit the emissions of NO_X in 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:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. } 2)$$

Where:
Ci = concentration of NOX or PM at the control device inlet,
Co = concentration of NOX or PM at the control device outlet, and
R = percent reduction of NOX or PM emissions.

(2) You must normalize the NO_X or 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.

$$C_{adj} = C_d \frac{5.9}{20.9 - \%O_2} \quad (\text{Eq. } 3)$$

Where:
C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.
C_d = Measured concentration of NO_X or PM, uncorrected.
5.9 = 20.9 percent O_2 −15 percent O_2, the defined O_2 correction value, percent.
$\%O_2$ = Measured O_2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction 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:

$$F_o = \frac{0.209\, F_d}{F_c} \qquad (\text{Eq. } 4)$$

Where:
F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume 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_2 produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2 correction 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_2 correction factor, percent.
5.9 = 20.9 percent O_2 − 15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the NO_X and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \qquad (\text{Eq. } 6)$$

Where:
C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.
C_d = Measured concentration of NO_X or PM, uncorrected.
$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \text{ x } 1.912 \text{ x } 10^{-3} \text{ x } Q \text{ x } T}{KW - hour} \qquad (\text{Eq. } 7)$$

Where:
ER = Emission rate in grams per KW-hour.
C_d = Measured NO_X concentration in ppm.
1.912×10^{-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:

$$ER = \frac{C_{adj} \times Q \times T}{KW - hour} \quad (Eq. 8)$$

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 (600 ≤ HP ≤ 750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
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]

Engine power	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)			
	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)

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW > 560 (HP > 750)	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_X emissions 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.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		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 NO_X concentration.
		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_X concentration.
		iv. Measure NO_X at 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 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.
	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.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		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.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		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 and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine and moisture content must be made at 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_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 measurements for PM concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		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	

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§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	

Indiana Department of Environmental Management
Office of Air Quality

Attachment C

40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source Description and Location

Source Name:	Liberty Green Renewables Indiana, LLC
Source Location:	Intersection of SR 64 and SR 66 Milltown, Indiana 47145
County:	Crawford
SIC Code:	4911
Operation Permit No.:	T 025-27957-00015
Permit Reviewer:	David J. Matousek

Complete Text of 40 CFR 63, Subpart ZZZZ

40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 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 as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.*

(i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.*

(i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.*

(1) An affected source which meets either of the criteria in paragraph (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(h) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source of HAP emissions; an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions; an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE; an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE; an existing compression ignition emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; an existing spark ignition emergency or limited use stationary RICE; an existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; or an existing stationary residential, commercial, or institutional emergency stationary RICE located at an area source of HAP emissions, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010, as amended at 75 FR 37733, June 30, 2010]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected Sources.*

(1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6602 What emission limitations must I meet if I own or operate an existing stationary CI RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary CI RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[75 FR 9675, Mar. 3, 2010]

§ 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary CI RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) you do not have to meet the numerical CO emission limitations specified in Table 2d to this subpart. Existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the FAHS must meet the management practices that are shown for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d to this subpart.

[75 FR 9675, Mar. 3, 2010]

§ 63.6604 What fuel requirements must I meet if I own or operate an existing stationary CI RICE?

If you own or operate an existing non-emergency CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. Existing non-emergency CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or at area sources in areas of Alaska not accessible by the FAHS are exempt from the requirements of this section.

[75 FR 9675, Mar. 3, 2010]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results,

review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010]

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing CI stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary CI RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(e) (1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

Where:
C_i= concentration of CO or formaldehyde at the control device inlet,
C_o= concentration of CO or formaldehyde at the control device outlet, and
R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2concentration is measured in lieu of oxygen concentration measurement, a CO_2correction factor is needed. Calculate the CO_2correction factor as described in paragraphs (e)(2)(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:

$$F_o = \frac{0.209\, F_d}{F_c} \quad (\text{Eq. 2})$$

Where:
F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2volume produced by the fuel at zero percent excess air.
0.209 = Fraction of air that is oxygen, 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 oxygen, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

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 SO_2 gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 4})$$

Where:
$\%CO_2$= Measured CO_2concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) 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;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO_2at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in §63.8.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate an existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions, an existing stationary emergency RICE, or an existing stationary RICE located at an area source of HAP emissions not subject to any numerical emission standards shown in Table 2d to this subpart, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) in this section.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

(h) If you operate a new or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary engine that is subject to the work, operation or management practices in items 1, 2, or 4 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil before continuing to use the engine. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing

limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the engine according to the conditions described in paragraphs (f)(1) through (4) of this section.

(1) For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(2) There is no time limit on the use of emergency stationary RICE in emergency situations.

(3) You may operate your emergency stationary RICE 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. The owner or operator 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 RICE beyond 100 hours per year.

(4) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(4), as long as the power provided by the financial arrangement is limited to emergency power.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary CI RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary CI RICE less than 100 HP, an existing stationary emergency CI RICE, or an existing stationary CI RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary CI RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency CI RICE.

(3) An existing stationary CI RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(1) An existing emergency stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary CI RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Black start engine means an engine whose only purpose is to start up a combustion turbine.
CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101–549, 104 Stat. 2399).

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

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 fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE 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 for peak shaving are not considered emergency stationary ICE. Stationary CI ICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. All other emergency stationary RICE must comply with the requirements specified in §63.6640(f).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (i.e., remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Residential/commercial/institutional emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or residences, commercial establishments such as office buildings, hotels, or stores, or institutional establishments such as medical centers, research centers, and institutions of higher education.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine 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 reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010]

Table 1a to Subpart ZZZZ of Part 63 — Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for existing, new and reconstructed 4SRB stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010]

Table1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

[As stated in §§63.6600, 63.6630 and 63.6640, you must comply with the following operating emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions]

For each...	You must meet the following operating limitation...
1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and

For each...	You must meet the following operating limitation...
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and using NSCR.	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and not using NSCR.	

[73 FR 3607, Jan. 18, 2008]

Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP Located at a Major Source of HAP Emissions, Existing Non-Emergency Compression Ignition Stationary RICE >500 HP, and New and Reconstructed 4SLB Burn Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed lean burn and existing, new and reconstructed compression ignition stationary RICE:

For each . . .	You must meet the following operating limitation . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst	a. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst	Comply with any operating limitations approved by the Administrator.

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.
[75 FR 9680, Mar. 3, 2010]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary Rice Located at Major Sources of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency CI and black start CI.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
2. Non-Emergency, non-black start CI < 100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[2]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	
4. Non-Emergency, non-black start CI 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start CI>500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	

[1]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.
[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.
[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9681, Mar. 3, 2010]

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission and operating limitations for existing compression ignition stationary RICE:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI ≤ 300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary	
2. Non-Emergency, non-black start CI 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more	
3. Non-Emergency, non-black start CI > 500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more	
4. Emergency CI and black start CI.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.
[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[75 FR 9681, Mar. 3, 2010]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. 2SLB and 4SLB stationary RICE with a brake horsepower >500 located at major sources and new or reconstructed CI stationary RICE with a brake horsepower >500 located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE with a brake horsepower >500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE		Conduct subsequent performance tests every 8,760 hrs or 5 years, whichever comes first.

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 9682, Mar. 3, 2010]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE for existing sources:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O_2 at the inlet and outlet of the control device; and	(1) Portable CO and O_2 analyzer	(a) Using ASTM D6522–00 (2005)[a](incorporated by reference, *see* §63.14). Measurements to determine O_2must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O_2 analyzer	(a) Using ASTM D6522–00 (2005)[a,b] (incorporated by reference, *see* §63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(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; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005)	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		iv. Measure formaldehyde at the inlet and the outlet of the control device.	(1) Method 320 of 40 CFR part 63, appendix A; or ASTM D6348–03[c], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130.	(a) Formaldehyde 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.
3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(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 RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005)	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 of 40 CFR part 63, appendix A; or ASTM D6348–03[c], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde 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.
		v. Measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour longer runs.

[a]You may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. ASTM–D6522–00 (2005) may be used to test both CI and SI stationary RICE.
[b]You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.
[c]You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[75 FR 9682, Mar. 3, 2010]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
3. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
4. 4SRB stationary RICE >500 HP located at a major source	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
5. 4SRB stationary RICE >500 HP located at a major source	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
6. Stationary RICE >500 HP located at a major source	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
7. Stationary RICE >500 HP located at a major source	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
8. Existing stationary non-emergency RICE ≥100 HP located at a major source, existing non-emergency CI stationary RICE >500 HP, and existing stationary non-emergency RICE ≥100 HP located at an area source	a. Reduce CO or formaldehyde emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
9. Existing stationary non-emergency RICE ≥100 HP located at a major source, existing non-emergency CI stationary RICE >500 HP, and existing stationary non-emergency RICE ≥100 HP located at an area source	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.

[75 FR 9684, Mar. 3, 2010]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations and Operating Limitations

As stated in §63.6640, you must continuously comply with the emissions and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
2. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source	a. Reduce CO emissions and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to §63.6620; and
		ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. 4SRB stationary RICE >500 HP located at a major source	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
5. 4SRB stationary RICE >500 HP located at a major source	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. 4SRB stationary RICE with a brake HP ≥5,000 located at a major source	Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved.[a]
7. Stationary RICE >500 HP located at a major source	Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. Stationary RICE >500 HP located at a major source	Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing stationary CI RICE not subject to any numerical emission limitations	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
		ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary RICE >500 HP that are not limited use stationary RICE, except 4SRB >500 HP located at major sources	a. Reduce CO or formaldehyde emissions; or b. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit.
11. Existing limited use stationary RICE >500 HP that are limited use CI stationary RICE	a. Reduce CO or formaldehyde emissions; or b. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit.

[a]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.
[75 FR 9685, Mar. 3, 2010]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in §63.6650, you must comply with the following requirements for reports:

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
Compliance report	If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b)(1)–(5) for engines that are not limited use stationary CI RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)–(9) for engines that are limited use stationary CI RICE subject to numerical emission limitations.
	If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
	If you had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in §63.6650(b).
Report	The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
	The operating limits provided in your Federally enforceable permit, and any deviations from these limits; and	i. *See* item 2.a.i.
	Any problems or errors suspected with the meters	i. *See* item 2.a.i.

[75 FR 9687, Mar. 3, 2010]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)–(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)–(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes.	
§63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)–(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes.	
§63.10(b)(2)(i)–(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)–(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010]

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a New Source Construction and Part 70 Operating Permit

Source Description and Location

Source Name:	Liberty Green Renewables Indiana, LLC
Source Location:	Intersection SR 64 and SR 66 Milltown, Indiana 47145
County:	Crawford
SIC Code:	4911
Operation Permit No.:	T 025-27957-00015
Permit Reviewer:	David J. Matousek / Josiah Balogun

The Office of Air Quality (OAQ) has reviewed a new source construction and Part 70 Operating permit application, submitted by Liberty Green Renewables Indiana, LLC on May 19, 2009, relating to the construction of a stationary electric power generation facility.

Public Notice Information

The initial public notice period for the draft Part 70 Operating Permit for Liberty Green Renewables Indiana, LLC, Milltown, Indiana began on December 23, 2009 and was scheduled to end on February 1, 2010. After the public notice period began, IDEM determined additional time was warranted due to confusion on the allowable fuel sources and the stack height for the boiler. The public notice period was extended to February 24, 2010 on February 3, 2010.

A public meeting was conducted at the Crawford County Fairgrounds in Marengo, Indiana on January 13, 2010.

Comments and IDEM's Responses

IDEM has summarized and consolidated comments received during the public notice period. Comments dealing with a similar issue were grouped and IDEM provided a response on the issue in question. Appendix B to the ATSD contains a list of commenter's names. Appendix A to the ATSD contains revised emission calculations for this source as a result of the comments received by IDEM. U.S EPA comments, public comments and IDEM's responses follow below:

U.S. EPA Comments

EPA Comment #1

D.1.12 requires CEMS to be installed and operated. The permit does not specify that the CEMS shall be operated at all times. While malfunctions cannot be predicted, the permit does not limit the amount of time the CEMS are allowed to be out of service. D.1.12(d) says that, "whenever a NOx CEMS is down for more than 24 hours, the Permittee shall follow the best combustion practice." The permit does not explain how NOx emissions are to be monitored during CEMS down times.

IDEM RESPONSE

The permit has been revised to require operation of the NOx CEMS at all times. IDEM understands the CEMS will require preventive maintenance, zero and span adjustments and calibration checks. The amount of time a CEMS is offline due to equipment malfunction or maintenance will be addressed on a case by case basis and excessive downtime due to malfunction will be dealt with by enforcement actions. In addition, specific requirements for procedures to follow during NOx CEMS outage have been expanded to require data substitution. Revisions as a result of this comment are shown along with IDEM RESPONSE to EPA Comment #3.

EPA Comment #2

D.1.5(d) limits the type of fuel the source can combust. While the source is limited to "clean wood and crops", the list of acceptable fuel items includes solid wood waste materials (including construction wood waste and demolition wood wastes). These could include items that wouldn't be considered clean wood waste. Based on phone conversation with IDEM, it is our understanding that this issue is being corrected for the final permit.

IDEM RESPONSE

The fuel description in the draft permit placed on public notice did not change during the public notice period and IDEM fully intended to issue this permit with the public notice fuel description. The intent of the fuel description included in the draft permit was to restrict the source to burning clean wood and crops. The other fuels listed were an attempt by IDEM to describe the possible sources of clean wood and crops. These further descriptions have clouded our intent and the permissible fuels for the boiler. Due to the overwhelming number of comments received on the fuel description during the public notice period, IDEM has changed the description of allowable fuels, to include a definition of clean wood and to allow the source to burn only clean wood and switchgrass. Both clean wood and switchgrass were included in the public notice draft permit. IDEM does not dictate which fuels a facility will combust. We simply permit the emission unit based on the fuels proposed by the applicant.

IDEM used the definition of wood in 40 CFR 60, Subpart Db as a starting point to develop the fuel description used in this permit. Subpart Db was included in the draft permit placed on public notice and it defines wood as follows:

> **Wood** means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sander dust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

IDEM will require the source to conduct inspections of the fuel received and maintain contracts with the supplier restricting the fuels that can be supplied. A test burn is proposed for switchgrass to document site specific emission factors and the permission to burn switchgrass will not be granted until IDEM approves the emission factors obtained during the test burn. Site specific emission factors will account for natural variation in the switchgrass due to local growing conditions. It should be noted that the facility intends to provide approximately 1% of the boiler heat input capacity with switchgrass.

The moisture content and heating value of clean wood is variable. The application indicates LGR allows wood moisture content from the supplier to vary from 0% to 53%. As the moisture content of the wood increases, the heating value decreases. Typical heating values are 4,000 Btu/lb for wet wood and 7,000 Btu/lb for dry wood, where AP-42 identifies wet wood as wood with 20% or greater moisture content. Therefore, less energy is available from wet wood per pound and more must be burned to achieve the maximum heat input capacity of the boiler. Moisture content also effects particulate matter and NOx emissions. NOx and particulate matter emissions both increase as moisture content decreases. Therefore, the source has an incentive to burn dry wood because it is more economical but also creates greater emissions. This trend is documented in AP-42, Chapter 1.6. AP-42 shows higher emission factors for dry wood over wet wood. The highest emissions factors for wood combustion are for bark for all pollutants except NOx. Dry wood has the highest emission factor for NOx. CO emission factors are unaffected by the moisture content of the wood. To address moisture content problems, IDEM used bark emission factors for particulate matter and SO2 (with a safety factor of 5.28 included for SO2) to estimate emissions. The emission factor for VOC is from the BACT analysis. Finally, the applicant provided emission factors for CO and NOx based on an equipment performance guarantee. The emission factors for PM, PM10, VOC, SO2, HCL and CO will be verified by emissions stack testing.

IDEM received several public comments on permit requirements to require compliance monitoring of the moisture content of the wood. IDEM believes no additional monitoring of the moisture content is required based on the following analysis:

(a) CO: The source has installed a CEMS to continuously record and monitor CO emissions.

(b) SO2: The source has installed a CEMS to continuously record and monitor SO2 emissions.

(c) NOx: AP- 42 emissions factors show bark, bark with wet wood and wet wood are identical. NOx emission factors for dry wood are almost double those for bark or wet wood. While moisture content has a profound impact on NOx emissions, moisture content testing is not required because the source has a NOx CEMS to continuously record and monitor NOx emissions.

(d) PM, PM10: AP-42 emission factors show both PM and PM10 emissions are approximately 20% higher for dry wood then wet wood. The emission factors for bark and bark with wet wood are approximately 30% higher than dry wood. In regards to PM and PM10, burning bark and bark with wet wood will result in the highest emission rates. IDEM used the emission factors for bark in the emission calculations for the boiler. IDEM does not believe moisture content monitoring is required for this boiler because a continuous opacity monitor is provided and this monitor will provide warning of a change in particulate matter emissions and is more representative of particulate matter emissions then a grab sample for moisture content of wood. To provide an additional layer of safety, IDEM is proposing to shorten the time frame for PM and PM10 testing to two years. IDEM is requiring the shortened time frame due to the size of this boiler and concern over natural variation in the fuel affecting PM and PM10 emissions.

IDEM is revising Condition D.1.5 to clarify the ability of LGR to use propane for startup and to revise particulate matter emission limitation due to the addition of the wood grinder (See IDEM RESPONSE to Public Comment #25 for information on the grinder). IDEM has renumbered conditions and updated individual condition references where required as a result of condition deletion or reordering. Revisions as a result of this comment are shown along with other Section D.1 revisions under IDEM RESPONSE to EPA Comment #3.

EPA Comment #3

D.1.10 says that the baghouse shall be in operation at all times except during periods of startup, shutdown, or emergency. The frequency and duration of startup and shutdown operations is not specified in the permit. What assumptions for startup, shutdown, or emergency periods were used in calculating the potential to emit of particulate matter (PM/PM10)? Without limits on these periods, the synthetic minor status of this facility may not be assured.

IDEM RESPONSE

It is the intent of IDEM to require continuous compliance with the PM/PM10 emission limitations in Condition D.1.5. IDEM agrees the permit condition as written appears to allow operation of the boiler without control for an undetermined period. To resolve the issue, IDEM will require the baghouse to be in operation at all times the boilers induced draft fan is in operation. Also Condition D.1.8 – Temporary Alternative Opacity Limitations was removed because the applicant did not apply for site specific startup or shut down revisions to the opacity rules. Without a site specific rule, Condition C.2 already addresses the opacity requirements. IDEM used worst case emission factors for the boiler operating at 8,760 hours per year based on clean wood and switchgrass. LGR uses propane for startup which is a cleaner fuel combusted with a smaller burner of 168 MMBtu/hr, whereas, at normal operation the boiler is capable of 407 MMBtu/hr. Emissions from clean wood and switchgrass will be considerably higher than

propane. In regards to shutdown, the boiler will be operating at a lower heat input rate while the control device is in operation. This should result in lower overall emissions for all pollutants except CO.

Additional IDEM Revisions related to EPA Comment #1, #2 and #3

1) CO emissions can increase on shutdown due to incomplete combustion. To address this possibility, IDEM has added a PSD minor limit for CO and the source has agreed to install a CO CEMS.

2) IDEM, OAQ has changed the compliance monitoring requirements for SO2 because the source has installed an SO2 CEMS. The information provided by the CEMS will be a more accurate indication of continuous compliance then regular compliance stack testing. IDEM is increasing the allowable emissions of SO2 from 0.132 lb/MMBtu (235.29 TPY) to 0.1394 lb/MMBtu (248.69 TPY) to provide more flexibility to the source.

3) IDEM added reporting forms to the draft permit. This allows the applicant to submit information to IDEM to document actual CO, SO2 and NOx emissions as required by Condition D.1.17.

4) IDEM has revised the emission unit descriptive information for boiler EU-01 in draft permit Section A.2, the facility description boxes in Section D.1 and E.1 to reflect the addition of the CO CEMS. Each individual revision is not shown, but revisions to the description are shown below:

> One (1) biomass-fired bubbling fluidized bed boiler, approved for construction in 2010, identified as EU-01, with a design heat input capacity of 407 MMBtu/hr using biomass, with a liquid propane gas (LPG) startup burner rated at 168 MMBtu/hr, using selective non-catalytic reduction (SNCR) to control NOx emissions and an alkaline sorbent injection system for HCL control, if necessary. Opacity is monitored with a continuous opacity monitoring system (COM)~~,~~**. CO,** NOx and SO_2 are monitored with continuous emission monitors**.**~~, p~~**P**articulate matter emissions are controlled by a baghouse identified as C-01, exhausting to stack S-01. [Under 40 CFR 60, Subpart Db, EU-01 is a new affected source.]

Additional IDEM Revisions to Listed Section D.1 Conditions

1) IDEM, OAQ has decided to clarify Section D - Testing Requirements.
2) IDEM, OAQ has decided to clarify Section D – Preventive Maintenance Plan.
3) The word "status" has been added to Conditions D.1.9, D.1.12, D.1.16 and D.1.17. The Permittee has the obligation to document the compliance status. The wording has been revised to properly reflect this.
4) IDEM has added a reference to 326 IAC 3-5 in original Condition D.1.11(e). The reference is for clarification purposes and magnifies the need for LGR to achieve continuous CEM operation.
5) IDEM is removing repetitive references in Condition D.1.16(d) - Recordkeeping

Revisions to the draft permit required as a result of EPA Comment #1, #2 and #3 and additional IDEM revisions are shown below:

D.1.5 Prevention of Significant Deterioration (PSD) Minor Limit [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:

*** * * * * * * * * ***

(b) PM10 emissions, from EU-01, shall not exceed ~~42.45~~ **37.00** lb PM10/hr. PM10 includes filterable and condensible particulate matter.

*** * * * * * * * * ***

(d) ~~The Permittee shall not combust any fuel other than clean wood and crops consisting of the following: tree and forest-related resources, including mill residues, harvesting residues, tree chips, thinning and trimming debris, slash, brush, storm debris, land clearing debris and right-of-way maintenance debris, solid non-hazardous, cellulosic waste material, agricultural material including orchard tree crops, vineyard, grain, switch grass, corn stover and other crop by-products or residues, and solid wood waste materials, including waste pallets, crates and dunnage, uncoated manufacturing wood waste, construction wood waste and demolition wood wastes, excluding wood wastes consisting of or derived from pressure treated wood, chemically treated wood or fiberboard~~ **CO emissions, from EU-01, shall not exceed 248.0 tons per twelve consecutive month period with compliance determined at the end of each month**.

(e) SO2 emissions, from EU-01, shall not exceed 248.69 tons per twelve consecutive month period with compliance determined at the end of each month.

(f) The Permittee shall use only the following materials as fuel:

(1) Clean wood, which includes only uncoated, unpainted and untreated: wood scrap, sawdust, chips, millings or shavings, and natural growth wood materials;

(2) Switchgrass (Panicum virgatum); and

(3) Liquid Propane Gas using the 168 MMBtu/hr burner for startup purposes only.

Combined with Condition D.2.4 and PM, PM10**, SO2, CO,** and NOx emissions from other emission units, these emission limits will limit the potential to emit of PM, PM10**, SO2, CO** and NOx emissions to less than 250 tons per year each and will render the requirements of 326 IAC 2-2 not applicable to the entire source.

~~D.1.8 Temporary Alternative Opacity Limitations [326 IAC 5-1-3]~~

~~(a) Pursuant to 326 IAC 5-1-3(e) (Temporary Alternative Opacity Limitations), the following applies:~~

~~(1) During boiler startups, an exemption from the forty percent (40%) opacity limit is allowed for up to two (2) hours (twenty (20) six (6) minute averaging periods) or until the flue gas temperature reaches two hundred forty (240) degrees Fahrenheit, whichever occurs first. In addition, an exemption of up to five (5) hours (fifty (50) six (6) minute averaged periods) is allowed for one (1) startup per unit each calendar year.~~

~~(2) During boiler shutdowns, an exemption from the forty percent (40%) opacity limit is allowed for up to two (2) hours (twenty (20) six (6) minute averaged periods).~~

~~(b) 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. 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 periods in any sixty (60) minute period. The averaging periods 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)]~~

~~(c) If a facility cannot meet the opacity limitations in (b) of this condition, 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.~~9~~**8** Preventive Maintenance Plan [326 IAC 2-7-5(15)]

A Preventive Maintenance Plan~~, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.~~ **is required for this facility and its control device. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.**

D.1.~~10~~**9** Operation of Control Devices [326 IAC 2-7-6(6)]

(a) In order to demonstrate **the** compliance **status** with Condition D.1.5, except as otherwise provided by statute or rule in this permit, the baghouse shall be in operation at all times that the boiler**'s induced draft fan** is in operation~~, except during periods of startup, shutdown, or emergency as described in Section B - Emergency Provisions~~.

*** * * * * * * * * ***

D.1.1~~1~~**0** Maintenance of Continuous Opacity Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)][40 CFR 64]

*** * * * * * * * * ***

D.1.1~~2~~**1** Maintenance of Continuous Emission Monitoring Equipment **for NOx, SO2, and CO** [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment. **The CEMS shall be in operation at all times.**

*** * * * * * * * * ***

(d) Whenever a NOx CEM**S** is down for more than twenty-four (24) hours, the Permittee shall**:**

(1) follow the best combustion practice~~.~~**; and**

(2) 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.

(e) Whenever a CO CEMS is malfunctioning or down for repairs or adjustments for more than twenty-four (24) hours, the Permittee shall:

(1) follow best combustion practice; and

(2) 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.

(f) Whenever an SO2 CEMS is malfunctioning or down for repairs or adjustments for more than twenty-four (24) hours, the Permittee shall:

(1) follow best combustion practice; and

(2) shall comply with the relevant requirements of 40 CFR Part 75 Subpart D - Missing Data Substitution Procedures.

(~~e~~**g**) 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,** 40 CFR 60, 40 CFR 75 and 40 CFR 96.

D.1.1~~3~~**2** Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) In order to demonstrate **the** compliance **status** with Condition D.1.5 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, the Permittee shall conduct PM emissions stack testing of the emissions from stack S-01 utilizing methods as approved by the ~~c~~**C**ommissioner~~. This test shall be repeated~~ at least once every ~~five~~ **two (2)** years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with ~~Section C – Performance Testing~~**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 determine **the** compliance **status** with Condition D.1.5, the Permittee shall perform PM_{10} emissions stack testing of boiler EU-01 ~~within~~ **no later than** 180 days of publication of the new or revised condensible PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008 or within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, whichever is later. This testing shall be conducted utilizing methods as approved by the Commissioner~~. This test shall be repeated~~ at least once every ~~five~~ **two (2)** years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with ~~Section C – Performance Testing~~**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.** PM10 includes filterable and condensible PM.

(c) In order to demonstrate **the** compliance **status** with Condition D.1.6 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, the Permittee shall conduct an emissions stack test of the emissions of stack S-01 for hydrogen chloride utilizing methods as approved by the ~~c~~**C**ommissioner~~. This test shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C – Performance Testing~~ **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) In order to demonstrate **the** compliance **status** with Condition D.1.4 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, the Permittee shall conduct an emissions stack test of the emissions of stack S-01 for VOC utilizing methods as approved by the ~~c~~**C**ommissioner~~. This test shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C – Performance Testing~~ **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.**

~~(e) Within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup, the Permittee shall conduct an emissions stack test of the emissions of stack S-01 for SO_2 utilizing methods as approved by the commissioner. Testing shall be conducted in accordance with Section C – Performance Testing.~~

(e) The compliance stack test as described in Conditions D.1.12(a) to (d) shall be conducted on clean wood.

(f) The compliance stack test as described in Condition D.1.12(a) to (d) for a clean wood and switchgrass fuel mixture shall be conducted at startup or no later than one hundred and eighty (180) days prior to burning switchgrass on a regular basis. The results of the test burn shall be approved by IDEM before the specific clean wood and switchgrass mixture may be used as a fuel.

D.1.15 Wood Inspections

In order to demonstrate compliance with Condition D.1.5, the Permittee shall perform visual inspections of the wood received at this source for combustion at the time of each delivery. Inspections shall be conducted by trained plant personnel. The inspections shall be conducted to ensure that the material being delivered does not contain any of the following materials:

(1) Treated, painted or coated wood materials,

(2) Particle board or plywood; or

(3) Non-wood materials (i.e. plastic, metal, rubber, etc.).

Loads containing any of the materials listed above shall be rejected and returned to the supplier.

D.1.15~~5~~**6** Record Keeping Requirements

*** * * * * * * * * ***

(b) In the event that a breakdown of the **SO2, CO and** NOx continuous emission monitoring systems (CEMS) occurs, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.

(c) To document **the** compliance **status** with Condition D.1.1~~4~~**3**, the Permittee shall maintain records of the pressure drop across the baghouse controlling EU-01. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

(d) To document **the** compliance **status** with Section C - Opacity, Section C - Maintenance of Continuous Opacity Monitoring Equipment, ~~and the particulate matter~~ and opacity conditions, the Permittee shall maintain records in accordance with (1) through (~~3~~**2**) below. Records shall be complete and sufficient to establish compliance with the limits in Section C- Opacity~~ and Conditions D.1.5 and D.1.8~~.

~~(1) Data and results from the most recent stack test.~~

(~~2~~**1**) All continuous opacity monitoring data, pursuant to 326 IAC 3-5-6.

(~~3~~**2**) The results of all Method 9 visible emission readings taken during any periods of COM downtime.

(e) To document **the** compliance **status** with Conditions D.1.4, D.1.5 and D.1.6, the Permittee shall maintain a copy of all contracts which indicates the biomass suppliers cannot deliver any type of ~~wood~~ **fuel** other than the fuels listed in Condition D.1.5(~~d~~**f**).

(f) To document **the** compliance **status** with Condition D.1.5, the Permittee shall maintain a record of the monthly NOx**, CO and SO2** emissions from boiler EU-01.

(g) To document **the** compliance **status** with Condition D.1.14, the Permittee shall maintain records of the alkaline sorbent injection rate used in conjunction with boiler EU-01. The Permittee shall include in its daily record when an injection rate reading is not taken and the reason for the lack of an injection rate reading (e.g. the process did not operate that day).

(h) To document **the** compliance **status** with Condition D.1.4**, D.1.5 and D.1.6**, the Permittee shall maintain all compliance testing results.

(i) To document **the** compliance **status** with Condition D.1.7, the Permittee shall maintain records of the propane heat input rate to boiler EU-01, including all information required to make the calculations.

(j) To document the compliance status with Condition D.1.11(d) to (f), the Permittee shall maintain records of all monitoring data and supporting information, including raw data, required by 326 IAC 3-5-6, for any of the following events:

(1) a monitoring sample,

(2) a measurement,

(3) a test,

(4) a certification,

(5) a report,

(6) all other activities required by 326 IAC 3-5.

These records shall include:

(1) design, installation, and testing of all elements of the monitoring system,

(2) required corrective action or compliance plan activities,

(3) all maintenance logs, calibration checks, and other required quality assurance activities,

(4) all records of corrective and preventive actions,

(5) a log of plant operations, including:

(i) date of facility downtime,

(ii) time of commencement and completion of each downtime,

(iii) reason for each downtime.

(k) To document the compliance status with Condition D.1.15, the Permittee shall maintain the results of all clean wood inspections.

(l) To document the compliance status with Condition D.1.13, the Permittee shall maintain the results of all pressure gauge calibration checks and replacement gauge purchase records.

(~~j~~**m**) ~~All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.~~**Section C – General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.**

D.1.1~~6~~**7** Reporting Requirements

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(c) A quarterly summary of the information to document **the** compliance **status** with Condition D.1.5(c)**, Condition D.1.5(d), Condition D.1.5(e)** and Condition D.1.7 shall be submitted~~ 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 their equivalent, within~~ **no 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 supporting required by this condition.** The report submitted by the Permittee does require ~~the certification by the "responsible official" as defined by 326 IAC 2-7-1(34)~~ **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)**.

EPA Comment #4

According to the technical support document, CO potential emissions are 225 tpy for this source. However, the permit conditions do not contain any compliance monitoring requirements for CO emissions.

IDEM RESPONSE

IDEM believes CO CEMS will satisfy the compliance monitoring requirements for this boiler.

Public Comments

Public Comment #1

IDEM received several comments requesting an extension of the public notice period due to additional information submitted by LGR during the public notice period. Commenters stated there was not enough warning of the air permit for the LGR facility to allow them to stop the issuance of the permit. Commenters requested that the permit be withdrawn and resubmitted because there was not enough time to review the draft permit. IDEM received several requests for a public hearing in addition to a public meeting. Commenters asked if IDEM has followed all of its public notice requirements.

IDEM RESPONSE

IDEM has followed all public notice requirements. The initial public notice period for the draft Part 70 Operating Permit for Liberty Green Renewables Indiana, LLC, Milltown, Indiana began on December 23, 2009 and was scheduled to end on February 1, 2010. IDEM held a public meeting on Janurary 13, 2010 at the Crawford County Fairgrounds in Marengo, Indiana. The meeting was attended by hundreds of concerned citizens. IDEM representatives responded to questions and comments from the public for several hours until no one had any additional questions or comments. On February 3, 2010, IDEM extended the public notice comment period to February 24, 2010. LGR submitted additional

information regarding stack height and emissions modeling to IDEM on February 11th. LGR added this information to the application materials available at the local library. In addition, IDEM e-mailed the information to members of the public who had requested it. IDEM also responded to numerous e-mails from citizens during the public notice period. IDEM determined that the extension of the public notice period to February 24, 2010 gave the public sufficient time to review the additional information submitted by LGR. IDEM determined an additional public hearing would not provide additional public input not already obtained during the public meeting or through the extensive written comments that IDEM received from hundreds of concerned citizens.

No changes to the draft permit are required by these comments.

Public Comment #2

IDEM received several comments disputing the environmental marketing claims of the source. Commenters disputed claims that the source is carbon neutral, that it will not emit particulate matter emissions, that its operation will be clean, that the source will be good for the environment, a benefit to the public and an antidote to climate change. Commenters assert that the source will be dirtier than a coal fired plant. Commenters asked if LGR will be environmentally clean.

IDEM RESPONSE

IDEM has no authority to regulate marketing claims or to determine if a source is carbon neutral or an antidote to climate change. The source will emit particulate matter. All of the source's air emissions are described in the Technical Support Document, starting on page 12 of that document. The emissions and their modeled concentrations are further described in IDEM's Response to Public Comment #8, below. No revisions to the draft permit are required as a result of this comment.

Public Comment #3

Many commenters expressed concerns over whether LGR will have a reliable and adequate supply of wood fuel and biomass, how much biomass is available within 75 miles, 100 miles and other distances from LGR, how much would be used by other sources, whether the use of the fuel will be cost effective, whether there will be a net loss of trees, whether trees will be harvested illegally, whether new trees will be planted and why a better, less polluting and more economical way to generate electricity isn't required.

IDEM RESPONSE

IDEM has no authority to require a source to show that it has an adequate fuel supply, to show the cost effective price of a fuel, or to show the quantity of fuel available. Wood is an available fuel and switch grass is a recognized crop. IDEM has no authority to require LGR to use a particular method to generate electricity. IDEM issues or denies permits based on the information provided in the application regardless of the ability of the source to make a profit. IDEM has no authority to require a source to show that it has an available fuel supply, to show the quantity of fuel in a given geographical area will be sufficient, or to require a source to show how much of the same fuel is being used by others. Theft of trees on private property is a criminal matter and outside the scope of air pollution permitting. IDEM has no authority to require a source to plant replacement trees. No revisions to the draft permit are required as a result of this comment.

Public Comment #4

Commenters asked what fuel LGR would use if it does not have enough biomass to operate and asked for data, calculation of emissions and the origins for these alternate fuels when reviewing LGR's air permit application.

IDEM RESPONSE

If LGR cannot find a supply of the fuel that is listed in the operating permit, it will be required to shut down operations until the fuel supply is available or the permit is modified to allow a new fuel. A new application to modify the permit for the new fuel would be required, as well as public notice and an opportunity for public comment. No revisions to the draft permit are required as a result of this comment.

Public Comment #5

Commenters asked about emissions from different fuels and whether those emissions would be under LGR's emission limits. A commenter asked IDEM to determine the emissions from sugar cane stalk waste and whether those emissions would be above the major source threshold. A commenter asked IDEM to define slash, cellulose waste material and dunnage.

IDEM RESPONSE

IDEM has revised the fuel description as noted in the IDEM Response to EPA Comment #2. The revised fuel description does not allow crop waste, such as sugar cane stalk and slash, or cellulose or dunnage, to be used as a fuel. The source can only burn clean wood and switchgrass during normal operations and liquid propane gas for startup. No revisions to the draft permit are required as a result of this comment.

Public Comment #6

Commenters requested information on periods when the boiler will be shut down or operated at less than full capacity and descriptions of increased emissions when the boiler is started back up, including annual emission increases beyond normal operation due to startups. Commenters asked for IDEM to provide proof of emission calculations and proof that startup emissions would not make LGR a major source subject to Prevention of Significant Deterioration (PSD) program.

IDEM RESPONSE

IDEM anticipates the boiler to shut down once every thirty to sixty days to replace the bed sand. During periods of startup and shutdown, all pollution control equipment will be in operation and controlling emissions. Propane is used as a fuel during startup. Emissions during startup and shutdown will be less than emissions during operation at maximum capacity. A complete description of the anticipated startup and shutdown emissions and CEMS outages were addressed above in IDEM RESPONSE to EPA Comments #1 and #3. No revisions to the draft permit are required as a result of this comment.

Public Comment #7

Many commenters asserted that the biomass boiler is not a boiler but a waste incinerator and asked IDEM to regulate it as a waste incinerator. One commenter cited generally to one court decision, NRDC, et al vs. EPA, U.S. Ct. Apps., District of Columbia Circuit, No. 04-1385 and asked why LGR's permit is not in contradiction of that court ruling or other, uncited, court rulings. Commenters asked why LGR's fuel is not a solid waste or waste and why it does not need a solid waste disposal permit.

IDEM RESPONSE

The comment asks why this permit does not contradict previous court rulings but only cites to the decision of the United States Court of Appeals, For the District of Columbia, published on June 8, 2007 (Court Opinion). IDEM is not aware of any court decisions that would contradict this permit. The Court Opinion cited by the commenter can be found on the internet at:

http://pacer.cadc.uscourts.gov/docs/common/opinions/200706/04-1385a.pdf

The Court Opinion concerned U.S. EPA rules that established the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (Boilers Rule) and Standards of Performance of New Stationary Sources and Emissions Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units (CISWI Rule).

The Court vacated the CISWI Rule due to U.S. EPA's overly restrictive definition of the term "commercial or industrial waste" which contradicted the language of the Clean Air Act that required U.S. EPA to establish the CISWI Rule. The definition would have kept any solid waste incineration units that recover thermal energy for a useful purpose out of CISWI Rule. The Clean Air Act is written so that solid waste incineration units subject to CISWI Rule would be subject to the Boilers Rule. Since the Boilers Rule would have to be substantially revised as a consequence of the

vacatur of the CISWI Rule, the Court also vacated the Boilers Rule (Court Opinion, page 6). Both rules were remanded to U.S. EPA for further action (Court Opinion, page 21).

As a result of the Court Opinion, U.S. EPA has been revising these rules. U.S. EPA proposed a new boiler rule and a new CISWI Rule on April 30, 2010. The proposed rules can be found at http://www.epa.gov/airquality/combustion/actions.html on the internet.

The rules will be published in the Federal Register, starting a 45 day public comment period. The rules will not take effect until after U.S. EPA publishes a final version at some point in the future. The LGR permit does not contradict or violate this Court Opinion.

IDEM believes LGR's boiler qualifies as a boiler and not an incinerator because of the type of fuel being combusted, which does not include waste. Specifically, the boiler does not qualify as an incinerator under the following rules:

(a) 40 CFR 60, Subpart AAAA – Standards of Performance for Small Municipal Waste Combustion Units: This rule does not apply to the biomass boiler because clean wood and energy crops (switchgrass) are specifically excluded from the definition of municipal solid waste.

(b) 40 CFR 60, Subpart CCCC – Standards of Performance for Commercial and Industrial Solid Waste Incineration Units: This rule does not apply to the biomass boiler because wastes burned in units that operate with energy recovery, such as a steam turbine, are not included in the definition of commercial and industrial waste incineration unit in the rule.

(c) 40 CFR 60, Subpart E – Standards of Performance for Incinerators: This rule does not apply because the fuel burned in the boiler does not contain municipal type solid wastes consisting of a mixture of paper, wood, yard wastes, food, plastics, leather, rubber and other combustibles for the purpose of reducing volume of the waste by removing combustible matter. The boiler burns clean wood and switchgrass to produce steam for energy recovery.

(d) 40 CFR 60, Subpart Eb – Standards of Performance for Large Municipal Waste Combustors: This rule applies to very small municipal waste combustion units and institutional waste incineration units. The boiler proposed at LGR does not burn municipal type solid waste, is not located at an institutional source, and combusts in excess of 35 tons per day of fuel. Therefore, this rule does not apply.

The boiler is subject to 40 CFR 60, Subpart Db – Standards of Performance for Industrial-Commercial Steam Generating Units and the applicable requirements are included in Section E.1. No revisions to the draft permit are required as a result of this comment.

Public Comment #8

Commenters asked if IDEM independently reviewed the SCREEN3 modeling submitted by URS for LGR, why other models were not used and why IDEM relies on a 14 year old modeling program.

IDEM RESPONSE

IDEM did a separate computer modeling of emissions. IDEM used AERMOD instead of SCREEN3 for their review. Both the consultant (URS) and Liberty Green used the latest versions of AERMOD, AERMET and AERMAP required by U.S. EPA. They are AERMOD version 09292, AERMET version 06341 and AERMAP version 09040.

AERMOD - Background

On October 21, 2005, U.S. EPA signed the new AERMOD rule replacing the Industrial Source Complex (ISC) Model. The rule was promulgated in the Federal Register on November 9, 2005, (40 CFR Part 51) which revised the Guideline on Air Quality Models. U.S. EPA's Guideline on Air Quality Models ("Guideline") addresses the regulatory application of air quality models for

assessing criteria pollutants under the Clean Air Act. The Guideline is used by U.S. EPA, States, and industry to prepare and review new source permits and State Implementation Plan revisions. The Guideline is intended to ensure consistent air quality analyses are conducted.

The Federal Register goes on to state that as of December 9, 2005, AERMOD, should be used for air dispersion modeling evaluations of criteria air pollutants from industrial facilities. The model was designed by AERMIC (American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee).

National Ambient Air Quality Standards
The Clean Air Act, which was last amended in 1990, requires U.S. EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment.

The Clean Air Act established two types of national air quality standards.

Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly.

Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

The U.S. EPA Office of Air Quality Planning and Standards (OAQPS) has set national Ambient Air Quality Standards for six principal pollutants, which are called "criteria" pollutants. The criteria pollutants are particle pollution (often referred to as particulate matter), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead.

IDEM Modeling Review
IDEM has independently performed a modeling analysis for Liberty Green in Crawford County, Indiana. IDEM ran 6 different MET years and has provided the results in Table 1. Maximum predicted concentrations occur approximately within a half mile from Liberty Green's property line. The results show there is no violation of IAC 1-7-2 for excessive concentrations or the NAAQS.

Table 1

Pollutant	Emission Rate (lb/hr)	Averaging Period	IDEM 1 g/s Factor 200 ft stack (max)	URS 1 g/s Factor 200 ft stack (max)	IDEM 1 g/s Factor 150 ft stack (max)	URS 1 g/s Factor 150 ft stack (max)	IDEM Modeled Max Concentration 200 ft stack (ug/m3)	IDEM Modeled Max Concentration 150 ft stack (ug/m3)	Background (ug/m3)	Total Max Concentration 200 ft stack (ug/m3)	Total Max Concentration 150 ft stack (ug/m3)	Percent Change (%)	NAAQS (ug/m3)
CO	51.28	8-hour (H2H)	1.14	1.5	3.52	4.6	7.37	22.74	2514	2521.37	2536.74	0.61	10000
		1-hour (H2H)	3.37	2.92	10.63	10.9	21.77	68.68	3886	3907.77	3954.68	1.20	40000
NO2	55.93	Annual (Highest)	0.048	0.079	0.31	0.31	0.34	2.18	28	28.34	30.18	6.52	100
SO2	53.72	3-hour (H2H)	1.47	1.96	6.36	7.3	9.95	43.05	192	201.95	235.05	16.39	1300
		24-hour (H2H)	0.44	0.88	3.49	3.18	2.98	23.62	52	54.98	75.62	37.55	365
		Annual (Highest)	0.048	0.07	0.31	0.31	0.32	2.10	12	12.32	14.10	14.39	80
PM10	42.45	24-hour (H6H)	0.3	0.72	2.3	2.73	1.60	12.30	39	40.60	51.30	26.35	150
		Annual (Highest)	0.048	0.079	0.31	0.31	0.26	1.66	22	22.26	23.66	6.30	50

* H2H – High 2nd High * H6H – High 6th High

Also, as an added measure of precaution, IDEM tripled Liberty Green's emission rate to see if air quality violations would occur. Even at these levels, Liberty Green still does not violate the NAAQS by itself. Maximum predicted concentrations occur approximately a half a mile from Liberty Green's property line. Local background levels could be added to these numbers and they would still be below the NAAQS. The modeling results are listed in Table 2 below.

Table 2

Pollutant	Emission Rate (lb/hr)	Averaging Time	Maximum Predicated Concentration (ug/m3)	NAAQS (ug/m3)
CO	168	8 hour (H2H)	97.5	10000
		1 hour (H2H)	191.9	40000
NO_2	168	Annual (highest)	5.3	100
SO_2	168	3 hour (H2H)	134.7	1300
		24 hour (H2H)	73.9	365
		Annual (highest)	5.28	80
PM_{10}	168	24 hour (H6H)	48.9	150
		Annual (highest)	5.3	50

* H2H – High 2nd High
* H6H – High 6th High

Liberty Green <u>is not</u> permitted to emit 168 lb/hr for any of the criteria pollutants but it just emphasizes that the facility is well below federal air quality standards at their requested limits, which are significantly lower. No revisions to the draft permit are required as a result of this comment.

Public Comment #9

Does the meteorology used match the conditions in Milltown?

IDEM RESPONSE

URS used 5 years of meteorological data (2004 to 2008) from the Louisville, Kentucky surface station along with upper air data from Nashville, TN station.

IDEM used 6 years of meteorological data (1988 to 1992, and 2008). The surface data for 1992 to 1998 was taken from Louisville, Kentucky and the upper air data was taken from Dayton, Ohio. The surface data for 2008 was taken from Louisville Kentucky and the upper air data was taken from Wilmington, Ohio.

This allowed for approximately 96,000 hours, or 11 years of different meteorological conditions since IDEM and URS used different upper air stations for 2008. This combination of meteorological years should cover most conditions encountered in Crawford County.

The meteorology IDEM used for the analysis was hourly observation surface data and the twice daily upper air data obtained from the NWS sites. It is preprocessed into a format that can be used by the air quality model, AERMOD, to calculate hourly and annual pollutant concentrations. AERMET (AERMOD Meteorological Preprocessor) is the name of the U.S. EPA approved meteorological preprocessor program required by AERMOD for regulatory modeling.

AERMET generates two output files, a surface file and a profile file which are read as inputs files by AERMOD.

The following meteorological parameters are included in the AERMET output ***surface file***.

Sensible heat flux, H (watts/meters^2)
Surface friction velocity, u (meters/second)
Convective velocity scale, w (meters/second)
Vertical potential temperature gradient above the boundary layer (K/meter) where K is in degrees Kelvin
Convective mixing height, z (meters)
Mechanical mixing height, z (meters)
Monin-Obukhov length, L (meters)
Surface roughness length, z_o (meters)
Bowen ratio, B
Albedo, r
Wind speed (meters/second) used in estimating the boundary layer
Wind direction (degrees) direction wind is blowing from
Height of wind speed and direction measurement (meters)
Temperature (K) used in estimating the boundary layer parameters
Height at which temperature above was measured (meters)

The following meteorological parameters are in the AERMET output ***profile file***.

Direction the wind is blowing from (degrees)
Wind speed (meters/second)
Temperature in degrees Celsius
The surface roughness length, Bowen ratio, and albedo are the parameters which are used by AERMET to describe the surface characteristics of the site to AERMOD. The site location of the surface meteorological data, Louisville NWS, was used as the location for selecting the surface characteristics for the Liberty Green modeling. The surface meteorological location is the U.S. EPA recommended site location for determining the surface characteristics. The surface characteristics are determined from a land use category based on the type of vegetation and topography of the land in the immediate vicinity, 1 kilometer, of the meteorological instrument tower. The land use category – cultivated land was used for determining the surface roughness, Bowen ratio, and albedo when preprocessing of the Louisville NWS surface data. The surface characteristics of surface roughness, Bowen ratio, and albedo were further broken down by seasonal values for spring, summer, fall, and winter.

An additional option in AERMET for variation of surface characteristics by direction sectors around the site is available. A total of up to 12 sectors can be selected by the user. The Louisville NWS meteorology was preprocessed using one sector since it was determined the land use category does not vary within the immediate vicinity of this site location. Additionally, the distance of a one kilometer radius from the meteorological site was used to determine the land use category of cultivated land. This is the U.S. EPA recommended distance for determining the site characteristics from the land use category. The remaining meteorological parameters listed above except for wind speed, wind direction, temperature, and measurement heights are calculated by equations within AERMET.

IDEM normally uses 5 years of metrological data as required by U.S. EPA for PSD review. The model is run for each hour of each day for an entire year. The model processes 43,800 hours of various metrological conditions in this 5 year time span. This information is correlated with the emissions being released at each stack. Ground level concentrations are calculated based on the meteorology, physical stack parameters, emissions, and the geometry of nearby buildings. Concentrations for the property line and for all areas adjacent to the facility were calculated. Areas beyond that are also examined for possible air quality violations. As noted above, IDEM used 11 years of metrological data for Liberty Green. No revisions to the draft permit are required as a result of this comment.

Public Comment #10

What terrain elevations were used?

IDEM RESPONSE

Terrain elevations inputs were from DEM (Digital Elevation Model) data. IDEM used the same terrain data URS used for this facility. It was 1 degree DEM files imported from Web GIS.

Public Comment #11

Were VOCs modeled?

IDEM RESPONSE

IDEM did not model VOCs. Volatile Organic Compounds (VOCs) are a photochemically reactive pollutant and cannot be modeled using AERMOD for local impacts. VOCs have a regional impact on ozone formation (smog) and are modeled with photochemical models. This source has submitted the necessary analysis for its size. This source is not a major PSD source. Major PSD sources go through a more extensive modeling analysis.

No revisions to the draft permit are required as a result of this comment.

Public Comment #12

Were HAPs modeled?

IDEM RESPONSE

Hazardous Air Pollutants (HAPs) were not modeled. LGR's emissions, as limited by the permit, are set out on page 1 of Appendix A to the Technical Support Document. Total HAPs emitted by LGR will be less than 25 tons per year and each specific HAP will be less than 10 tons per year. These are below the lowest levels that require modeling. No revisions to the draft permit are required as a result of this comment.

Public Comment #13

What is the correct PM2.5 monitor selection for this facility?

IDEM RESPONSE

IDEM did not model $PM_{2.5}$ for this analysis so background monitoring was not selected.

At present, EPA has not promulgated final PSD Increments, Significant Impact Levels, and Significant Monitoring Concentrations for $PM_{2.5}$. There is also no consensus about how to address direct versus condensable $PM_{2.5}$ emissions and secondary atmospheric reactions that lead to $PM_{2.5}$ formation in the modeling analyses from a single source on local $PM_{2.5}$ air quality. U.S. EPA has a current policy for PSD purposes of modeling PM_{10} as a surrogate for $PM_{2.5}$, which is overly conservative. Further, it does not account for chemical reactions of sulfate and nitrate species, which are important contributors to the formation of $PM_{2.5}$.

The federal guidance quoted below is taken from a U.S. EPA memo, dated October 23, 1997, from John Seitz, Interim Implementation of New Source Review Requirements for $PM_{2.5}$.

"This guidance addresses the interim use of PM_{10} as a surrogate for $PM_{2.5}$ in meeting new source review (NSR) requirements under the Clean Air Act (Act), including the permit programs for prevention of significant deterioration of air quality (PSD). The revised national ambient air quality standards (NAAQS) for particulate matter, which include the revised NAAQS for PM_{10} and new NAAQS for $PM_{2.5}$, became effective on September 16, 1997. In view of the significant technical difficulties that now exist with respect to $PM_{2.5}$ monitoring, emissions estimation, and modeling (described below), U.S. EPA believes that PM_{10} may properly be used as a surrogate for $PM_{2.5}$ in meeting NSR requirements until these difficulties are resolved.

"Section 165(a) (1) of the Act provides that no new or modified major source may be constructed without a PSD permit. Moreover, section 165(a) (3) provides that the emissions from any such source may not cause or contribute to a violation of any NAAQS. Also, section 165(a) (4) requires best available control technology for each pollutant subject to regulation under the Act. The U.S. EPA's recent promulgation of the primary and secondary standards for $PM_{2.5}$ marks the first time that U.S. EPA has specifically regulated fine particles--less than 2.5 microns in diameter--as a discrete indicator for particulate matter. Hence, this guidance addresses how to implement PSD for $PM_{2.5}$ in light of significant technical difficulties, which presently exist.

"Of specific concern is the lack of necessary tools to calculate emissions of $PM_{2.5}$ and related precursors and project ambient air quality impacts so that sources and permitting authorities can adequately meet the NSR requirements for $PM_{2.5}$. Any comprehensive system for regulating $PM_{2.5}$ must take into account not only the fine particles emitted directly by stationary sources but also the various precursors, emitted by certain sources, which result in secondarily formed fine particles through chemical reactions in the atmosphere. Recent studies suggest that secondary particulate matter may account for over half of total ambient $PM_{2.5}$ nationwide. Emission factors for the fine particles emitted directly by stationary sources, and for some important precursors (e.g., ammonia), are largely unavailable at the present time.

"U.S. EPA is in the process of developing a comprehensive modeling system that will be designed to include precursor emissions and account for secondary fine particle formation. The modeling system will also incorporate a method for nesting small local impacts from individual point sources within a greater modeling domain. Before this can be completed, it will be necessary to collect sufficient monitoring data to verify and validate protocol-modeling results.

"Therefore, U.S. EPA believes that it is administratively impracticable at this time to require sources and state permitting authorities to attempt to implement PSD permitting for $PM_{2.5.}$ The U.S. EPA has projects underway that will address the current technical and informational deficiencies, but it will take 3-5 years to complete these projects. <u>Until these deficiencies are corrected, U.S. EPA believes that sources should continue to meet PSD and NSR program requirements for controlling PM_{10} emissions (and, in the case of PM_{10} nonattainment areas, offsetting emissions) and for analyzing impacts on PM_{10} air quality. Meeting these measures in the interim will serve as a surrogate approach for reducing $PM_{2.5}$ emissions and protecting air quality.</u> "When the technical difficulties are resolved, U.S. EPA will amend the PSD regulations under 40 CFR 51.166 and 52.21 to establish a $PM_{2.5}$ significant emissions rate, and U.S. EPA will also promulgate other appropriate regulatory measures pertinent to $PM_{2.5}$ and its precursors."

Additional guidance on this topic can also be obtained from a U.S. EPA memo, dated April 5, 2005, from Steve Page, Implementation of New Source Review Requirements in $PM_{2.5}$ Nonattainment Areas, which involves Implementation of New Source Review Requirements in $PM_{2.5}$ Non-attainment Areas.

Public Comment #14

What is the tallest "nearby" structure and GEP stack height?

IDEM RESPONSE

<u>Background</u>

IDEM used the Building Profile Input Program (BPIP) for downwash calculations.
Building downwash algorithms have been developed for air quality dispersion models such as AERMOD. The BPIP was designed to incorporate the concepts and procedures expressed in the GEP (Good Engineering Practice) technical support document, the Building Downwash guidance and other related U.S. EPA documents referenced into a program that correctly calculates building heights (BH's) and projected building widths (PBW's).

Each structure type produces an area of wake effect influence that extends out to a distance of five times L directly downwind from the trailing edge of the structure, where L is the lesser of the BH or PBW. As the wind rotates full circle, each direction-specific area of influence changes and is integrated into one overall area of influence termed the GEP 5L area of influence. A line drawn around the limit of the overall GEP 5L area of influence is termed the GEP 5L limit line. Any stack that is on or within the limit line is affected by GEP wake effects for some wind direction or range of wind directions. Wakes from two structures that are closer than the greater of either structure's L, are considered to be 'sufficiently close' to one another that their wakes act as one wake. Therefore, when the projected widths of the structures do not completely overlay each other, the structures are combined and the gap between the two structures is treated as if the gap had been filled with a structure equal in height to the lower structure. Otherwise, the two structures are processed separately. The GEP technical support document calls for the gap, between two structures being combined, to be treated as if filled by a structure equal in height to the lesser projected height. BPIP creates a Gap-Filling Structure (GFS) by connecting each pair of structures on a corner to corner basis and/or corner perpendicular to the other side basis. In some cases, the GFS can be just two dimensions, height and width. The most outward parts of the lines form the perimeter of the GFS. The GFS perimeter is used together with the perimeters of the connected structures to determine the GEP 5L area of influence.

The latest documentation for this subject can be obtained from U.S. EPA Support Center for Regulatory Atmospheric Modeling (SCRAM) website at http://www.epa.gov/scram001/guidance_permit.htm on the internet. The document is called, “Guideline for determination of Good Engineering Practice Stack Height,” dated June 1985.

IDEM GEP analysis

IDEM used BPIP version 04274 and based locations and dimensions on prints and spreadsheet data provided by LGR. All significant structures were entered into BPIP. The dominant structure was the boiler/turbine building. The height of the structure is documented as 80 feet by the Permittee and IDEM understands that this is based upon specifications from the boiler vender. Previous drawings indicated that the boiler/turbine building could be 100 feet tall, but that criterion, according to the Permittee, was prior to the selection of the boiler vendor. Based on the drawings provided, there was an ash silo or ash tank that was also relatively close to the stack which measured 87 feet high but was only 25 feet wide. This structure was also inputted into BPIP but was probably “sufficiently close” or was not significant to affect GEP height calculations. BPIP calculated GEP stack height to be 200 feet. The formula that calculates GEP is based on the following parameters. Structures have to be within 5L of the source - where L is the lesser dimension of the Height (H) or Width (W, Projected Width). Once that is determined, the dominant structure is determined for GEP stack height. Hg = H + 1.5 (L), where Hg is the GEP stack height, H is the structure height, and L is the structure’s lesser dimension (height or width). Basing calculations off the boiler/turbine building, the calculations would be Hg = 80 feet + 1.5 (80 feet) = 200 feet GEP stack height. Computer modeling by IDEM and LGR shows a stack height of 150 feet is protective of human health and the environment. No revisions to the draft permit are required as a result of this comment.

Public Comment #15

Are there a published set of prints?

IDEM RESPONSE

URS provided prints to IDEM as part of the initial application and as supplemental information to the permit application during the public notice period. No revisions to the draft permit are required as a result of this comment.

Public Comment #16

Commenters asked if all emissions behave/disperse exactly the same, and if not to describe where each settles and its concentrations, including dioxin, sulfuric acid, heavy metals emissions and VOC emissions. Commenters asked about the effects of these emissions on the public, hospitals, playgrounds, schools. Commenters asked if air quality standards are out of date. Commenters asked how emissions from LGR will impact the environment including pets, gardens, trees, crops, land, grave stones, water resources, ground water, Blue River, natural springs, karst topography and drinking water. Commenters noted that Crawford County does not have a good environmental ranking. Commenters noted that the Robert Wood Johnson Foundation ranked Crawford County as having poor health of its citizens, with the only significant positive factor reported was that Crawford County has clean air, defined as very low levels of fine particulate matter (PM2.5). Commenters expressed concern for their community and asked if LGR's operation will adversely affect them, their family, neighbors or anyone. Commenters expressed concerns that children, the elderly, the infirm, and those suffering from existing lung conditions, lung disease and other medical conditions will be adversely affected and that the plant is an unacceptable health risk. Commenters stated that LGR will be too close to homes, schools, nursing homes and should not be located in the city of Milltown. Commenters stated that IDEM should have stricter standards for sources located close to communities. Commenters stated that several state Medical Associations oppose biomass combustion because it is an unacceptable health risk. Commenters stated that IDEM has a lack of concern for human life. Commenters asked about the ways, locations and times that adverse health affect may occur and if the pollution emitted remains in the county.

IDEM RESPONSE

The federal Clean Air Act, which was last amended in 1990, requires the U.S. EPA to set National Ambient Air Quality Standards (NAAQS) for the six criteria pollutants. These standards are set at levels that protect human health, including the health of sensitive persons, such as asthmatics, children and the elderly. The NAAQS are often referred to as the federal health standards for outdoor air. Crawford County is currently in attainment for all criteria pollutants. IDEM modeled the dispersion of pollutants from this source using AERMOD, as set out in the IDEM Response to Public Comment #8, above. IDEM determined this source will not adversely affect the National Ambient Air Quality Standards for the six criteria pollutants, particulate matter, ozone, carbon monoxide, nitrogen oxides, sulfur dioxide and lead (LGR will have no lead emissions). The modeling is done assuming that people reside as close as the property line of the plant.

More information about the criteria pollutants is available at http://www.epa.gov/air/airpollutants.html on U.S. EPA's website. The complete table of the NAAQS can be found at the http://www.epa.gov/air/criteria.html website. The Clean Air Act requires U.S. EPA to periodically review the science upon which the standards are based and the standards themselves.

Exposure to high concentrations of any of the criteria pollutants is associated with numerous effects on human health, including increased respiratory symptoms, hospitalization for heart or lung diseases, and even premature death. Detailed information about the health effects of the criteria pollutants is available at http://www.epa.gov/air/urbanair/ on the internet.

The NAAQS include secondary standards that set limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings. Air pollutants can impact the environment, including water resources. Nitrogen and sulfur interactions in the environment are highly complex. They can lead to acidification and eutrophication of terrestrial and aquatic ecosystems, impairing water quality. *See* Risk and Exposure Assessment for Review of the Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Oxides of Sulfur (2009), executive summary, at

http://www.epa.gov/ttn/naaqs/standards/no2so2sec/data/NOxSOxREASep2009MainContent.pdf on the internet. The emissions modeling (IDEM Response to Public Comment #8, above) shows no adverse effect on any NAAQS standard and therefore no threat to pets, gardens, crops, land, water resources or drinking water.

IDEM conducts sampling of the ambient air at monitoring stations around Indiana. This air monitoring is conducted to measure whether the NAAQS are being met. Information about Indiana's air monitoring system and monitoring results is available at http://www.in.gov/idem/4116.htm. Information about current and expected air pollution levels is on IDEM's SmogWatch site at http://www.in.gov/apps/idem/smog/ on the internet.

HAP and VOC emissions were not modeled. LGR will not emit any sulfuric acid. Robert Wood Johnson Foundation study seems to include factors beyond air quality that cannot be addressed by this permit.

The local water utility regularly tests and monitors drinking water quality and IDEM regulates the water utility on the basis of these tests. No revisions to the draft permit are required as a result of these comments.

Public Comment #17

Commenters asked if the PM10 figures in the permit include condensable PM, to describe LGR's potential to emit condensable PM and the origin of the emission factors shown on page 2 of 8 of Appendix A to the TSD. Commenters stated that the notes do not agree with the table, such as the note to limit VOC to avoid BACT but a BACT limit is shown in the table. Commenters asked if sulfur dioxide is a significant precursor of condensable PM downstream and why the permit does not require monitoring of the condensable PM caused by SO2 emissions. A commenter asked why emission factors in NERL/TP-510-33123 are not used in place of AP-42, stating that the NERL/TP-510-33123 emission factors are much higher for biomass and would make this a major source for PSD. Commenters asked why the estimated emissions are higher in IDEM's permit than in the application, whether IDEM has enough information on the design of the boiler to issue a permit, how IDEM determined the correct emission factors for LGR's boiler, if the AP-42 emission factors are correct and why IDEM didn't use U.S. EPA FIRE. Commenters asked why NCASI emission factors were accepted for some pollutants when IDEM does not have access to all of the supporting data for these emission factors, why IDEM did not use emission factors in AP-42, Chapter 2.1 and how IDEM estimated emissions.

IDEM RESPONSE

IDEM believes all emission factors are accurate or will overestimate potential emissions. The NCASI emission factors are more accurate then the emission factors listed in AP-42, Chapter 1.6 because the AP-42 emission factors are for treated wood. The most significant difference between the emission factors listed in AP-42 and NCASI is for HCL. IDEM is requiring LGR to conduct emissions testing to verify the NCASI factor is correct. Emissions testing will also verify that LGR is not major for HAPs. The emission factors in AP-42, Chapter 2.1 apply to municipal waste combustion, which does not reflect the types of fuels to be burned at LGR. IDEM chose to use AP-42 emission factors for the boiler because they are more conservative and produce higher emissions estimates. IDEM is requiring performance stack testing on a regular basis to ensure the emission estimates are correct.

The PM10 emissions shown in the draft permit include condensible PM10. In regards to the emission factors and table notes shown on page 2 of 8 of Appendix A to the TSD, IDEM agrees the source of the emission factors is unclear. In addition, the uncontrolled emissions factors and potential to emit for PM10 (filterable and condensable) shown in this table was calculated using the limited PTE based on NSPS requirements and the estimated control efficiency of the baghouse. In an attempt to clarify the uncontrolled emissions, IDEM has revised page 2 of 8 of Appendix A to the TSD.

Sulfur dioxide emissions can lead to the formation of fine particulate in the atmosphere. The condensable portion of the PM10 potential to emit includes fine particulate matter formed by sulfur dioxide emissions as they exit the stack. These emissions will be included in the PM10 emissions testing done by the source, since the testing includes condensable PM10.

The worst case emission factors listed in AP-42, Tables 1.6-2, 1.6-3 and 1.6-4 (9/2003) for wood combustion are:

PM (Filterable Only)	0.560 lb/MMBtu
PM10 (Filterable Only)	0.500 lb/MMBtu
PM10 (Condensible Only - All condensible PM is PM10)	0.017 lb/MMBtu
NOx	0.490 lb/MMBtu
SO2	0.025 lb/MMBtu
CO (See table notes in AP-42)	0.170 lb/MMBtu
VOC	0.017 lb/MMBtu

IDEM offers the following clarifications:

NOx
The draft permit contained an uncontrolled emission factor for NOx of 0.220 lb/MMBtu and a limited emission factor of 0.1374 lb/MMBtu. The uncontrolled NOx emission factor was supplied by the applicant based on a design specification and a performance guarantee from the boiler manufacturer. IDEM accepted the factor and will require a NOx continuous emissions monitoring system (CEMS), which will continuously measure and record NOx emissions from the boiler.

CO
The draft permit contained an uncontrolled emission factor for CO of 0.126 lb/MMBtu and a limited emission factor of 0.126 lb/MMBtu. These CO emission factors were supplied by the applicant based on a design specification and a performance guarantee from the boiler manufacturer. IDEM accepted the emission factor and set an emission limitation of 0.1391 lb/MMBtu. This higher level of allowable emissions allows the source more room for error while maintaining emissions under the PSD major source threshold. The applicant has installed a CO CEMS to continuously monitor and record CO emissions.

SO2
The draft permit contained an uncontrolled emission factor for SO2 of 0.132 lb/MMBtu and a limited emission factor of 0.132 lb/MMBtu. This emission factor is 5.28 times greater than the accepted AP-42 emission factor of 0.025 lb/MMBtu. IDEM has increased the allowable emissions from EU-01 to 0.1394 lb/MMBtu, a safety factor of 5.6. IDEM believes the higher emission limitation keeps the entire source minor for PSD while providing the applicant more room for error in daily operations. The applicant intends to install an SO2 CEMS to continuously monitor and record SO2 emissions.

VOC
The emission calculations for boiler EU-01 incorrectly stated a VOC limit was accepted to avoid a 326 IAC 8-1-6 Best Available Control Technology (BACT) analysis. A BACT analysis was performed and the VOC emission rate in accordance with this BACT analysis is 0.019 lb/MMBtu.

PM (Filterable)
The draft permit shows the limited PTE emission factor for PM (Filterable) as 0.0300 lb/MMBtu, as required by NSPS, Subpart Db. The emission factor before control was calculated by IDEM using the control efficiency of the baghouse claimed by the applicant. This method does not allow the public to compare the control efficiency required to achieve compliance with the NSPS to the capability of the baghouse. To resolve this issue, IDEM is proposing to change the before control PM10 (Filterable) emission factor from 0.375 lb/MMBtu to the worst case AP-42 emission factor listed in Chapter 1.6 for wood combustion (0.560 lb/MMBtu). The before control emissions

will increase as a result of this revision, as will the minimum control efficiency of the baghouse required to achieve compliance with the NSPS. The new control efficiency is 94.60%. Baghouse control efficiencies are often approved above 99.9%. The limited PTE of PM10 (Filterable) will not change.

All references to these figures shown in the permit and TSD have been revised as shown below:

	Boiler EU-01		
	Emission Factor (lb/MMBtu)	**Control Efficiency**	**Controlled Emissions (TPY)**
PM (Filterable)	0.560	94.6%	53.48

PM10 (Filterable + Condensible)

IDEM is revising the emission factors used before control to match the factors listed for the worst case for wood combustion in AP-42, Chapter 1.6. The emission factor used before control is shown as the sum of the filterable portion (0.50 lb/MMBtu) and the condensible portion (0.017 lb/MMBtu) for a total of 0.517 lb/MMBtu. All condensible PM is assumed to be PM10. This revision lowers the before control emissions.

In addition, IDEM has revised the baghouse control efficiency and the limited PTE of the boiler to allow emissions of up to 162.06 TPY of PM10 at 82.59% control. A lower PM10 emission rate is required as a result of the addition of the wood grinder to the source, see Public Comment #25. The limited PM10 emissions from the boiler, along with the PM10 emissions from other emission units, ensure source wide potential emissions of PM10 are below 250 TPY.

All references to these figures shown in the permit and TSD have been revised as shown below:

	Boiler EU-01		
	Emission Factor (lb/MMBtu)	**Control Efficiency**	**Controlled Emissions (TPY)**
PM10 (Filterable + Condensible)	**0.517**	**82.59%**	**162.06**

In regards to emissions during startup and shutdown, IDEM used the worst case conditions for determining the PTE of the boiler. The emission factors, burner capacity and potential emissions are all lower for startup operations then they are for burning biomass. IDEM calculated the PTE of the boiler based on 8,760 hours of operation using biomass with the control devices required to be in operation at all times. Biomass emissions are worst case and result in the highest possible PTE for this boiler. Therefore, no special allowances for startup or shutdown are required.

IDEM believes the emission factors listed above along with compliance stack testing and test burns will confirm that IDEM's emission calculations are accurate. It should be noted that the exact equipment manufacturer is not needed to determine emission estimates. IDEM had all the information required to develop a draft permit.

IDEM is using AP-42 emission factors for criteria pollutants, NACASI TB-858, Table 20A for some HAPs and will verify the accuracy of the emission factors used on a site specific basis. While additional research on emissions estimates and the health effects of contaminates is available from multiple sources, IDEM believes emission factors determined on a site specific basis is the best solution for ensuring this source is minor for PSD, HAPs and that emissions will be protective of human health and the environment.

IDEM has revised the emission calculations for the boiler to reflect the above changes. They are included as Appendix A to the ATSD and have been incorporated into Condition D.1.5. Revisions to the emissions calculations for boiler EU-01 are shown below:

Revised Emissions Boiler EU-01	Uncontrolled			Limited PTE			
	lb/MMBtu	lb/hr	TPY	Control Efficiency	lb/MMBtu	lb/hr	TPY
PM (Filterable Only)	~~0.375~~ **0.5600**	~~152.63~~ **227.92**	~~668.52~~ **998.29**	~~92.00%~~ **94.60%**	0.0300	12.21	53.48
PM10(Filterable + Condensible)	~~0.588~~ **0.5170**	~~239.32~~ **210.42**	~~1,048.22~~ **921.64**	~~82.26%~~ **82.59%**	~~0.1043~~ **0.0900**	~~42.45~~ **37.00**	~~185.90~~ **162.06**
SO_2	~~0.132~~ **0.1394**	~~53.72~~ **56.77**	~~235.29~~ **248.69**	0.00%	~~0.1320~~ **0.1394**	~~53.72~~ **56.77**	~~235.29~~ **248.69**
VOC	0.0190	7.70	33.73	0.00%	0.0190	7.70	33.73
CO	~~0.126~~ **0.1391**	~~51.28~~ **56.62**	~~224.61~~ **248.00**	0.00%	~~0.1260~~ **0.1391**	~~51.28~~ **56.62**	~~224.61~~ **248.00**
NOx	0.2200	89.54	392.19	37.54%	0.1374	55.93	245.00

Public Comment #18

Commenters asked if IDEM worked on a fuel description/definition that differs from what is in the public comment version of the permit of December 2009 and when IDEM became aware that the fuel description would change. Commenters asked if IDEM knowingly released for public comment a permit which it knew contained language/elements/descriptions which would not be in the final permit. Commenters asked what law authorizes the release for public comment a permit which IDEM is aware is not representative of the permit IDEM contemplated issuing, what law enables IDEM to utilize a public comment period upon a draft permit which contains language/description/elements IDEM knew would not be in the issued permit and if it is ethical for IDEM to release for public comment a draft permit known at the time of release to not be the permit contemplated to be issued.

IDEM RESPONSE

The public notice period for the LGR facility began on December 23, 2009. Almost immediately IDEM was inundated with questions regarding the fuel description. Due to the issues and concerns raised by public comments, IDEM realized the fuel description in the draft permit would not be suitable for final issuance. When the draft permit was put out on public notice, IDEM had fully intended to issue the permit with the fuel description as shown in the public notice draft. See IDEM's RESPONSE to EPA Comment #2 for additional discussion. One of the goals of the public notice of a draft permit is to determine if changes should be made to the permit prior to final issuance.

Public Comment #19

Commenters expressed concern that IDEM may alter a citizen's public comment or alter its meaning by abridging the comment or answering on a phrase or part of the entire question. Commenters asked what law authorizes IDEM to alter public comments.

IDEM RESPONSE

IDEM has grouped and summarized similar comments. IDEM uses the opportunity to present its position on a topic and address public concerns on issues related to the permitting process. Without grouping comments, IDEM will answer the same question hundreds of times. This is not in the best interest of the public or IDEM. 326 Indiana Administrative Code (IAC) 2-1.1-6 and 326 IAC 2-7-17 set out the legal requirements for public notice and IDEM's response to public comments. Under 326 IAC 2-7-17(c)(4), IDEM must keep a record of the commenters and also of

the issues raised during the public participation process so that the U.S. EPA may fulfill its obligation under Section 505(b)(2) of the federal Clean Air Act to determine whether a citizen petition may be granted. IDEM must make these records available to the public. Under 326 IAC 2-7-17(c)(5) IDEM must make a written response to comments available to the public. The Indiana Administrative Code can be viewed at http://www.in.gov/legislative/iac/ on the internet.

Public Comment #20

Commenters asked if the LGR boiler will be a 28 MW or 32 MW unit, stating that it was proposed to the city of Milltown as a 28 MW unit.

IDEM RESPONSE

IDEM understands the source is capable of producing 32 MW total. LGR plans to sell 28 MW to the grid and use 4 MW to run the facility. In either case, the potential to emit of this source is based on the heat input capacity of the boiler, 407 MMBtu/hr. No revisions to the draft permit are required as a result of this comment.

Public Comment #21

A Commenter asked if IDEM took more than 70 days to fulfill an unidentified citizen's request for access to public records concerning this permit.

IDEM RESPONSE

A copy of the permit application was placed at the Crawford County Public Library within ten days after the application was filed with IDEM. IDEM placed all the draft permit documents at the library and also made them available at IDEM's offices and on IDEM's website. IDEM responds to requests for public records as quickly as possible, given the number of records requests that IDEM receives. IDEM is not aware of the specific records request referenced in this comment. No revisions to the draft permit are required as a result of this comment.

Public Comment #22

Commenters asked about IDEM's legal authority to issue or deny LGR's permit and what law would stop the permit process. Commenters asked what law gives IDEM the power or authority to make policy for biomass combustion. Commenters stated that there is clear direction given to the "Department" in IC 13-14-1-9, but that there is no authority given for IDEM to regulate biomass combustion as it applies to LGR's permit. A commenter asked when and where the necessary steps were taken for biomass combustion policy to be formalized under IC 13-14-11. Commenters suggested LGR is violating unspecified Indiana laws.

IDEM RESPONSE

326 IAC 2 provides IDEM with the regulatory basis to issue New Source Review and Part 70 Operating permits. Indiana Code (IC) 13-14-1 sets out IDEM's duties. There is no requirement that a biomass combustion policy be formalized under IC 13-14-1. IC 13-14-1-9(a) requires IDEM to issue permits as authorized by Indiana Code Title 13, other statutes and the rules passed by the environmental boards. Indiana Code 13-14-1-11 states that **"**The department shall follow the operating policies established in rules adopted by the boards." IDEM is following the air permit rules as set out in Title 326 of the Indiana Administrative Code, as passed by the Indiana Air Pollution Control Board. 326 IAC 2 allows IDEM to issue new source construction permits and Part 70 Operating Permits for boilers. The application meets all of the requirements of 326 IAC 2 and IDEM can issue a permit. The commenters did not provide any facts or citation to specific laws or rules for IDEM to respond to the comments about LGR violating Indiana law. No revisions to the draft permit are required as a result of this comment.

Public Comment #23

Commenters asked if IDEM can keep the Prevention of Significant Deterioration (PSD) requirements (under 326 IAC 2-2) from applying to LGR by setting emission limits that lower LGR's potential to emit. Regarding permit Condition D.2.4 commenters asked IDEM to explain the legal justification for a synthetic limit on emissions to avoid PSD status.

IDEM RESPONSE

The definition of "potential to emit" in 326 IAC 2-2-1(nn) allows IDEM to set emission limits in the permit that lower LGR's potential to emit, as long as the limits are federally enforceable and practically enforceable. All of the minor emission limits in the permit are enforceable by IDEM and by the U.S. EPA. The limits are practically enforceable because compliance with the limits can be determined through testing, monitoring, and recordkeeping. No revisions to the draft permit are required as a result of this comment.

Public Comment #24

Commenters expressed concern about radioactivity in the ash and cesium from the trees that will be removed from LGR's boiler and also asked how much radiation LGR will emit.

IDEM RESPONSE

IDEM has no power or authority to regulate radiation as part of the permitting process. The federal government has retained all authority to regulate radioactivity. No revisions to the draft permit are required as a result of this comment.

Public Comment #25

Commenters asked about LGR's wood grinding operation, how it affects air pollution permitting and if it constitutes fuel conversion. Commenters asked about overall fuel conversion requirements for LGR.

IDEM RESPONSE

IDEM received additional information on February 10, 2010 from LGR requesting the inclusion of an electric powered wood grinder with a magnetic screener. LGR submitted the additional information in response to public comments received by IDEM questioning the ability of the source to remove small pieces of metal from the wood feed to the boiler. All wood received will be processed through the magnetic screener and a wood grinder will process wood with a physical dimension greater than four inches. Only a portion of the wood received will actually be ground. In estimating the emissions from the grinder, IDEM assumed the unit would operate at full capacity for a total of 8,760 hours per year. The information submitted by the applicant to justify the emission factors used has been accepted by IDEM and are consistent with permits issued by other states, such as Mountain West, LLC in the State of Montana. These emissions factors are the best available for this type of emission source.

In regards to fuel conversion, IDEM does not consider the resizing of a small portion of the biomass fuel received as fuel conversion. While federal regulations have not defined the meaning of "fuel conversion" explicitly, EPA has offered opinions on the meaning of fuel conversion in regards to PSD applicability. One example is a letter dated June 4, 2007 to the South Carolina Department of Health and Environmental Services (SCDHEC) from Gregg M. Worley, Chief of the Air Permits Section, U.S. EPA in regards to Norbord South Carolina, Inc. Norbord South Carolina, Inc. operates three rotary gasifier/burner oxidizer systems at its oriented strandboard facility. Each system includes a rotary kiln gasifier generating a synthetic gas from gasification of wood waste. The synthetic gas is burned in a secondary combustion chamber producing hot exhaust gases used to produce steam and (in one system) hot oil for manufacturing process needs. A feature essential to the opinion expressed in this letter is that the gasification process at Norbord South Carolina, Inc. does not involve fossil fuels. All of the material feeding the gasification process is a biomass, non-fossil material.

As part of EPA's reconsideration, they provided a brief regulatory and statutory history of the PSD program as related to the establishment of the list of specific source categories now embodied in the definition of major source. This history is shown below:

- Congress established the basic framework for a national air quality control program in the Clean Air Act as amended in 1970. These amendments, however, did not contain any explicit requirements on preventing significant deterioration of air quality.

- Responding to a lawsuit, the U.S. District Court for the District of Columbia issued an opinion (Sierra Club v. Ruckelshaus) on May 30, 1972, directing EPA to establish rules for preventing significant deterioration of air quality. On November 1, 1972, the U.S. Court of Appeals for the District of Columbia affirmed the opinion of the District Court. The District Court opinion was then stayed by the U.S. Supreme Court until June 11, 1973, when the Supreme Court (in an equally divided opinion) affirmed the judgment of the Court of Appeals, thereby upholding the District Court opinion.

- EPA proposed PSD rules on July 16, 1973 (38 FR 18986) and listed 16 source categories covered by the rules. This list did not include fuel conversion plants. Also, as of that time EPA had not introduced the 100 tpy/250 tpy two-tier approach to defining major sources.

- On August 27, 1974, (39 FR 31000), EPA re-proposed the PSD rules and included this statement in the preamble: "The list of sources subject to review has been expanded to include three additional source types – fuel conversion plants (such as coal gasification and oil shale plants)…." The re-proposed rule itself did not contain a definition of the term fuel conversion plants. In addition, the two-tier approach was still not part of PSD regulations.

- On December 5, 1974, (39 FR 42510), EPA promulgated the first set of PSD rules. These rules contained "fuel conversion plants" as a listed source category but without a definition of the term. The two-tier approach was still absent.

- In August 1977, Congress adopted the Clean Air Act Amendments of 1977 with a statutory PSD section. The 1977 amendments included the PSD 100 tpy/250 tpy two-tier concept along with a list of the categories having a 100-tpy PSD major source threshold. The listed categories included fuel conversion plants, but without any definition of the term.

- Pursuant to the Clean Air Act Amendments of 1977, EPA issued implementing PSD regulations in June 1978 and revised them in August 1980 in response to the holdings in Alabama Power Company v. Costle. The 1980 PSD rules contained the 100-tpy source category list with fuel conversion plants as one of the categories but again without definition. This list (still without definitions) remains in current federal PSD rules and in current SCDHEC PSD rules.

EPA then provided a summary of EPA statements on the meaning of the term fuel conversion as expressed in various documents to support the concept that the term fuel conversion plants is limited to facilities engaged in the processing of fossil fuels. These statements are listed below:

- PSD source clarification memo; January 20, 1976 – This memo was from EPA headquarters in response to an EPA Region 4 request for clarification on sources subject to PSD review. The memo contains this statement: "Fuel conversion plants are defined for purposes of PSD as those plants which accomplish a change in state for a given fossil fuel. The large majority of these plants are likely to accomplish these changes through coal gasification, coal liquefaction, or oil shale processing."

- Pencor-Masada Oxynol order: May 2, 2001 – In this order (referred to as the Masada I order) issued by the EPA Administrator in response to a title V operating permit petition, the Administrator covered various topics related to a refuse recycling and ethanol production facility. One of these topics was whether a gasifier associated with refuse processing was a fuel conversion process. EPA's conclusion reads in part as follows: "Based on our review, EPA policy has historically defined this category [fuel conversion plants] as 'plants which accomplish a change in state for a given fossil fuel. The large majority of these plants are likely to accomplish these changes through coal gasification, coal liquefaction or oil shale processing.' In this case, where fossil fuels are not involved

and where the processing involves hydrolysis, a chemical process, it is EPA's judgment that the Masada facility is not a fuel conversion plant."

IDEM believes the historical interpretation of fuel conversion for purposes of PSD are those plants which accomplish a change in state for a given fossil fuel usually through coal gasification, coal liquefaction, or oil shale processing. Since the source does not process a fossil fuel, the LGR facility is not a fuel conversion plant and not one of 28 source categories. See IDEM response to Public Comment #122 for additional discussion on fuel conversion plants.

Sections A.2, Section D.2 and Attachment A to the ATSD have been revised to add the wood grinder as EU-16. The potential to emit is shown below. The TSD will not be revised because IDEM wishes the TSD to reflect the permit on public notice. Changes to the TSD as a result of comments received are shown in this ATSD. This allows IDEM to maintain the TSD for historical purposes while allowing IDEM to show changes to the permit as a result of public comments. IDEM has added the wood grinder to pages 1 and 5 of Appendix A to the TSD. Emission estimates are shown below:

					Uncontrolled PM Emissions
Emission Unit Description	**Emission Unit ID**	**Stack ID**	**Throughput (ton/hr)**	**Emission Factor PM (lb/ton)**	**PM Emissions (TPY)**
Wood Grinder	EU-16	NA	300.0	2.40E-02	31.54

					Uncontrolled PM10 Emissions
Emission Unit Description	**Emission Unit ID**	**Stack ID**	**Throughput (ton/hr)**	**Emission Factor PM10 (lb/ton)**	**PM10 Emissions (TPY)**
Wood Grinder	EU-16	NA	300.0	1.44E-02	18.92

Emissions from these units are uncontrolled and are not considered fugitive.

Revisions associated with adding the wood grinder are shown below:

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:

*** * * * * * * * * ***

(f) One (1) wood grinder, approved for construction in 2010, identified as EU-16, with a maximum capacity of 300 tons per hour, emissions are uncontrolled, located indoors without an exhaust stack. [326 IAC 6-3-2]

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

* * * * *

(f) One (1) wood grinder, approved for construction in 2010, identified as EU-16, with a maximum capacity of 300 tons per hour, emissions are uncontrolled, located indoors without an exhaust stack. [326 IAC 6-3-2]

* * * * *

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

D.2.5 Particulate Matter Emissions [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of **the** following operations shall not exceed the pound per hour limit listed in the table below:

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)	Equation Used
EU-06	Bed Sand Receiving	30.0	40.0	a
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *
EU-16	**Wood Grinder**	**300.0**	**63.0**	**b or c**

* * * * * * * * * *

(c) Pursuant to 326 IAC 6-3-2(e)(3), since the process weight rate of the wood receiving operation **and wood grinder** exceeds 200 tons per hour, EU-02 **and EU-16** may exceed the emission limitation calculated using equation (b), as long as the concentration of particulate matter in the gas discharged to the atmosphere remains less than 0.1 pounds per 1,000 pounds of gases.

Public Comment #26

Commenters asked about the potential for fire resulting from operation of the wood grinding process and from LGR's entire operation. Commenters stated that IDEM should require alarms or sirens on the property to warn the public in case of an emergency at the source. Commenters stated that IDEM should require a disaster plan for the facility and address whether LGR will provide its own emergency equipment or will local government provide these services. Commenters stated that IDEM should require LGR to show it has an adequate water supply to extinguish a fire.

IDEM RESPONSE

Responses to a fire or similar emergency situation and the adequacy of equipment and local water supply to respond to a fire are outside the air permit process. No revisions to the draft permit are required as a result of this comment.

Public Comment #27

Commenters asked if the Indiana State Implementation Plan (SIP) has ever been disapproved with respect to the prevention of significant deterioration of air quality and if the Indiana SIP adequately protects the public and environment from the adverse effects of emissions resulting from emissions trades?

IDEM RESPONSE

The federal Clean Air Act, section 110, requires Indiana to show U.S. EPA that its rules and statutes create an air quality regulatory framework that is at least as stringent as federal law. This is referred to as the State Implementation Plan (SIP). Indiana is a SIP approved state. Since new federal air quality rules are created on an ongoing basis, Indiana's air quality rules are often enacted and modified to reflect the federal changes. New Indiana rules that are related to federal rules are submitted to U.S. EPA for SIP approval on a regular basis. Rules may be modified to reflect U.S. EPA comments that certain language is needed to obtain federal approval. No revisions to the draft permit are required as a result of this comment.

Public Comment #28

Commenters asked if issuance of this permit will be in compliance with all federal and state laws and why LGR is allowed to pollute the environment at all.

IDEM RESPONSE

The permit will be issued in compliance with all federal and state laws. The air permit for LGR requires the construction and operation of all equipment located at the facility to comply with all applicable state and federal air quality rules and regulations. IDEM issues air permits to insure that sources comply with all applicable laws and keeps its emissions under the limits set out in its permit. No revisions to the draft permit are required as a result of this comment.

Public Comment #29

Commenters asked about the presence and concentration of heavy metals that LGR will emit and stated that IDEM should require stack testing of heavy metals.

IDEM RESPONSE

Page 3 of 8 of Appendix A to the TSD of the draft permit shows the emission calculations for metal HAPs. IDEM anticipates the following:

Non-organic HAP	Annual Emissions (TPY)
Antimony	1.4083e-02
Arsenic	3.9219e-02
Beryllium	1.9609e-03
Cadmium	7.3089e-03
Chromium, total	3.7436e-02
Chromium, hexavalent	6.2393e-03
Cobalt	1.1587e-02
Lead	8.5568e-02
Manganese	2.8523e+00
Mercury	6.2393e-03
Nickel	5.8828e-02
Phosphorus	4.8132e-02
Selenium	4.9914e-03

IDEM has revised the emission calculations to use scientific notation in place of decimal notation for HAPs. This allows the public to verify the emissions calculated by IDEM. In regards to stack testing, heavy metal emissions are insignificant and do not warrant testing. IDEM believes these emissions are protective of human health and the environment.

Public Comment #30

Several commenters were concerned about the source's effect on global warming and sought information on carbon dioxide emissions and the source's carbon emissions. Commenters expressed concern that the permit did not require reporting of CO2 and also expressed concerns that LGR could trade CO2 emissions.

IDEM RESPONSE

U.S. EPA is regulating greenhouse gas (GHG) in response to global warming and its affect on the earth's climate. Federal regulation of GHG began on April 1, 2010, when U.S. EPA and the Department of Transportation's National Highway Safety Administration issued the first federal rule limiting GHG emissions from cars and light trucks. The GHG light duty vehicle rule takes effect on January 2, 2011. On May 13, 2010, U.S. EPA issued final air permitting emission regulations for six greenhouse gases (GHG), including carbon dioxide that are emitted from stationary sources. This rule, the Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule (Tailoring Rule), can be found on at http://www.epa.gov/nsr/documents/20100413final.pdf on U.S. EPA's website.

The regulation of GHGs from stationary sources has two steps. Beginning on January 2, 2011, the Tailoring Rule sets additional requirements for any source that is seeking a permit under the Prevention of Signification Deterioration (PSD) program for other pollutants, if the source will also increase GHG emissions, expressed in carbon dioxide equivalents (CO2e), by at least 75,000 tons per year (tpy). Starting on January 2, 2011, additional GHG requirements will also apply to sources that already have operating permits for other pollutants, or are applying for their first Title V permits for other pollutants. On July 1, 2011, all new sources that emit at least 100,000 tpy of CO2e will require permits under the PSD program, while existing sources will require permits for modifications that result in an increase of 75,000 tpy or more. Also on July 1, 2011, all sources emitting 100,000 tpy or more of CO2e will be subject to the Title V permitting program.

Since no sources will be regulated earlier than January 2, 2011, there are no GHG requirements that apply to LGR. LGR did not submit information to allow IDEM to estimate CO2 emissions from this boiler. There is no trading program set up for CO2 or any GHG emissions. There is no requirement that LGR report CO2 emissions under this permit. However, LGR will be required to report CO2 emissions if it is issued an acid deposition control (acid rain) permit under 326 IAC 21-1-1. LGR has not yet applied for an acid deposition control permit. Published emission factors from the U.S. Energy Information Administration indicate a 407 MMBtu/hr boiler combusting wood would generate 195 pounds of CO2 per MMBtu or 347,600 tons of CO2 per year. No revisions to the draft permit are required as a result of this comment.

Public Comment #31

Commenters asked about the percentage of the fuel that will be wet wood, dry wood, wet bark and dry bark, the moisture content of wet wood and dry wood, the moisture of the wood to be burned and the change in the fuel description from the public noticed version. Commenters asked if the change in fuel was a significant revision requiring a new public notice period and if it was lawful to issue a permit without having the final fuel description available during the public comment period.

IDEM RESPONSE

The fuel description is discussed in detail in IDEM RESPONSE to EPA Comment #2, including a description of how moisture content was taken into account when calculating emissions. The revised fuel description is not a significant change requiring another public notice period because the fuels in the issued permit were included in the draft permit placed on public notice. No revisions to the draft permit are required as a result of this comment.

Public Comment #32

Commenters asked if the emissions calculations and emissions amounts contained in the permit application are valid for the fuel which LGR will be permitted to burn. Commenters asked for a new calculation of the potential to emit.

IDEM RESPONSE

The fuel description and emission factors are discussed in detail in IDEM RESPONSE to EPA Comment #2 and IDEM Response to Public Comment #18. Separate emission factors are not

shown for clean wood and switchgrass because IDEM believes the worst case emission factors are obtained with clean wood as a fuel. IDEM will require a performance stack test of a test burn to determine emissions from the use of switchgrass as a fuel prior to allowing this facility to burn switchgrass on a regular basis. The combination of the performance test and the test burn will provide IDEM sufficient information to ensure compliance with all permit conditions and limitations. No revisions to the draft permit are required as a result of this comment.

Public Comment #33

Commenter asked how the fuel will be moved around LGR and how it will be manipulated and/or modified onsite.

IDEM RESPONSE

LGR wood and switchgrass will be received at a truck dump and conveyed to storage or the boiler by use of a belt conveyor system. Propane will be available from a storage tank. The wood sizing equipment and process is described in the IDEM Response to Public Comment #26, above. No revisions to the draft permit are required as a result of this comment.

Public Comment #34

Many commenters stated that they did not want the LGR plant in their area, that no health effects would be worth the additional jobs, that the plant will be in a bad location, too close to homes, schools, nursing homes and residents. Commenters stated that operation of the plant will increase truck traffic on roadways that will increase road damage and pose hazards for children going to and from school, that the plant will reduce tourism, destroy the community's reputation, and that the plant will cause noise and light pollution, destroy property values, and create objectionable odors. Commenters stated that the plant will not provide any public benefit and have a long term negative economic impact.

IDEM RESPONSE

IDEM has no authority to regulate the location of the source. Zoning is determined by local government officials. IDEM understands that all of these matters are of genuine concern to the commenters. However, IDEM does not have any authority to consider impairment of property values, noise, road traffic, road damage, road safety, fire safety, the reputation or tourism potential of the community, odor, or light pollution in issuing air permits. No revisions to the draft permit are required as a result of this comment.

Public Comment #35

Commenters asked if the permit contains or is based on erroneous or false or incomplete information and if IDEM can issue a permit based on such information.

IDEM RESPONSE

IDEM had the information required to prepare the draft permit for public notice. During this process, the applicant provided additional information required by IDEM to allow a complete and enforceable permit to be issued. IDEM cannot provide a guarantee that the permit does not contain technical, grammatical and administrative errors. IDEM will revise the permit to correct any errors that may be discovered. No revisions to the draft permit are required as a result of this comment.

Public Comment #36

Commenters asked IDEM to consider the financial impact of issuing the permit, similar to a BACT (Best Available Control Technology) consideration of financial matters. Commenters asked if IDEM has considered other financial effects of the permit, such as increased health care costs, mortality and decreased property values that the plant is a long term economic negative, as well as the effect that the massive government subsidies available to LGR have on all of America. Commenters stated that there should not be federal subsidies to pollute the air. Commenters expressed that they would move if the plant is approved.

IDEM RESPONSE

IDEM knows that these matters are of genuine concern to the commenter. However, IDEM has no authority to consider financial matters outside of BACT requirements. IDEM has no control over federal subsidies. IDEM does not have the authority to consider the affect of the new source construction on population relocation. No revisions to the draft permit are required as a result of this comment.

Public Comment #37

Commenters asked if IDEM is in any way complicit with any other entity in avoiding or evading or violating any law in the processing or issuing LGR's permit and if IDEM has violated any laws in the processing or issuance of the permit.

IDEM RESPONSE

The processing and issuance of LGR's permit has been in compliance with all laws. No revisions to the draft permit are required as a result of this comment.

Public Comment #38

Commenters asked about the BACT determination and why MACT was not required.

IDEM RESPONSE

Indiana's Best Available Control Technology (BACT) requirements (326 IAC 8-1-6) apply to the boiler because its potential to emit volatile organic compounds (VOCs) exceeds twenty-five tons per year and it is a new facility constructed after January 1, 1980. LGR requested a limit on HCL to limit the potential to emit of a single HAP to less than ten (10) tons per year and the potential to emit of combined HAPs to less than twenty-five (25) tons per year rendering the requirements of 326 IAC 2-4.1 (MACT) not applicable to the boiler. No revisions to the draft permit are required as a result of this comment.

Public Comment #39

Commenters asked for an environmental impact study (EIS) regarding the LGR plant. Some commenters stated that the law does not mandate environmental impact studies for all projects, it does not preclude this from being done and that a statute gives discretion to the Commissioner to order such studies and asked IDEM to take every precaution known since this project "is a first of its kind." Commenters asked if NEPA applies to LGR's permit and why an environmental impact study is not required under NEPA?

IDEM RESPONSE

Wood fired boilers have been in operation for hundreds of years. IDEM has sufficient information to ensure this boiler is a minor source for PSD and as such, no EIS is required. IDEM will not require an EIS for this permit.

The National Environmental Policy Act (NEPA) establishes national environmental policy and goals for the protection, maintenance and enhancement of the environment and it provides a process for implementing these goals within federal agencies. The NEPA requires the federal government to use all practicable means to create and maintain conditions under which man and nature can exist in productive harmony. Section 102 requires federal agencies to incorporate environmental considerations in their planning and decision-making through a systematic interdisciplinary approach. Specifically, all federal agencies are to prepare detailed statements assessing the environmental impact of and alternatives to major federal actions significantly affecting the environment. These statements are commonly referred to as environmental impact statements (EISs). Section 102 also requires federal agencies to lend appropriate support to initiatives and programs designed to anticipate and prevent a decline in the quality of mankind's world environment.

IDEM normally includes an environmental impact statement in permits subject to 326 IAC 2-2 (PSD) and 326 IAC 2-3 (EO). This project is located in an attainment county for all regulated pollutants and is minor for PSD. Therefore, an environmental impact statement is not required and IDEM will not require one for this application.

No revisions to the draft permit are required as a result of this comment.

Public Comment #40

Commenters asked if the switchgrass must be processed on site to allow it to be burned in the boiler. Is this fuel conversion or does it require a solid waste permit?

IDEM RESPONSE

Switchgrass will be received and transferred to storage and the boiler by a belt conveyor. LGR does not intend to process the switchgrass in any way. As set out in IDEM Response to Public Comment #7, above, LGR's fuel is not solid waste. IDEM is unsure what the commenters mean by "fuel conversion". There are no air permit requirements concerning "fuel conversion". No revisions to the draft permit are required as a result of this comment.

Public Comment #41

Regarding permit Condition D.2.5, a commenter asked why there are no PM emissions listed for fuels other than sawdust and wood. The commenter asked how IDEM calculated the total PM PTE for this facility when most of the fuels do not have listed emission factors.

IDEM RESPONSE

Condition D.2.5 is intended to incorporate the requirements of 326 IAC 6-3 – Particulate Matter Limitations for Manufacturing Processes. This rule sets allowable particulate matter emission limits for emission units that are part of a manufacturing process. A manufacturing process is defined in the rule as any single or series of actions, operations, or treatments in which a mechanical, physical, or chemical transformation of material occurs that emits, or has the potential to emit, particulate in the production of the product. The term includes transference, conveyance, or repair of a product. The product in this case is steam and wood is the raw material. 326 IAC 6-3 only applies to particulate matter emissions. No revisions to the draft permit are required as a result of this comment.

Public Comment #42

A commenter asked why the permit does not require LGR to submit a monthly fuel firing rate report, such as required by the Department of Energy.

IDEM RESPONSE

IDEM calculated emissions from the boiler at the maximum heat input capacity of 407 MMBtu/hr. Therefore, monthly reporting of fuel usage is not required to determine compliance with permit conditions. IDEM does not have the statutory authority to require testing, reporting or record keeping outside what is necessary to determine compliance with permit conditions or as required in an applicable NSPS/ NESHAP. No revisions to the draft permit are required as a result of this comment.

Public Comment #43

Regarding permit Condition C.4, commenters asked if it allows incineration of up to 11 tons per day of such fuels as municipal, medical, infectious, radioactive and hazardous waste. Commenters asked IDEM to put the requirements of 326 IAC 4 into LGR's permit.

IDEM RESPONSE

Condition C.4 – Incineration is intended to prohibit operation of an incinerator on site except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. Section B and Section C conditions are standard conditions that are included in all permits. They are intended to be general enough to apply to most sources. For LGR, no incinerators are included in the Section A or Section D conditions or

facility description boxes. LGR's boiler does not qualify as an incinerator, as set out in IDEM Response to Public Comment #7, below. The condition makes it clear that no waste or refuse may be burned. The fuels allowed to be combusted in the boiler are described in detail in IDEM RESPONSE to EPA Comment #2. See additional revisions to the Section B and Section C Conditions in IDEM's additional revision #3 below. No revisions to the draft permit are required as a result of this comment.

Public Comment #44

Commenters asked how IDEM can make accurate emissions calculations from burning wood without specifying the allowable moisture content or the heat content of the wood.

IDEM RESPONSE

It is possible for a source to estimate emissions from a specific emission unit when acceptable emission factors are not available. IDEM will allow the use of these emission factors with compliance stack testing and continuous emission monitoring systems (CEMS) to confirm the accuracy of the emission factor. Estimates of emission factors can be from equipment supplier guarantees, mass balance, or emissions from similar processes. IDEM has reviewed the information provided by LGR and is comfortable the estimated emissions are accurate and can be verified by compliance stack testing or CEMS. In regards to moisture content of the wood, IDEM has adequately addressed moisture content variation and emission calculations in IDEM RESPONSE to EPA Comment #3 and Public Comment #18. No revisions to the draft permit are required as a result of this comment.

Public Comment #45

Commenters asked how much ammonia and how much ammonia related compounds LGR will emit, what the PTE will be and if ammonia causes health related problems.

IDEM RESPONSE

IDEM has no authority to regulate ammonia. Ammonia is not a VOC or HAP or otherwise listed as a regulated air pollutant. IDEM has no information regarding ammonia emissions from LGR. Information regarding ammonia can be located at http://www.epa.gov/iris/subst/0422.htm on U.S EPA's website. No revisions to the draft permit are required as a result of this comment.

Public Comment #46

Commenters asked about conflicting permit specifications for monitoring of emissions.

IDEM RESPONSE

IDEM tailors compliance monitoring requirements based on the level of emissions anticipated, the control efficiency required to meet emission limits and the probability of control device failure. In this permit, IDEM requires:

For the boiler: NOx and CO are monitored by continuous emission monitoring systems (CEMS). Opacity and PM emissions are monitored by a continuous opacity monitor (COM). VOC and HAP emissions are stable and well below the major source threshold and IDEM is requiring regular compliance stack testing for HCL and VOC.

For Section D.2 emission units: IDEM requires weekly visible emission (VE) notations for stacks S-02 (EU-06), S-04 (EU-09), S-06 (EU-14) and S-09 (EU-15). IDEM did not require VE emission readings for the remaining emission units because either the units are uncontrolled or the level of control required is low and the VE readings are not necessary to ensure compliance with permit emission limitations.

No revisions to the draft permit are required as a result of this comment.

Public Comment #47

Commenters asked about the basis for allowing LGR to report calculated actual emissions instead of actual emissions.

IDEM RESPONSE

Condition C.17 – Emission Statement incorporates the requirements of 326 IAC 2-6. This rule requires the source to report estimated actual emissions. As long as the source follows the requirements of 326 IAC 2-6-4, the report is valid. No revisions to the draft permit are required as a result of this comment.

Public Comment #48

Commenters asked for the basis of the permit requirement that requires inspection of the baghouse filters only every ninety days and questions if that is adequate?

IDEM RESPONSE

IDEM believes the inspection frequency is adequate for this control device. If a bag failure should occur, the source has other compliance monitoring requirements in the permit that ensure the baghouse operates properly between inspections. LGR is required to operate a continuous opacity monitoring system (COMS) and to monitor pressure drop in the baghouse daily. Both measures provide warning of a failure in the baghouse between the required inspections. No revisions to the draft permit are required as a result of this comment.

Public Comment #49

Commenters asked that IDEM require monitoring of VOC and HAP emissions.

IDEM RESPONSE

VOC and HAP emissions are well below major source levels for PSD and IDEM has determined that continuous compliance monitoring is not required. However, compliance stack testing is required. No revisions to the draft permit are required as a result of this comment.

Public Comment #50

Commenters asked why the permit does not require compliance with emission limits upon startup of the plant, instead allowing 90 to 180 days after commencement of operation.

IDEM RESPONSE

IDEM requires continuous compliance with all permit conditions. The facility will be constructed to meet all emission limits and permit conditions at startup. Some permit conditions such as compliance stack testing, submittal of preventive maintenance plans (PMPs) and emergency reduction plans (ERPs) offer some delay. This delay allows time for the source to develop an acceptable PMP and ERP. No revisions to the draft permit are required as a result of this comment.

Public Comment #51

Commenters asked why, since Section A.4 states LGR is a major source, LGR is treated as a minor source.

IDEM RESPONSE

The term “major source” is defined differently in the Part 70 Operating Permit rules than the definition in the Prevention of Significant Deterioration rules. Section A.4 references the major source definition in 326 IAC 2-7-1(22) for purposes of Part 70 Operating Permit applicability. This definition includes sources that have the potential to emit 10 tons per year or more of a single HAP or 25 tons per year of a combination of HAPs or 100 tons per year or more of a criteria air pollutant. LGR has a potential to emit (Uncontrolled Potential Emissions) of PM10, SO2, CO and NOx in excess of 100 tons per year; therefore, it is a major source under the Part 70 Operating Permit program. In regards to the definition of major source for Prevention of Significant Deterioration (PSD), a definition is provided in 326 IAC 2-2-1(gg)(2). LGR does not have the

potential to emit 250 TPY of a regulated NSR pollutant and it does not emit greater than 25 TPY of lead or lead compounds measured as elemental lead; therefore, it is a minor source for PSD applicability. No revisions to the draft permit are required as a result of this comment.

Public Comment #52

A commenter asked what verification of permit condition B.22 proper emissions trades is required and how this prevents the source from exceeding a permit limit.

IDEM RESPONSE

Section B and Section C conditions are more general in nature and appear in all Part 70 Operating Permits. Condition B.22 – Operational Flexibility applies to sources specifically allowed to trade emissions in the State Implementation Plan for the State of Indiana. LGR is not SIP listed and this condition does not apply. See additional revisions to the Section B and Section C Conditions in IDEM's additional revision #3 below. No revisions to the draft permit are required as a result of this comment.

Public Comment #53

Regarding permit Condition B.27, a commenter asked if this condition enables IDEM to disregard or restrict proof of noncompliance and if the condition restricts other government agencies from protecting public health and the environment.

IDEM RESPONSE

Condition B.27 – Credible Evidence does not allow IDEM to ignore evidence of noncompliance. On the contrary, it allows IDEM to use all available information, including credible evidence such as operational logs, to determine if a violation has occurred. See additional revisions to the Section B and Section C Conditions in IDEM's additional revision #3 below. No revisions to the draft permit are required as a result of this comment.

Public Comment #54

Commenters asked how IDEM will know that PM, PM10, PM2.5 and HAP emissions from LGR are actually below established limits, since there is no HAP testing and what testing exists is on a five year plan.

IDEM RESPONSE

IDEM uses a layered approach in determining compliance with applicable emission limitations. The source will be required to test emission units after initial startup to make sure the emission estimates from the permit application and the issued permit are accurate and reflect actual operations. For CO, SO2 and NOx, there are continuous emissions monitoring systems (CEMS), which measures CO, SO2 and NOx emissions in real time and also measures the total amount of CO, SO2 and NOx emitted by the boiler. The repeat compliance stack tests are intended to ensure emission units are still operating within design parameters. The source is then required to perform compliance monitoring for PM which involves operation of a continuous opacity monitor, visible emission notations of the control devices and a wood inspection program. Finally, the source is subject to annual inspections by IDEM that are not announced. Taken as a whole, IDEM can within reason ensure the source is not violating any state or federal laws. No revisions to the draft permit are required as a result of this comment.

Public Comment #55

Commenters asked about the actions IDEM will take to stop violations of the emissions limits in this permit, how quickly IDEM responds to violations, if IDEM has enough inspectors to properly enforce environmental laws and how IDEM can catch polluters after dark?

IDEM RESPONSE

IDEM response time to violations depends on the severity of the reported violation. IDEM responds to all reports of violations. Responses to violations vary depending on the severity of the violation and can be a warning letter, a fine or even criminal prosecution. IDEM has sufficient compliance

inspectors. IDEM has inspection tools and practices to determine noncompliance, even if a source is violating under the cover of darkness. No revisions to the draft permit are required as a result of this comment.

Public Comment #56

Commenters asked if the continuous opacity monitor will monitor PM, PM10 and PM2.5, why IDEM doesn't require a PM CEMS for each type of particulate, why IDEM doesn't require a CEMS for every pollutant and why a CEMS isn't needed to ensure compliance with the permit's synthetic minor limits?

IDEM RESPONSE

Opacity monitors will provide sufficient information to serve as an adequate compliance monitoring device. While PM CEMS are available, they are expensive and in this case the added burden on the applicant cannot be justified. IDEM can only require the use of a continuous emissions monitor when it is required by a state or federal law. All CEMS required by state or federal law have been included in the draft permit. No revisions to the draft permit are required as a result of this comment.

Public Comment #57

Regarding permit Condition D.1.12 commenters asked if this condition addresses breakdowns of the NOx CEMS, why it doesn't impose a deadline for repairs. Commenters asked what proves that BACT is good combustion practice and how LGR will calculate emissions during this period of downtime.

IDEM RESPONSE

The Permittee is required to repair a failed CEMS as soon as possible. IDEM requires a CEMS to be online at all times. If a CEMS breaks, the Permittee is required to notify IDEM and keep records of CEMS downtime and actions taken to place the unit back in service. IDEM reviews this information to determine, on a case-by-case basis, the enforcement action that will be taken. NOx emissions are estimated during outages using data substitution methods. VOC BACT was determined by comparing the control requirement and emission limits of this boiler to other units already permitted. 326 IAC 8-1-6 BACT for this boiler is "good combustion practices to limit VOC emissions and a corresponding VOC limit of 0.019 lb/MMBtu and 7.7 pounds per hour." No revisions to the draft permit are required as a result of this comment.

Public Comment #58

Commenters asked if BACT is still accurate for different mixtures of fuels, if different fuel mixtures will change emissions and how this affects BACT.

IDEM RESPONSE

The 326 IAC 8-1-6 BACT provided in the draft permit placed on public notice is still valid. Clean wood and switchgrass are natural products and their composition will vary as will the emissions generated. IDEM believes the AP-42 emission factors overestimate the amount of VOC emissions from wood and wood products. The initial performance test will confirm the validity of the emission factors used in the BACT analysis. No revisions to the draft permit are required as a result of this comment.

Public Comment #59

Regarding permit Condition B.21, a commenter asked if this condition indicates fuel changes do not require a permit modification.

IDEM RESPONSE

Condition B.21 – Permit Revision Under Economic Incentives and Other Programs does not address fuel changes. However, Condition B.22 – Operational Flexibility does address backup fuel switches. The Section B and Section C conditions are more general permit conditions that are included in all Part 70 Operating Permits. The backup fuel switches addressed in this condition concern a boiler permitted to operate on more than one fuel. In the case of LGR Milltown, Indiana, the boiler can combust propane, clean wood and switchgrass. A permit

modification is not required for LGR to switch between burning propane, clean wood and switchgrass because the fuels are listed in the permit. A source modification and permit modification would be required if LGR wanted to combust any additional fuels. See additional revisions to the Section B and Section C Conditions in IDEM's additional revision #3 below. No revisions to the draft permit are required as a result of this comment.

Public Comment #60

Commenters asked if PM2.5 is a health concern, if monitoring is adequate to protect public health and what IDEM will do if the county becomes non-attainment for PM2.5. Commenters are concerned that permitting LGR without monitoring of PM2.5 will contribute to the further deterioration of the health of the community. Commenters asked IDEM to delay permitting and extend the public comment period until field studies or a full environmental impact statement for PM2.5 can be performed and IDEM has established appropriate regulations for PM2.5.

IDEM RESPONSE

Very fine particulate matter, PM2.5, is a health concern. See IDEM RESPONSE to Public Comment #16 for a description of regulated pollutants with a link to the U.S. EPA website for additional information. Crawford County has been classified by the U.S. EPA as in attainment for the National Ambient Air Quality Standard for PM2.5. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions and the effective date of these rules was July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

On February 11, 2010, U.S. EPA published a proposed rule to end the PM10 surrogacy policy established by previous guidance and rules, including the May 2008 Rule. See 75 Federal Register 6827. While U.S. EPA clearly expresses its intent to end the use of the PM10 surrogacy policy, U.S. EPA acknowledges that the surrogate policy "is in effect" (75 FR at 6833) and states that "EPA is proposing to end the PM10 Surrogate Policy before the end of the three-year transition period for revising SIPs . . . ." Thus, while U.S. EPA undoubtedly has concerns about continuing the surrogate policy, the policy remains in effect.

In the February 2010 proposed rule, U.S. EPA indicates that permit applicants or permitting authorities, in contemplating whether use of the PM10 Surrogate Policy is reasonable in a specific situation, should consider the differences between PM10 and PM2.5 and demonstrate that PM10 is an adequate surrogate for PM2.5 in light of those differences. This is the same position U.S. EPA took in its order granting a petition for objection to a Title V permit issued to a proposed coal-fired power plant generating unit in Kentucky, stating that the Kentucky permitting authority had failed to justify its application of the PM10 surrogate policy (In re Louisville Gas & Electric Co., Petition No. IV-2008-3 (EPA Adm'r, Aug. 12, 2009). LGR is not subject to the PSD program, since the permit sets federally enforceable emission limits that are below the PSD threshold. PM2.5 is a subset of PM10 and IDEM believes it is an adequate surrogate for PM2.5.

If Crawford County becomes a non-attainment county, IDEM will work with the EPA to develop an attainment plan. Also, all new sources and modifications to existing sources will be reviewed to determine if 326 IAC 2-1.1-5 (Nonattainment New Source Review) for PM2.5 requirements are applicable. These regulations require additional pollution from existing sources and new sources to be offset by reductions from existing sources. No revisions to the draft permit are required as a result of these comments.

Public Comment #61

Commenters asked where LGR will send its report of emissions monitoring and the frequency of reports, what the enforcement penalties are for violations and how LGR can be trusted to report its own violations.

IDEM RESPONSE

The permit requires emissions reporting and these reports are submitted to IDEM. In regards to the adequacy of self reporting, IDEM requires the source to compile the information needed to determine compliance with permit conditions and limits and to keep records of compliance. These records are reviewed by the inspector on an annual basis or sooner if cause exists. The permit requires a quarterly summary of this information to be completed and certified by the responsible official and then submitted to IDEM. It serves as a check to indicate normal or abnormal operations between inspection visits. Falsification is a criminal offense and IDEM will pursue legal action as needed. Penalties for violations are determined on a case-by-case basis. IDEM will consider the severity of the violation, the past history of the source and the amount of environmental damage as a few items in determining penalties for violations. No revisions to the draft permit are required as a result of this comment.

Public Comment #62

Commenters asked why ash storage and handling are considered insignificant activities under permit condition A.3 when U.S. EPA has classified ash as a toxic substance.

IDEM RESPONSE

All emissions units in Section A.3 are specifically regulated insignificant activities in accordance with 326 IAC 2-7-1(21). Pneumatic Ash Conveying (EU-08) is considered an insignificant activity in accordance with 326 IAC 2-7-1(21)(B) because the uncontrolled emission of PM10 is less than five pounds per hour **or** twenty-five pounds per day. The classification in this draft permit is strictly related to air pollution emissions. Emissions of HAPs from the entire source are less than the major source thresholds for HAPs. No revisions to the draft permit are required as a result of this comment.

Public Comment #63

Commenters asked IDEM to identify any information that LGR elected to keep confidential.

IDEM RESPONSE

Liberty Green Renewables Indiana, LLC did not submit a claim of confidentiality with the application. Therefore, the entire application and supplemental information is included in the public file. No revisions to the draft permit are required as a result of this comment.

Public Comment #64

Commenters asked what the enforcement policies and penalties are for any LGR noncompliance and if these penalties will have any effect.

IDEM RESPONSE

IDEM reviews compliance and enforcement issues on a case-by-case basis. Specific enforcement policies and penalties are not included in the permit. Actual penalties for permit violations follows a complex formula based on the severity of the violation, compliance history of the source and any extenuating circumstances relevant to the violation. Penalties are intended to encourage future compliance. No revisions to the draft permit are required as a result of this comment.

Public Comment #65

Regarding permit Condition B.12, commenters asked if the responsible official does not have to certify the PMP what value does it have, since no one has any liability; if there is an exceedance, what can IDEM do besides forcing a revision to the PMP?

IDEM RESPONSE

In regards to enforcement issues, see IDEM RESPONSE to Public Comment #64. The PMP is a guideline for the proper maintenance of the emission units and their control devices. The PMP is essential to ensure the staff responsible for maintaining equipment has definite procedures to follow to ensure the equipment functions properly and is capable of meeting permit limitations and conditions. Most PMPs are prepared with the assistance of the equipment suppliers for their

individual pieces of equipment and include the manufactures operation and maintenance manuals. Certification of these documents is not required for these types of records. If the PMP is inadequate or if it is not followed, ultimately a control device or emission unit will fail, possibly leading to a permit violation. IDEM will pursue enforcement action against the source for violations of permit conditions and/or emission limitations at that time. See Additional IDEM Change #3 below for other revisions to the Section B and Section C Conditions. No revisions to the draft permit are required as a result of this comment.

Public Comment #66

Regarding permit Condition B.13 commenters asked why the source is not forced to stop operations when there is an exceedance of emissions limitations until the problem is corrected.

IDEM RESPONSE

The Section B and Section C conditions are general in nature and are included in all operating permits. Condition B.13 – Emergency Provisions sets the ground rules for what constitutes an emergency that may be used for a defense to noncompliance with permit limits. An emergency is defined in 326 IAC 2-7-1(12) as, "any situation, including acts of God, arising from sudden and reasonably unforeseeable events beyond the reasonable control of the source, which:

(A) requires immediate corrective action to restore normal operation; and

(B) causes the source to exceed an emission limit under Part 70 permit due to unavoidable increases in emissions attributable to the emergency.

An emergency shall not include noncompliance to the extent caused by improperly designed equipment, failure to implement an adequate preventive maintenance plan, careless or improper operation, or operator error." An emergency is not an affirmative defense for an action brought for noncompliance with a federal or state health based emission limitation such as a BACT limit.

The condition does not require the immediate shutdown of an emission unit because in some cases an immediate shutdown may not be possible or may pose an immediate safety hazard. The condition requires immediate corrective action which is reviewed by IDEM on a case-by-case basis and if required will be followed up with enforcement action. See Additional IDEM Change #3 below for other revisions to the Section B and Section C Conditions.

No revisions to the draft permit are required as a result of this comment.

Public Comment #67

Regarding permit Condition B.24, a commenter stated that this condition implies that emissions information is confidential and asked if it is?

IDEM RESPONSE

Condition B.24 requires the Permittee to give IDEM reasonable access to the source for the purposes of determining compliance with the permit terms and conditions. IDEM has access to confidential information but this information must be treated as confidential. Public disclosure of information deemed by IDEM to be confidential is not allowed. LGR did not submit a claim of confidentiality with the application. All information required to determine compliance with permit terms and conditions is part of the public record. See Additional IDEM Change #3 below for other revisions to the Section B and Section C Conditions. No revisions to the draft permit are required as a result of this comment.

Public Comment #68

Regarding permit Condition C.10, commenters asked why IDEM gives a 90 day grace period to install monitoring and record keeping equipment after startup instead of keeping LGR from operating until all the equipment is installed.

IDEM RESPONSE

Condition C.10 – Compliance Monitoring requires the Permittee to start compliance monitoring and record keeping requirements within 90 days of issuance of the permit or initial startup. All monitoring and emission control equipment required by the permit must be installed prior to startup of the emission unit. The 90 day delay allows the source time to gain experience in gathering the information required by the permit and to ensure continuous monitors are properly installed without violating permit conditions. See Additional IDEM Change #3 below for other revisions to the Section B and Section C Conditions. No revisions to the draft permit are required as a result of this comment.

Public Comment #69

Regarding permit Condition C.16 a commenter asked if LGR could continue to operate without end with extensions after failing a stack test instead of terminating operations until the problem is solved.

IDEM RESPONSE

IDEM will review all stack test failures, including consecutive failures, on a case-by-case basis and will take appropriate enforcement action. Emission unit shutdown is not always required. For example, a shutdown is not appropriate if the stack test failed because the emission unit could not achieve maximum capacity. See Additional IDEM Change #3 below for other revisions to the Section B and Section C Conditions. No revisions to the draft permit are required as a result of this comment.

Public Comment #70

Regarding permit Condition D.1.10, a commenter asked if the boiler continue to operate after a bag failure, hence loss of control of particulate matter emissions.

IDEM RESPONSE

A multi-compartment baghouse can operate with a bag out of service. A part of the design of this type of baghouse allows a bag to be replaced while the unit continues to operate. IDEM understands that it is part of the design but not a normal mode of operation. If the baghouse operates outside of normal operating parameters for a significant period of time, IDEM may initiate enforcement action for violations of permit conditions and emission limitations. No revisions to the draft permit are required as a result of this comment.

Public Comment #71

Regarding permit Condition D.1.11, a commenter asked IDEM to justify that visual readings of opacity are safe and sufficient and if there is a time limitation when visual readings will no longer prevent plant shutdown.

IDEM RESPONSE

Condition D.1.11 – Maintenance of Continuous Opacity Monitoring Equipment allows the use of Method 9 visible emission reading only during times of COM downtime. Staff performing Method 9 readings receive regular training on the method and can make reasonably accurate estimates of stack opacity. A COM is required to be in operation at all times. IDEM will review COM outage on a case-by-case basis. Excess COM outages will be subject to enforcement action. No revisions to the draft permit are required as a result of this comment.

Public Comment #72

Regarding permit Condition D.1.13 commenters asked why the plant is given 180 days to perform testing, what test methods are approved by the Commissioner, why PM2.5 is not being tested, what full capacity means and what happens if LGR never reaches full capacity during the stack tests.

IDEM RESPONSE

Compliance stack testing protocols must be preapproved by IDEM and the test must be set up far enough in advance that IDEM personnel have an opportunity to attend the test. This can normally be accomplished within 60 days but may take up to 180 days. Some sources need time

to build up a supply of raw materials to be able to run emission units at maximum capacity. PM2.5 testing is included in the permit because IDEM is using PM10 as a surrogate for PM2.5. PM2.5 is a subset of PM10. IDEM does not require the testing at startup because an adequate test method for condensable PM10 has not been finalized by U.S EPA. IDEM will require the test as soon as the test method is approved. Test methods used are normally from 40 CFR 60, Appendix A. The Commissioner can modify these requirements on a case-by-case basis.

Full capacity is normally considered 95% to 100% of the permitted capacity. If the source cannot operate at full capacity, the test may not be considered valid and must be repeated as production increases. If the test is not completed within the time allotted, IDEM may initiate an enforcement action. No revisions to the draft permit are required as a result of this comment.

Public Comment #73

Regarding permit Condition D.1.14, a commenter asked IDEM to define “reasonable response steps.”

IDEM RESPONSE

The Permittee is required to take reasonable response steps to excursions and exceedances from permit limitations. The actual steps taken are site, emission unit and control device specific but should follow an industry norm. Condition C.15 – Response to Excursions or Exceedances provided the source guidance on the actions to be taken. These actions can include reducing raw material feeds, fuel usage or immediate shutdown of an emission unit. No revisions to the draft permit are required as a result of this comment.

Public Comment #74

Regarding permit Condition D.1.15, commenters asked if all of these records will be available to the public.

IDEM RESPONSE

Part 70 Operating Permits are enforceable by IDEM, the U.S. EPA and citizens of the United States. IDEM maintains a virtual file cabinet giving the general public access to all records received from LGR. These files may be accessed at http://www.IN.gov/idem and then follow the link for the Virtual File Cabinet (VFC). Documents can be searched for using LGR’s source number, 025-00015, or source name.

Any deviations by LGR from permit terms, conditions or limitations will be shown on the quarterly deviation and compliance monitoring report maintained in the VFC and will be accessible to the public. In addition, all inspection reports and stack test data will be available in the VFC. Lastly, if the public believes additional information is needed to confirm compliance by LGR, they are welcome to file a complaint with IDEM and IDEM can request any supporting information needed to verify compliance with the Part 70 Operating Permit.

No revisions to the draft permit are required as a result of this comment.

Public Comment #75

Regarding permit Condition D.2.5, a commenter asked IDEM for the scientific basis for these limits.

IDEM RESPONSE

The 326 IAC 6-3-2 rules limit the PM emissions from the facilities listed in Condition D.2.5. These rules were developed based on Reasonably Available Control Technology (RACT) rules. RACT rules were developed by IDEM and approved by U.S. EPA as a State Implementation Plan to keep areas in attainment for particulate matter.

Public Comment #76

Regarding permit Attachments A, B and C, commenters noted that there are sections of these rules that do not apply, asked why are they included in the permit and asked for the scientific basis, environmentally safe threshold or risk information used to justify the limits listed in these attachments.

IDEM RESPONSE

Attachments A, B and C are the complete text of the NSPS and NESHAP standards applicable to LGR. IDEM reformatted the documents to improve readability to the public but did not change any of the text. IDEM includes the complete text of the federal rules and then cites the applicable portions in Sections E.1, E.2 and E.3.

Comments on the scientific basis of specific federal rules can be searched for at http://www.epa.gov/air/oarregul.html on the U.S. EPA website. No revisions to the draft permit are required as a result of this comment.

Public Comment #77

Commenters asked if the permit does not include a definition of biomass while the TSD makes references to biomass, would the permit be valid.

IDEM RESPONSE

Complete descriptions of the fuels to be combusted were included in Condition D.1.5 of the draft permit and TSD under 326 IAC 2-2 (PSD) applicability. The fuel description has been revised by this ATSD. See IDEM RESPONSE to EPA Comment #2 for more information. No revisions to the draft permit are required as a result of this comment.

Public Comment #78

Commenters asked how the ash produced at the plant is stored and disposed of and how ash emissions are accounted for in LGR's permit. Commenters requested information on the type of ash generated in the facility.

IDEM RESPONSE

The ash produced by the boiler is transferred to an ash storage silo by a pneumatic conveying system. Ash from the storage silo can be transferred by truck for offsite disposal by two methods. Ash with beneficial reuse properties is pneumatically transferred to enclosed tanker trucks that are vented to the storage silo with emissions controlled by a bin vent filter. Ash without beneficial reuse properties is dropped from the silo into a pug mixer that combines ash with water to form a product similar in consistency to wet soil. The pug mixer is vented to the ash silo vent. Beneficial reuses for ash include soil amendment and concrete manufacture. Ash without a beneficial reuse is sent to a landfill. Emissions from ash handling are shown in the emission calculations attached to this ATSD as emission units EU-07, EU-08 and EU-09.

A bubbling fluidized bed boiler operates in a manner that produces fly ash in the exhaust stack. The wood and switchgrass remains in the boiler until it reaches a particle size that allows the ash to be entrained in the exhaust gas. IDEM, Office of Air Quality does not regulate ash disposal beyond particulate matter emissions from ash handling. IDEM believes the permit as written is protective of human health and the environment

No revisions to the draft permit are required as a result of this comment.

Public Comment #79

Commenters asked IDEM to calculate air pollution impacts of the trucks hauling fuel to the incinerator and hauling ash away from the incinerator, including the number of trucks entering and exiting the facility each day and asked why the emissions of mobile sources such as trucks and loaders are not included in this permit.

IDEM RESPONSE

The number of trucks entering and exiting the facility was included in the application for the Part 70 Operating Permit. Original Condition C.5 – Fugitive Dust Emissions regulates fugitive dust emissions by incorporating the requirements of 326 IAC 6-4. According to this condition, 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. In accordance with 326 IAC 6-4-4, no vehicle shall be driven or moved on any public street, road, alley, highway, or other thoroughfare, unless such vehicle is so constructed as to prevent its contents from dripping, sifting, leaking, or otherwise escaping therefrom so as to create conditions which create fugitive dust. IDEM does not anticipate a problem with LGR complying with 326 IAC 6-4. If a problem arises, IDEM can pursue enforcement action.

In regards to 326 IAC 6-5 – Fugitive Particulate Matter Emission Limitations, this rule applies to any source of fugitive particulate matter emissions located in nonattainment areas for particulate matter as designated by the Air Pollution Control Board which has potential fugitive particulate matter emissions of twenty-five (25) tons per year or more. This source is located in an attainment county and has a potential to emit of fugitive particulate matter of less than twenty-five tons per year; therefore, 326 IAC 6-5 does not apply.

In regards to emissions from loaders and truck engines, IDEM is not empowered by any rule to include emissions from mobile sources. U.S. EPA has exclusive authority to regulate mobile source emissions in Indiana. No revisions to the draft permit are required as a result of this comment.

Public Comment #80

Commenters asked IDEM to address the potential for dioxin to be emitted from LGR and to inform the public of the laws regulating dioxin emissions.

IDEM RESPONSE

Dioxin and furan emissions are shown in the revised emission calculations attached to this ATSD. Emission calculations show annual dioxin emissions as 1.53 E-08 TPY and furan emissions as 1.6 E-07 TPY. These levels of emissions are protective of human health and protective of the environment. No revisions to the draft permit are required as a result of this comment.

Public Comment #81

Commenters stated that IDEM should require LGR to show it has an adequate water supply to operate the plant?

IDEM RESPONSE

IDEM, OAQ has no authority under air permit regulations to require LGR to demonstrate that it will have adequate water to operate the plant. No revisions to the draft permit are required as a result of this comment.

Public Comment #82

Commenters stated that all data collections should be performed daily and not weekly. Commenters stated that reports should be submitted to the state monthly or quarterly until such time as there is sufficient record of the general operations data of the plant equipment, overall plant operations and abilities of the plant personnel to demonstrate the capability of this plant to operate under permit conditions?

IDEM RESPONSE

For certain emission parameters such as CO, NOx, SO2 and opacity, IDEM requires continuous monitoring and data collection. Daily parametric monitoring is required for the baghouse controlling the boiler. IDEM requires weekly monitoring for visible emission notations for stacks S-02, S-04, S-06 and S-09. IDEM requires different monitoring periods based on the probability that a control device will fail and the consequences of control device failure. IDEM believes that daily monitoring of the baghouse is sufficient because although this control device has a low rate of failure, failure could result in violation of an emissions limit. IDEM believes weekly monitoring of stacks S-02, S-04, S-06 and S-09 is adequate because bin vent filters have a low probability of failure and will have minimal effects on air quality because emissions are small. IDEM believes this compliance monitoring schedule will ensure the facility is in compliance with all permit terms

and conditions. PM, PM10, NOx, SO2 and CO emission reports are sent to IDEM every three years. No revisions to the draft permit are required as a result of this comment.

Public Comment #83

Commenters asked that the Commissioner use his authority to issue LGR's permit for less than five years and to require the most extreme testing, monitoring, record keeping and reporting requirements possible.

IDEM RESPONSE

IDEM believes all permit terms and conditions are correct and require sufficient testing, monitoring, recordkeeping and reporting to ensure compliance. The Title V permit term is set at five years by rule, 326 IAC 2-7-5(2). No revisions to the draft permit are required as a result of this comment.

Public Comment #84

Commenters asked how IDEM can be sure that the fuel burned in LGR's boiler complies with the fuel described in the permit and requested that daily, on-site testing be done.

IDEM RESPONSE

IDEM has added Condition D.1.15 to the permit to ensure the fuel combusted reflects the fuel in the permit. It requires LGR to perform visual inspections of the wood fuel to ensure that the wood does not contain any treated, painted or coated wood, particle board or plywood and any non-wood materials. A load containing any of these materials must be rejected and returned to the supplier. This complete condition is shown in IDEM RESPONSE to EPA Comment #3:

Public Comment #85

Commenters stated that the boiler specifications should be complete before permitting begins and that once IDEM receives the full specifications the application process should restart from the beginning. Commenters stated that their rights to participate in the permitting process were violated because needed information was not available to participate in a meaningful way with input, comments, and cogent critique of the permit. Commenters stated that IDEM should not work on assumptions.

IDEM RESPONSE

IDEM had sufficient information to determine the proper permit level and to prepare a draft permit. It is not unusual for a source to provide a general description of an emission unit in an application for new source construction. In regards to the boiler, the only information needed for air permitting purposes was the maximum heat input capacity and the type of boiler, a fluidized bed boiler in this case. IDEM uses assumptions on a regular basis when these assumptions result in calculating the worst case air emissions. IDEM will use regular testing, compliance monitoring requirements and continuous emissions monitoring systems as necessary to confirm these assumptions. No revisions to the draft permit are required as a result of this comment.

Public Comment #86

Commenters asked IDEM to state the quantity of sulfuric acid that will be created by LGR, the effects of acid rain and asked if those emissions will yellow the clothing on clothes lines.

IDEM RESPONSE

LGR will not emit any sulfuric acid. Atmospheric sulfuric acid can be created in a chemical reaction between the sulfur dioxide (SO2) emitted by the boiler and oxygen and water vapor in the surrounding air. If IDEM assumes one mole of SO2 produces one mole of sulfuric acid, worst case theoretical generation of sulfuric acid from this boiler would be 360 tons per year. However, the atmospheric chemistry is extremely complex and the reactions are highly dependent on temperature, pressure, and humidity. Also, it is not reasonable to expect all SO2 to convert to sulfuric acid and not to other sulfate compounds. To develop a defensible sulfuric acid deposition estimate, additional computer modeling is required using models such as: Regional Acid

Deposition Model (RDAM), Regulatory Emissions Modeling System for Aerosols and Deposition (REMSAD), Community Multi-scale Air Quality (CMAQ), Acid Deposition and Oxidant Model (ADOM), Advanced Statistical Trajectory Regional Air Pollution (ASTRAP) or Urban and Regional Multiscale Model (URM). The regulated pollutant created by sulfuric acid and similar compounds is condensable PM10. IDEM has reviewed the particulate matter emissions from this source and will confirm their accuracy with regular testing. Additional modeling for acid deposition is not required for this New Source Construction and Part 70 Operating Permit and IDEM will not require additional modeling for LGR.

Acid rain permit provisions are not included in this permit. The source is required to apply for an acid rain permit prior to startup of the boiler. The goal of the 1990 Acid Rain Program is to reduce the impact of man-made emissions of sulfur dioxide (SO_2) and nitrogen oxide (NO_x) on lakes, streams, forests, crops and, most important, the health of the public, by a nationwide SO_2 allocation of emissions from power plants. These emissions can be transported great distances. More information regarding the program, along with past, present and future plans, can be found on the Internet at http://www.epa.gov/airmarkets. Additional information in the form of maps showing the results of the SO_2 and NO_x limitations can be found on the Internet at http://nadp.sws.uiuc.edu/.

The U.S. EPA has set a limit on the amount of sulfur dioxide emissions and the emission rate of nitrogen oxides for all regulated power plants, for each year from 1996. In 1993, U.S. EPA allocated a certain amount of sulfur dioxide emissions allowances to each power plant regulated by Phase II of the Acid Rain Program. Prior to 2010, the total sulfur dioxide emissions for all affected power plants in the nation were limited to 9.4 million tons every year. That amount was 10 million tons less than the total emissions of sulfur dioxide in 1980. Beginning in 2010, the Clean Air Act has placed a cap at 8.95 million on the number of allowances issued to units each year. Each allowance is equivalent to one tone of sulfur dioxide. No allocations were made for new sources. New regulated power plants have to obtain sulfur dioxide allowances by purchasing them from pre-existing power plants that have received U.S. EPA allocations. A regulated power plant may have emissions allocations to sell because the plant purchased newer, less polluting, equipment. The U.S. EPA keeps track of the transfer of all sulfur dioxide emission allocations in an official accounting system. LGR will be required to obtain the necessary SO2 allocations from existing power plants. Emissions of nitrogen oxides were reduced by 2 million tons from the 1980 level by year 2000, as required by the Clean Air Act of 1990. There is no ton per year limit set for NOx like SO2.

Public Comment #87

Commenters asked if any agency of any level of any government in the United States has given a report to Congress stating biomass combustion is clean in the sense of nonpolluting or that it produces no carbon dioxide pollution to the atmosphere.

IDEM RESPONSE

IDEM is unaware of such a report. No revisions to the draft permit are required as a result of this comment.

Public Comment #88

Commenters expressed concern that LGR's emissions will cause cancer and other serious health effects, asked who will be responsible for any resulting medical bills and asked if children and others in the community can be tested regularly for heavy metal accumulations, lung and heart function.

IDEM RESPONSE

IDEM's modeling of LGR's emissions is set out in the IDEM Response to Public Comment #8, above. Hazardous Air Pollutants (HAPs) are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects or adverse environmental effects as addressed in Public Comment #16, above. People must be exposed to HAPs at high concentrations and durations to have an increased chance of getting cancer or experiencing other serious health effects. LGR's emission of HAPs will not pose any threat or

danger to the community. Computer modeling of HAPs from this source was not conducted for LGR because it is a minor source of HAPs. A minor source has a potential to emit of a single HAP of less than ten tons per year and a combination of all HAPs of less than twenty-five tons per year. Information on the health effects of hazardous air pollutants can be found on the U.S. EPA web site at www.epa.gov/ttn/atw/allabout.html

IDEM, OAQ conducts ambient monitoring of hazardous air pollutants as part of the toxics monitoring program. IDEM, OAQ currently monitors for air toxics at 10 locations across the state. The closest air toxics monitor to Milltown, Indiana is located at the Falls of Ohio State Park in New Albany, Indiana. This information can be viewed at www.in.gov/idem/programs/air/amb/data/toxic/toxic.html on the IDEM website.

IDEM does not have the authority to determine responsibility for any resulting medical bill or to order medical testing. No revisions to the draft permit are required as a result of this comment.

Public Comment #89

Commenters asked why LGR has months to prepare an emergency reduction plan and what would happen if an emergency occurs before the plan is prepared.

IDEM RESPONSE

An emergency reduction plan is prepared in case the overall ambient air quality in any region reaches a specified level for any of five specified pollutants, as set out in 326 IAC 1-5. Sources with the potential to emit one hundred (100) tons per year or more of any pollutant are required to prepare plans on how they will reduce their emissions if an air pollution alert or air pollution emergency is declared. The intent of the emergency response plan is to reduce emissions from sources until the ambient air quality in the county is restored to healthier levels. It is unrelated to a response to any emergency that may occur at LGR. The exact requirements for plan submittal are specified in 326 IAC 1-5-2 and the permit is consistent with these requirements. No revisions to the draft permit are required as a result of this comment.

Public Comment #90

Commenters expressed concern that the wood supplied to the plant will increase the spread of the emerald ash borer, an insect that is attacking trees in Indiana. Commenters asked how LGR and its use of wood fuel will affect the bald eagle and river bats.

IDEM RESPONSE

Several counties in Indiana are under quarantine due to the emerald ash borer. In a press release of May 3, 2010, Robert E. Carter Jr., Director of the DNR, named thirty-four counties in Indiana subject to an emerald ash borer quarantine. This quarantine restricts the movement of regulated ash tree materials, including whole ash trees, limbs branches or debris of ash trees at least one inch in diameter, ash logs or untreated ash limber with bark attached or cut firewood of any hardwood species outside of affected counties. Counties affected may be found at http://www.in.gov/dnr/entomolo/5349.htm on the internet. Crawford County is not an affected county but there are several southern Indiana counties that are affected. The exact text that forms the regulatory basis for the quarantine can be found in 312 IAC 18-3-18. For additional information contact Indiana DNR's Division of Entomology and Plant Pathology at (317) 232-4120.

In addition to the state-level quarantine, all of Indiana is under a federal quarantine that prohibits moving regulated ash tree material out of Indiana without a compliance agreement or permit from the USDA Animal and Plant Health Inspection Service (APHIS). For additional information on the federal program, contact APHIS at (765) 497-2859.

IDEM understands that LGR's affect on the emerald ash borer, the bald eagle and the river bat are of genuine concern to the commenters. However, IDEM has no regulatory authority to consider those concerns in LGR's air permit. No revisions to the draft permit are required as a result of this comment.

Public Comment #91

Commenters asked if all of LGR's stacks vent into one tall stack or if there are multiple stacks.

IDEM RESPONSE

In accordance with 326 IAC 1-2-74, a stack is defined as, "a vertical duct originating within the facility, the area and other physical parameters of which are quantifiable (including the quantity of pollutants emitted) and the use of which results in any immediate, physical pollutant plume whose characteristics continuously are determined by the operation of the facility. Any stack as defined herein with a horizontal discharge, or an elevated flare shall be considered to be a stack for the purpose of these rules (326 IAC)." There are several individual stacks. However, some of these stacks are more accurately defined as vents on emission units. The boiler has the only significant stack. No revisions to the draft permit are required as a result of this comment.

Public Comment #92

Commenters stated that the local approval for the construction of the plant was for a specific development plan which is at variance with the pending application. Commenters stated that they do not believe all property owners were notified of the application. Commenters stated that the address on the application is incorrect.

IDEM RESPONSE

IDEM understands that local approval is a genuine concern to the commenter. IDEM does not have any authority to consider whether a proposed plant has obtained local approvals. IDEM issues permits for the address listed in the permit application. For this application, the address is Intersection SR 64 and SR 66, Milltown, Indiana 47145. The permit application is only valid for this source address. If the source location changes, a new application will be required. The applicant submitted information to IDEM indicating the notification requirements have been completed. IDEM has no specific information indicating that any property owner was not properly notified. No revisions to the draft permit are required as a result of this comment.

Public Comment #93

Commenters asked why the facility description boxes in the permit state that the information contained in the boxes is not enforceable.

IDEM RESPONSE

IDEM uses the information provided by the applicant to describe the source contained in the facility description boxes in Sections D and E of the permit as well as Section A.2 and Section A.3. These descriptions are not enforceable. However, a physical change or a change in the method of operation may render this descriptive information obsolete or inaccurate and may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2. IDEM reviews these revisions on a case by case basis and may pursue enforcement actions for noncompliance with all applicable rules. No revisions to the draft permit are required as a result of this comment.

Public Comment #94

Commenters expressed concern that the wood or switchgrass used as fuel might be contaminated with pesticides, herbicides and may have absorbed chemicals, hormones, antibiotics or other things not listed in the permit. Commenters asked how, without testing, IDEM can be sure what is in the fuel. Commenters noted that switchgrass can be used in phytoremediation. Commenters asked how the emission calculations can be correct based on the unknown composition of the biomass. Commenters asked what will prevent LGR from burning

animal wastes contained in bedding material. Commenters stated the biomass from crops should be grown exclusively for energy production.

IDEM RESPONSE

As stated in the IDEM Response to EPA Comment #2, above, LGR will only be allowed to burn clean wood and switchgrass. The emissions for these fuels are described in IDEM Response to Public Comment #17. IDEM will require the source to conduct inspections of the fuel received and maintain contracts with the supplier restricting the fuels that can be supplied. A test burn is proposed for switchgrass to document site specific emission factors and the permission to burn switchgrass will not be granted until IDEM approves the emission factors obtained during the test burn. Site specific emission factors will account for natural variation in the switchgrass due to local growing conditions. Testing of LGR's emissions while burning wood is also required. Prior emission testing on boilers using wood and switchgrass as fuels have not noted emissions resulting from contamination by pesticides, herbicides or other chemicals that may have been absorbed. But, if IDEM believes there is a problem with these contaminates, it can order testing at any time to confirm compliance.

Public Comment #95

Commenters stated that baghouse filtration is not the most effective control of particulate matter and that IDEM should require LGR to use an electrostatic precipitator. Commenters asked if the baghouse will be fire proof and whether the fireproofing material emits dangerous chemicals. Commenters requested that IDEM require the latest pollution control equipment to be installed.

IDEM RESPONSE

LGR is proposing standard and well understood pollution control measures. The fact that these technologies have been in use for decades does not indicate they are not effective in controlling emissions. IDEM believes the control measures proposed by LGR will be protective of human health and the environment. The risk of fire is a possibility whenever fine material containing organic matter is generated. IDEM requires a preventive maintenance plan (PMP) to be prepared, maintained on site and approved by IDEM. This PMP will minimize the risk of fire. In regards to additional emissions due to retardant material, IDEM will test the boiler on a regular basis to confirm VOC and HCL emissions. IDEM does not anticipate significant additional emissions due to the baghouse bag materials of construction. No revisions to the draft permit are required as a result of this comment.

Public Comment #96

Commenters asked why IDEM is allowing a limit for PM at the equivalent of 0.3 pounds/MMBtu and asks why IDEM is not setting a lower limit.

IDEM RESPONSE

The New Source Performance Standard limit is 0.3 pounds/MMBtu. Emissions above this level are prohibited. IDEM has no regulatory authority to require emissions below those levels in state and/or federal law. No revisions to the draft permit are required as a result of this comment.

Public Comment #97

Commenters stated the following views: Our politicians are crooked and are going to get rich by letting LGR build a plant that makes us sick. They don't listen to us. How would you like to live and raise children near this plant? How can you protect us? LGR does not even own the land yet. How can they get a permit on land they don't own? Management at LGR is crooked and has no experience in running this plant. How is this safe? As a bureaucrat, do you have the guts to deny this permit?

IDEM RESPONSE

IDEM can respond to information relevant to the issuance of the New Source Review and Part 70 Operating Permit, however, other issues are outside of the scope of permit review. IDEM has no authority to consider the character or prior experience of the applicant. IDEM issues permits consistent with state and federal law that will protect human health and the environment. IDEM

Response to Public Comment #8, above, describes the air permit modeling for LGR that shows the air emissions will comply with the National Ambient Air Quality Standards. LGR has provided information in the application indicating they have the ability to construct and operate this facility in compliance with all permit terms, conditions and limitations. IDEM can issue a permit for a parcel of land not owned by the applicant. However, the permit is only good for the location listed in the permit. No revisions to the draft permit are required as a result of this comment.

Public Comment #98

Commenters requested that LGR's actual measured emissions be posted in chart form on a weekly basis in the local paper for as long as this plant is in operation, including all toxic and/or potentially toxic emissions, and that LGR post a notice in all local newspapers of any change to the plant prior to submitting an application to IDEM.

IDEM RESPONSE

IDEM requires record keeping and reporting necessary to ensure compliance with permit terms, conditions and limitations. These requirements have to have foundation in underlying rules and regulations and the genuine necessity of IDEM to ensure continuous compliance. IDEM believes the requirements suggested by the commenter are well outside what is necessary for IDEM to ensure continuous compliance and would be an undue burden on the applicant. No revisions to the draft permit are required as a result of this comment.

Public Comment #99

Commenters asked how many permits IDEM has denied and why IDEM reviews applications for permits if IDEM doesn't intend to deny any permits.

IDEM RESPONSE

IDEM rarely denies air permit applications. This is not an indication that IDEM is not properly regulating sources. If an applicant can comply with all applicable air regulations and requirements, IDEM will issue the permit. Projects without the possibility of permit issuance or which would require more in pollution controls than the applicant thought would be required are often screened out of the permit process before an application is submitted. Most sources hire professional consultants well versed in state and federal law as it applies to air permitting. These professionals are the first ones that would discourage a client from submitting the application without first understanding the conditions that would be required in an air permit. Secondly, IDEM conducts pre-application meetings with sources to address requirements that the source would have to comply with in an air permit, sometimes leading the source to reevaluate its project. IDEM may discover that a permit must be denied after application submittal, or the applicant will find that it cannot afford to construct the project with the permit conditions that IDEM will require. When this occurs, IDEM will request that the application be withdrawn. Applications that are not withdrawn are denied. No revisions to the draft permit are required as a result of this comment.

Public Comment #100

Commenters stated that this is the first plant of its kind in Indiana and should be treated more strictly then other boilers, that IDEM should require the highest level of pollution control, emissions monitoring, testing and inspection, and that there are better ways to use our resources to generate electricity.

IDEM RESPONSE

Wood burning boilers are already in operation in Indiana, although on a smaller scale. IDEM has no reason to expect emissions from these boilers will be out of the ordinary and has placed sufficient emission limitations, testing, compliance monitoring, record keeping and reporting requirements to ensure protection of public health and the environment. IDEM has no authority to dictate the methods used to generate electricity.

Public Comment #101

Commenters stated that the local officials approved a modification in what LGR is allowed to burn and how the facility will be monitored and asked how IDEM will work with local officials to ensure these modifications are met. Commenters also stated that there is pending litigation within the city to stop the facility from being constructed and asked if IDEM can stop the permit process until litigation is complete?

IDEM RESPONSE

IDEM has no authority to consider local approvals in the air permitting process. If local government applies additional restrictions, it will be responsible for any enforcement. IDEM cannot delay or stop the permitting process due to ongoing litigation. No revisions to the draft permit are required as a result of this comment.

Public Comment #102

Commenters asked who will be responsible for administering penalties to LGR for noncompliance.

IDEM RESPONSE

IDEM will enforce the permit as issued. IDEM will review the severity of any violation and the source's history of violations in determining what enforcement action is necessary and what are appropriate penalties. No revisions to the draft permit are required as a result of this comment.

IDEM inspects sources like LGR on the average of once per year. IDEM will make more frequent inspections if it a source has a history of violations or is the subject of complaints from the public. IDEM handles all inspection, compliance and enforcement issues on a case-by-case basis.

Public Comment #103

Regarding permit Condition D.2.5, commenters asked why (a) and (b) are not equal and asked IDEM to set out the definition of an emergency.

IDEM RESPONSE

Condition D.2.5(a) and (b) are quoted from 326 IAC 6-3-2. As the process weight rate increases, the allowable emissions from the emission unit increase. This is consistent with 326 IAC 6-3-2.

An emergency is defined in 326 IAC 2-7-1(12) as, "any situation, including acts of God, arising from sudden and reasonably unforeseeable events beyond the reasonable control of the source, which:

(A) requires immediate corrective action to restore normal operation; and

(B) causes the source to exceed an emission limit under Part 70 permit due to unavoidable increases in emissions attributable to the emergency.

An emergency shall not include noncompliance to the extent caused by improperly designed equipment, failure to implement an adequate preventive maintenance plan, careless or improper operation, or operator error." An emergency is not an affirmative defense for an action brought for noncompliance with a federal or state health based emission limitation such as a BACT limit.

No revisions to the draft permit are required as a result of this comment.

Public Comment #104

Commenters asked that if IDEM is prohibiting the use of residential wood burning stoves between May to September, how IDEM can issue this permit to LGR to burn 40 tons of wood per hour. Commenters asked if IDEM is allowing LGR to burn wood because a former IDEM employee took a job with LGR.

IDEM RESPONSE

The LGR project is subject to the New Source Review and Part 70 Operating Permit program. This source is required to have a site specific operating permit with considerable restrictions on operations. IDEM is fairly enforcing applicable rules consistent with other facilities in this industry. The boiler and all pollution control equipment installed will ensure the permit complies with all applicable rules and will protect human health and the environment. There are no residential wood stove regulations in effect. The Indiana Air Pollution Control Board is considering rules to regulate outdoor wood boilers located at residences. These wood boilers have been the subject of numerous complaints since they have no control devices to control particulate matter, have high opacity levels and stacks that are often lower than their neighbors' second floor windows. IDEM does not know if a former IDEM employee works for LGR, but such a situation would have no affect on the permit. No revisions to the draft permit are required as a result of this comment.

Public Comment #105

Commenters stated that the site of the plant changed and not every landowner was notified, that LGR's updating of its application information did not make it to the library within 10 days as required by law and that the mailing address in the application and LGR's notices were incorrect and misleading.

IDEM RESPONSE

IDEM has no information to indicate LGR did not comply with the public notification requirements. The location of the plant has not changed during the application process. The mailing address on the application is consistent with the source's location. The commenters have not cited to any specific application information that was not updated at the library within 10 days. If specific evidence was provided to IDEM of a failure to comply with the requirements of 326 IAC 2-7-17(b) or 326 IAC 2-1.1-6 prior to issuance, IDEM would consider this information in its permit decision. No revisions to the draft permit are required as a result of this comment.

Public Comment #106

Commenters asked why operation procedures and laboratory procedures aren't used to determine compliance with emission limits included in the permit.

IDEM RESPONSE

IDEM desires to issue a clear and concise permit to ensure compliance with all state and federal laws. A detailed list of operation and laboratory procedures does not help this cause. Where specific methods are required by an applicable rule, IDEM will reference the rule without listing the requirements in the permit. No revisions to the draft permit are required as a result of this comment.

Public Comment #107

Commenters asked why beryllium controls are required for some facilities and not others.

IDEM RESPONSE

The levels of beryllium emitted by boiler EU-01 are well below the 326 IAC 2-2 (Prevention of Significant Deterioration) major source threshold for beryllium of 250 tons per year. Also, a National Ambient Air Quality Standard (NAAQS) for beryllium has not been established. A major source for PSD may be required to install best available control technology for beryllium as part of a PSD BACT determination. LGR is not a major source for PSD, a PSD BACT analysis was not performed and no additional controls are required. No revisions to this permit are required as a result of this comment.

Public Comment #108

Commenters asked why chromium is listed as a trace pollutant, if it is used for corrosion protection, if any hexavalent chromium will be used, and if there are other emissions.

IDEM RESPONSE

Chromium additives in cooling towers are no longer legal and cannot be used by LGR. HAPs listed in the emission calculations for the boiler contain trace metals that are contained in the fuel. IDEM provided emission calculations in Appendix A to the ATSD. Emissions from the cooling tower unit consist of particulate matter from the suspended solids in the water being cooled. IDEM finds the level of emissions to be protective of human health and the environment. No revisions to the draft permit are required as a result of this comment.

Public Comment #109

Commenters asked if biomass is cleaner than other forms of energy generation.

IDEM RESPONSE

IDEM does not have the authority to require one method of energy generation over another. IDEM must issue or deny an application based on the information supplied in the application and all state and federal rules. LGR has supplied the information necessary for IDEM to issue the permit. The permit as issued will be protective of human health and the environment.

Public Comment #110

Commenters asked IDEM to explain why BioEnergy is a smaller wood burning plant and is considered a major source and LGR is not?

IDEM RESPONSE

The design of the boilers for LGR and BioEnergy were significantly different. LGR proposed a fluidized bed boiler. BioEnergy proposed a spreader stoker boiler which has higher CO and NOx emissions. LGR accepted limits to remain a minor source under 326 IAC 2-2 (Prevention of Significant Deterioration). BioEnergy did not accept limits on emissions to remain below the major source threshold. Therefore, it is possible the smaller capacity boiler at BioEnergy to be a major source for PSD, while the larger boiler at LGR is a minor source for PSD. No revisions to the draft permit are required as a result of this comment.

Public Comment #111

Commenters stated that LGR intends to grow and burn switchgrass, that switchgrass is toxic to horses, goats and sheep and asked how toxic switchgrass is when it is burned.

IDEM RESPONSE

Preliminary estimates show switchgrass can be combusted in a manner consistent with all state and federal laws. IDEM will require LGR to conduct a test burn to determine the exact composition of combustion gases prior to allowing LGR to burn switchgrass on a regular basis. No revisions to the draft permit are required as a result of this comment.

Public Comment #112

Commenters stated that LGR has stated that three specific engineering measures have been included in the design of the wood storage areas to ensure that water does not surround the biomass piles and increase the moisture content of the biomass fuel. Commenters asked that the permit require the wood storage areas to be constructed as described by LGR in a letter sent to IDEM.

IDEM RESPONSE

A detailed description of the effect on moisture content is detailed in IDEM RESPONSE to EPA Comment #2. IDEM has sufficient compliance monitoring and reporting requirements in the permit to ensure the fuel combusted will be capable of meeting all emission limitations. No revisions to the draft permit are required as a result of this comment.

Public Comment #113

A commenter expressed concern about how close this source is to the major source thresholds for PSD. The applicant believes that there are errors in the throughputs of some process units that will make this source major for PSD.

IDEM RESPONSE

The applicant provided the maximum capacity of each emission unit. These maximum capacities are shown in Section A.2 and Section A.3 of the Part 70 Operating Permit. IDEM requires the applicant to provide the maximum capacities to allow estimation of the emission of regulated pollutants for rule applicability determinations. However, the source may never actually operate at maximum capacity, 24 hours a day, 365 days a year. When the capacities of all emission units do not match, it only means the process is bottlenecked by a single step. It does not indicate the throughputs are incorrect. Given the information provided by the applicant and the practically enforceable limits in the permit, IDEM determined this source is not a major source under 326 IAC 2-2 (Prevention of Significant Deterioration). No revisions to the draft permit are required as a result of this comment.

Public Comment #114

One commenter questioned the propane capacity factor accepted by the applicant to avoid the NOx limitations in 40 CFR 60.44b(l)(1). The commenter believes avoiding the limit is really excusing polluters from more stringent rules.

IDEM RESPONSE

In order to make the requirements of 40 CFR 60.44b(l)(1) not applicable to boiler EU-01, the Permittee has requested a federally enforceable annual capacity factor to limit the usage of propane to less than 10% of the heat input to the boiler. IDEM is not excusing an emitter by allowing the limitation. We are simply applying the rule as written. 40 CFR 60.44b(l)(1) allows the source to avoid applicability of the NOx regulations by accepting this capacity limitation. LGR requested the capacity factor limit and IDEM believes it is appropriate in this case. IDEM notes that the limit from 40 CFR 60.44b(l)(1) is 0.20 lb NOx/MMBtu and the controlled emissions from the boiler are 0.1374 lb NOx/MMBtu, which is significantly below the NSPS limit. No revisions to the draft permit are required as a result of this comment.

Public Comment #115

A commenter questioned the applicability of 40 CFR 60, Subpart D because the subpart contains a subcategory of fuels listed as “other fuels.”

IDEM RESPONSE

In accordance with 40 CFR 60.40, Subpart D applies to:

(1) Each fossil-fuel-fired steam generating unit of more than 73 megawatts (MW) heat input rate (250 million British thermal units per hour (MMBtu/hr)).

(2) Each fossil-fuel and wood-residue-fired steam generating unit capable of firing fossil fuel at a heat input rate of more than 73 MW (250 MMBtu/hr).

Fossil fuel is defined in 40 CFR 60.41 as, “natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials for the purpose of producing steam by heat transfer.”

The boiler proposed for the LGR Milltown facility is not capable of firing fossil fuel at a rate of 250 MMBtu/hr or more. The propane burner is rated at 168 MMBtu/hr and its purpose is to start up the boiler in a controlled manner and not to generate steam by heat transfer. Therefore, 40 CFR 60, Subpart D does not apply to boiler EU-01. No revisions the draft permit are required as a result of this comment.

Public Comment #116

A commenter believes the boiler is subject to the sulfur dioxide limits in 40 CFR 60, Subpart Db.

IDEM RESPONSE

The SO2 limitations in 40 CFR 60, Subpart Db apply to the following:

(a) In accordance with 60.42b(a), an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or oil.

(b) In accordance with 60.42b(b), 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.

(c) In accordance with 60.42b(c), 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.

(d) In accordance with 60.42b(d), an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 and are:

(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.

The boiler at LGR Milltown does not meet any of the above listed applicability definitions; therefore, the SO2 limitations listed in Subpart Db do not apply. No revisions to the draft permit are required as a result of this comment.

Public Comment #117

One commenter indicated the site is located too close to an elementary school and that the stack is at the same height as the elementary schools playground.

IDEM RESPONSE

Milltown Elementary School is at the same ground elevation as the proposed LGR facility; however, the boiler stack is 150 feet above ground elevation. Computer modeling by IDEM and the consultant for the source (URS) shows the emissions from this stack will not cause a violation of the National Ambient Air Quality Standards (NAAQS) and are protective of human health and the environment. See IDEM RESPONSE to Public Comment #8 above for further discussion on modeling. No revisions to the draft permit are required as a result of this comment.

Public Comment #118

A commenter requested an explanation for the change in the potential to emit of VOC from boiler EU-01 from the initial application to the emission calculations provided in the technical support document. This applicant also requested an explanation for the proposed use of the alkaline sorbent injection system.

IDEM RESPONSE

The initial application submitted by LGR showed VOC emissions from the boiler at 44.6 TPY. The emissions shown in the draft permit were 33.7 TPY due to compliance with 326 IAC 8-1-6 (Best Available Control Equipment). While there was not a significant difference between the VOC emission rate in LGR's application and the draft permit, there was a significant difference in HAP emissions. LGR's application estimated the worst case HAP was methanol emitted at a rate of 1.5 tons per year. The emissions calculations shown in the draft permit estimated the potential to emit of all HAPs as 45.12 TPY, with the highest being HCL at 33.87 TPY. IDEM proposed an emission limitation of less than 25 TPY. LGR believes they can meet this limit using the natural alkalinity in the boiler ash to neutralize the HCL. IDEM has required a compliance stack test to ensure the boiler can meet this emission limitation. If they boiler does not meet the limit, LGR will be required to use the alkaline sorbent to neutralize the HCL and achieve compliance with the emission limitation. If the boiler meets the emission limitation without additional alkalinity, LGR will not use sorbent injection.

It does not matter to IDEM which method is used to achieve compliance with the emission limitation. IDEM requires LGR to keep HAP emissions to less than 10 tons of a single HAP and 25 tons of all HAPs to ensure the source is not a major source of HAPs. No revisions to the draft permit are required as a result of this comment.

Public Comment #119

A commenter requested an explanation of the method used by LGR to achieve the particulate matter emission limitation of 0.03 lb/MMBtu. This commenter also requested information on the use of continuous particulate matter monitors, ultrafine particulate matter and an explanation of triboflows.

IDEM RESPONSE

The PM emission limit of 0.03 lb/MMBtu is a maximum emission limitation from 40 CFR 60, Subpart Db. LGR proposes to meet the emission limitation with limits on the type of fuel to be combusted, the use of a baghouse and the physical design of the boiler. Particulate Matter Continuous Emissions Monitors (CEMS) are available but are expensive and not required by any specific regulation. IDEM believes the continuous opacity monitor will provide adequate compliance monitoring to ensure compliance with the NSPS PM limitation. IDEM included PM and PM10 limitations in the permit. While not listed, PM2.5 is controlled by limiting PM10. This is effective because PM2.5 is a subset of PM10.

Triboflows is a reference to a method of operation of a sensor for a baghouse leak detection system. When two particles collide, an electric charge is transferred between the two particles. This electrical transfer is called contact electrification. If these particles collide with the sensor of a baghouse leak detection system, an electrical signal or a triboflow is generated that triggers an alarm. A triboflow is an indication of the failure of a baghouse filter bag.

Public Comment #120

A commenter requested a clarification of the SO2 control system, asking if the SO2 control system be installed. This commenter wanted information on the acid rain requirements and the ability of bin vent filters to protect the public from ash emissions.

IDEM RESPONSE

LGR proposes to install the limestone injection system to control SO2 only if needed. IDEM cannot require the use of this control device unless the source wide emissions of SO2 exceed 250 tons per year and the source wished to limit out of 326 IAC 2-2. The source wide

emissions of SO2 are below 250 tons per year; therefore, IDEM cannot require the use of a control device. This source will require an Acid Rain permit. IDEM requires the source to obtain an Acid Rain Permit prior to operation of the boiler. They are not allowed to operate without the permit. IDEM believes this is reasonable on a new source construction permit due to uncertainties in funding the project and delays that may be encountered in obtaining other permits.

Bin vent filters are an adequate control method for particulate matter sources with lower levels of emissions that require lower control efficiencies. This device will protect human health and the environment if used and maintained properly.

Public Comment #121

A commenter was concerned about VOC, formaldehyde, HAP and furan emissions and odor from the mulch piles. The commenter believes they are a respiratory health threat according to the American Lung Association.

IDEM RESPONSE

This is not a major source under the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration); therefore, fugitive emissions from the wood and switchgrass storage piles are not considered in the potential to emit of this source. IDEM does not have the regulatory authority to regulate fugitive VOC or HAP emissions from this source. Also, IDEM does not have the regulatory authority to control odors from this source. Please contact your local officials for odor concerns. No revisions to the draft permit are required as a result of this comment.

Public Comment #122

A commenter questioned the determination that the source is not one of 28 listed sources for PSD applicability.

IDEM RESPONSE

The major source threshold for 326 IAC 2-2 (Prevention of Significant Deterioration) is 250 TPY unless it is one of the following stationary source categories:

(1) Fossil fuel-fired steam electric plant of more than two hundred and fifty million (250,000,000) British thermal units per hour heat input.
(2) Coal cleaning plants with thermal driers
(3) Kraft pulp mills
(4) Portland Cement Plants
(5) Primary zinc smelters
(6) Iron and Steel mill plants
(7) Primary aluminum ore reduction plants
(8) Primary copper smelters
(9) Municipal incinerators capable of charging more than fifty (50) tons of refuse per day.
(10) Hydrofluoric acid plants
(11) Sulfuric acid plants
(12) Nitric acid plants
(13) Petroleum refineries
(14) Lime Plants
(15) Phosphate rock processing plants
(16) Coke oven batteries
(17) Sulfur recovery plants
(18) Carbon black plants (furnace process)
(19) Primary lead smelters
(20) Fuel conversion plants
(21) Sintering plants
(22) Secondary metal production plants

(23) Chemical process plants
(24) Fossil fuel boilers (or combinations thereof) totaling more than two hundred and fifty million (250,000,000) British thermal units per hour heat input.
(25) Taconite ore processing plants
(26) Glass fiber processing plants
(27) Charcoal production plants
(28) Petroleum storage and transfer units with a total capacity exceeding hundred thousand (300,000) barrels

IDEM offers the following analysis:

(1) **Fossil fuel-fired steam electric plant of more than two hundred and fifty million (250,000,000) British thermal units per hour heat input:** The fossil fuel-fired burner is rated at 160,000,000 British thermal units per hour. The wood-fired heat input capacity is 407,000,000 British thermal units per hour. The fossil fuel-fired burner is used to startup the boiler. The wood-fired heat input is to generate steam by heat transfer. Because the fossil fuel-fired burner is less than 250 MMBtu/hr, the LGR facility is not included in this source category.

(2) **Municipal incinerators capable of charging more than fifty (50) tons of refuse per day:** The boiler is not considered a municipal waste incinerator and is not part of this source category. See IDEM RESPONSE to Public Comment #42 for a more detailed discussion.

(3) **Fuel conversion plants:** IDEM received several requests to consider this facility as a fuel conversion plant. The U.S. EPA has not defined the meaning of "fuel conversion plant" explicitly. However, EPA has offered opinions on the meaning of fuel conversion. One example is in a letter dated June 14, 2005 to the South Carolina Department of Health and Environmental Services (4APT-APB) describing a change in state (solid to liquid or gas) of the fuel as fuel conversion. This decision indicates significant change to the physical properties of the fuel is necessary. The wood grinder is only used on pieces of wood in excess of four inches in dimension. IDEM does not consider resizing of the wood or switchgrass as a fuel conversion process. Therefore, boiler EU-01 is not considered part of this source category.

(4) **Fossil fuel boilers (or combinations thereof) totaling more than two hundred and fifty million (250,000,000) British thermal units per hour heat input:** The LGR facility in Milltown, Indiana does not have one or more boilers located onsite with a combined fossil fuel-fired heat input rate totaling 250 MMBtu/hr or more. Therefore, the source is not considered part of this source category.

(5) The remaining twenty-four categories can be eliminated by the source SIC code. Since boiler EU-01 does not belong to of the twenty-eight source categories, the major source threshold is 250 TPY and not 100 TPY of a regulated New Source Review (NSR) pollutant.

No revisions to the draft permit are required as a result of this comment.

Public Comment #123

A commenter requested additional information on the disposal of boiler blow down water and on-site wastewater treatment facilities.

IDEM RESPONSE

IDEM, Office of Air Quality does not issue wastewater facility construction permits or regulate discharges of wastewater. IDEM, Office of Water Quality handles these issues. These

comments are outside the scope of New Source Review and Part 70 Operating Permit review. No revisions to the draft permit are required as a result of these comments.

Public Comment #124

A commenter wanted IDEM to require the use of the best pollution control equipment possible because LGR will make high profits.

IDEM RESPONSE

IDEM can only require the installation of air pollution control equipment if it is necessary for meeting a permit limitation or to ensure the National Ambient Air Quality Standards (NAAQS) are not violated. IDEM and URS Corporation have performed a modeling analysis of the emission of this boiler with all proposed pollution control equipment included in the draft permit and found the NAAQS will not be violated. Therefore, IDEM cannot require any additional air pollution control equipment. IDEM believes this permit is protective of human health and the environment. No revisions to the draft permit are required as a result of this comment.

Public Comment #125

A commenter requested IDEM to require the boiler be restricted to 0% opacity (no visible plume).

IDEM RESPONSE

The requirements of 326 IAC 5-1 – Opacity have been incorporated into the permit to address particulate matter emissions. These regulations also regulate how much light obstruction is allowed by the plume. Condition C.2(a) states, “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. This indicates a forty percent obstruction, where 0% opacity is an invisible plume and 100% is totally obscured. Condition C.2(b) states, “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 non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.” This condition allows 60% opacity for short periods of time. IDEM cannot require an opacity restriction greater than those provided for in 326 IAC 5-1. No revisions to the draft permit are required as a result of this comment.

Public Comment #126

A commenter questioned IDEM’s authority on allowing synthetic minor limits to keep sources under major source thresholds.

IDEM RESPONSE

326 IAC 2 provides the ability to issue permits with synthetic minor limits as long as the potential to emit reflecting all limits or control devices is federally and practically enforceable after issuance of the Part 70 Operating Permit and the limit or control device is made practically enforceable by IDEM, U.S. EPA or citizens. Control device usage and all permit limits are enforceable; therefore, the limited potential to emit is used to determine applicability of 326 IAC 2-2 (PSD). No revisions to the draft permit are required as a result of this comment.

Public Comment #127

A commenter asked if the permit could be appealed by the public.

IDEM RESPONSE

You can appeal IDEM’s decision to issue a Part 70 Operating Permit. 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).

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:

(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 impractical 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

No revisions the draft permit are required as a result of this comment.

Public Comment #128

A commenter wanted a clarification of the need for the SNCR emission control system.

IDEM RESPONSE

The use of selective non-catalytic reduction (SNCR) is required by the permit to meet the NOx emission limitations. Actual NOx emissions are recorded and monitored on a continuous basis by the NOx continuous emissions monitoring system (CEMS). The alkaline sorbent injection system may not be necessary but was included to give the source flexibility in meeting emission limitations. The source believes the ash produced by combustion in the boiler will provide enough alkalinity to neutralize hydrochloric acid produced in the combustion of clean wood. If the initial performance test proves this to be correct, the source will not use the alkaline sorbent injection system. If the uncontrolled emission rate of HCL is more than 0.005 lb/MMBtu in compliance testing, the Permittee shall use the alkaline sorbent

injection system for boiler EU-01. See IDEM RESPONSE to Public Comment #60 for additional information. No revisions to the draft permit are required as a result of this comment.

Public Comment #129

A commenter wanted LGR to monitor ground level ozone at the LGR site.

IDEM RESPONSE

LGR Milltown is not considered a major source under 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)); therefore, ambient air monitoring is not required for this facility. IDEM will not require the monitoring because it is not required by an applicable rule. No revisions to the draft permit are required as a result of this comment.

Public Comment #130

A commenter requested a clarification of the source of dioxin production in the boiler.

IDEM RESPONSE

Some amount of dioxin is formed in the combustion of biomass in the boiler. The emissions are discussed in IDEM RESPONSE to Public Comment #16 and are generally related to the combustion temperature in the boiler and the chlorine content of the fuel. The lower the combustion temperature, the higher the emission rate of dioxin. The highest levels of dioxin are seen with combustion temperatures of 1560 °F or less. The boiler at LGR Milltown will operate at 1700 °F. IDEM believes the emission levels anticipated are protective of human health and the environment. No revisions to the draft permit are required as a result of this comment.

Public Comment #131

A commenter asked if LGR is proposing to construct a landfill.

IDEM RESPONSE

The permit application for this facility did not include any information indicating a landfill will be located onsite. The waste ash will be transferred to enclosed tanker trucks by a pneumatic conveying system or it will be sent to a land fill offsite. No revisions to the draft permit are required as a result of this comment.

Public Comment #132

A commenter referenced a comment during the public meeting related to an increase in NOx emissions as a result of lightning strikes and strong thunderstorms and the nearby Duke Energy substation and power lines.

IDEM RESPONSE

IDEM considers potential emissions from emission units located within the property of LGR. IDEM cannot consider potential sources of emissions located outside of the property line. Background levels of NOx were taken into consideration in IDEM's air modeling, as discussed in IDEM RESPONSE to Public Comment #8, above. No revisions to the draft permit are required as a result of this comment.

Public Comment #133

A commenter requested an explanation of the BART rule and if it applied to the LGR facility.

IDEM RESPONSE

Best Available Retrofit Technology (BART) refers to Sections 169A and 169B of the Clean Air Act known as the regional haze rule. BART is designed to address visibility impairment in federally protected parks and wilderness areas (Class I Areas). The State of Indiana does not contain any Class I Areas; however, surrounding states do. IDEM is currently working with BART eligible sources to verify that the sources must comply with the BART requirements. A BART eligible source

is an existing stationary facility consisting of any of the following stationary sources of air pollutants, which were not in operation prior to August 7, 1962 and were in existence on August 7, 1977, and have the potential to emit 250 tons per year or more of any air pollutant:

1) Fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input,
2) Coal cleaning plants (thermal dryers),
3) Kraft pulp mills,
4) Portland cement plants,
5) Primary zinc smelters,
6) Iron and steel mill plants,
7) Primary aluminum ore reduction plants,
8) Primary copper smelters,
9) Municipal incinerators capable of charging more than 250 tons of refuse per day,
10) Hydrofluoric acid plants,
11) Sulfuric acid plants,
12) Nitric acid plants,
13) Petroleum refineries,
14) Lime plants,
15) Phosphate rock processing plants,
16) Coke oven batteries,
17) Sulfur recovery plants,
18) Carbon black plants (furnace process),
19) Primary lead smelters,
20) Fuel conversion plants,
21) Sintering plants,
22) Secondary metal production facilities,
23) Chemical process plants,
24) Fossil-fuel boilers of more than 250 million British thermal units per hour heat input,
25) Petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels,
26) Taconite ore processing facilities,
27) Glass fiber processing plants, and
28) Charcoal production facilities.

The boiler at LGR Milltown was not in existence during the applicability period required by the BART rules; therefore, the rule does not apply to boiler EU-01.

No revisions to the draft permit are required as a result of this comment.

Public Comment #134

A commenter wanted to know why the diesel powered equipment that will be running 24/7 on the site not being included in the emission totals, stating that they would make the plant a major source polluter.

IDEM RESPONSE

LGR provided a list of emission units located at the source subject to the permitting requirements of 326 IAC 2. There may be many other emission units located at the source that are not subject to the permitting rules because their emission levels are so small they qualify as exempt units. LGR is required to identify all emission units located at the source requiring a new source construction permit. Failure to do so opens the source to enforcement action by IDEM. The commenter can find additional information in Public Comment #79, above. No revisions to the draft permit are required as a result of this comment.

Public Comment #135

A commenter stated that the emission analysis of sand for the incinerator bed is inadequate, that the sand could be contaminated with heavy metals not accounted for in the emission calculations, and that LGR should identify the sand chemical characterization for the bed sand. A commenter stated that an approximate value should be included in the emission factors to account for the potential metals that could be present or a description of the specific source of sand and measures LGR must take to ensure the sand is clean should be included in the permit.

IDEM RESPONSE

AP-42 emission factors were developed with testing conducted in fluidized bed boilers using a variety of sand sources. IDEM has no reason to expect operation of this boiler to be significantly different than those used to develop the emission factors. Therefore, there is no reason to expect heavy metal emissions to exceed the levels listed in AP-42. No revisions to the draft permit are required as a result of this comment.

Public Comment #136

Best Available Control Technology (BACT)

A commenter stated that Appendix B of the technical support document only contains BACT analysis for volatile organic compound (VOC) emissions, that biomass combustion facility permits from other states include BACT analyses for the priority air pollutants and HAPs, for example, the air permits for Palmer Renewable Energy LLC, Massachusetts; Russell Biomass, LLC Plan Roseburg-ATC, Massachusetts; Mount Shasta, California and Robbins Community Power in Robbins, Illinois. A commenter stated that BACT should be required at this biomass combustion facility for all other pollutants, because the LGR facility should be classified as a major source after the utilization of the AP-42 emission standards for incinerators or wood burning boilers and the additional emissions not yet considered, such as the sand bed in the incinerator and the potential emission differences between different fuel sources.

IDEM RESPONSE

HCl is not a regulated pollutant under PSD therefore BACT analysis is not required for this HAP emission. The requirements of MACT are not applicable to this pollutant because the source has limited it's HCl emissions (Single HAP) below ten (10) tons per year and consequently limited its total HAPs emissions to less than twenty-five (25) tons per year. No revisions to the draft permit are required as a result of this comment.

Public Comment #137

Nitrogen Oxide (NOx) BACT

A commenter stated that a BACT analysis should be performed for nitrogen oxide (NOx) emissions because most wood-fire boiler permits for biomass combustion facilities require a BACT analysis for NOx, for example, the air permits for Palmer Renewable Energy LLC, Massachusetts; Russell Biomass, LLC Plan Roseburg-ATC, Massachusetts; Mount Shasta, California and Robbins Community Power in Robbins, Illinois. A commenter stated that LGR has proposed using Selective Non-Catalytic Reduction (SNCR) as means to control NO_x emissions; however, information on SNCR control technology as it pertains to NO_x reduction varies, according to on-line information obtained at http://www.wahlco.com/datas/denox-systems.pdf, only 30% to 50% of nitrogen oxides are removed, and a superior technology exists that specifically accounts for wood-fired biomass combustion emissions. This commenter went on to state the technology was developed by Babcock Power (Babcock Power Inc. (http://www.babcockpower.com/)) and is known as Regenerative Selective Catalytic Reduction (RSCR), which can reduce nitrogen oxide emissions by 70% or greater.

Carbon Monoxide (CO) BACT

A commenter stated that a BACT was not performed for CO emissions, and that control technologies for evaluation in this BACT analysis to control CO emissions consist of:

- Oxidation Catalysts; and
- Combustion Controls.

This commenter stated both an oxidation catalyst and combustion controls are technically feasible for the control of CO emissions from wood-fired boilers; however, the performance of the oxidation catalyst is dependent upon the temperature zone in which it is located. This commenter stated that because of the operating temperature requirement, the application of oxidation catalysts has not been successfully applied since the appropriate temperature zone is located upstream of the particulate matter control device in a high ash-loading zone, which creates catalyst deactivation issues similar to the SCR catalyst deactivation described for NOx. This commenter believes a CO BACT should be analyzed.

Particulate Matter, PM_{10} and $PM_{2.5}$ BACT.
A commenter stated that the control technologies evaluated in the BACT analysis to control PM, PM_{10} and $PM_{2.5}$ emissions from the wood-fired stoker boiler consisted of:

- Fabric collector and electrostatic precipitators (ESPs);
- Dry circulating fluid bed scrubber; and
- Multiclones.

This commenter also stated all of the above control devices are technically feasible control alternatives for wood-fired boilers; however, dry scrubbers and mechanical collectors are typically used in conjunction with other PM control technologies such as ESPs or fabric collectors. This commenter stated that although the majority of wood-fired boilers have favored ESPs for particulate control due to fire-related concerns with fabric collectors, a few fabric collectors have been put in operation in the past few years, for example, the air permits for Palmer Renewable Energy LLC, Massachusetts; Russell Biomass, LLC Plan Roseburg-ATC, Massachusetts; Mount Shasta, California and Robbins Community Power in Robbins, Illinois. The commenter stated that fabric collectors are considered slightly superior to ESPs for PM control, especially for fine PM control, and that the BACT analysis for PM control in the LGR draft permit is inadequate and should be performed again to analyze all BACT technologies available.

Boiler Sulfur Dioxide (SO_2) BACT.
A commenter stated that the control technologies evaluated in this BACT analysis to control SO_2 emissions consisted of:

- Wet scrubbers;
- Dry scrubbers (dry circulating fluid bed scrubber);
- Low sulfur fuels; and
- Good combustion practices

The commenter also stated that emissions of SO_2 from fuel combustion result from the oxidation of sulfur compounds present in the fuel, that emissions of SO_2 from wood-fired boilers are inherently minimized by the low sulfur content of the biomass fuel except that C&D derived wood (0.2% by weight sulfur) has the potential for a higher sulfur content than green wood (0.06% by weight sulfur), and that the BACT analysis for SO_2 in the draft permit is inadequate and should be performed again to analyze all possible BACT technologies available.

IDEM RESPONSE

The emissions of NOx, SO2, CO and PM/PM10/PM2.5 are limited below 250 tons per year; therefore, pursuant to 326 IAC 2-2, the emissions of NOx, SO2 CO and PM/PM10/PM2.5 are minor under PSD rules. Therefore, the source is not required to perform BACT analyses for all these emissions. Therefore, IDEM is not performing BACT analyses for the emissions of NOx, SO2, CO and PM/PM10/PM2.5 in this permit.

Public Comment #138

VOC BACT.
A commenter stated that on page 27 of 51 of the draft permit, Permit Condition D.1.4 BACT states “good combustion practices to limit Volatile Organic Compounds (VOC) emissions and the corresponding VOC emission limit shall not exceed 0.019 lb/MMBtu and 7.7 pounds per hour,” and that LGR performed a VOC BACT analysis, which is documented in Appendix B of the technical support document (TSD). The

commenter stated that LGR stated the Sierra Pacific Skaget County Washington Permit also meets the same VOC limit and that the vendors can currently meet this limit; however, LGR's "good combustion practices" are not clearly defined. A commenter also noted an error on page 2 of 8 of the TSD, Appendix A, footnote #4, Boiler Potential to Emit (PTE) it states: "VOC emission factor of 0.0139 lb VOC/MMBtu is an emission limit to avoid BACT review." The commenter correctly identified that the limit is a BACT limit and not a BACT avoidance limit. The commenter went on to state that BACT for VOCs consisted of:

- Oxidation Catalysts; and
- Combustion Controls.

The commenter stated that Palmer Renewable Energy LLC air permit (http://www.mass.gov/dep/public/publiche.htm#pre) analyzed BACT options from other permitted biomass combustion facilities and that BACT for VOCs is the use of good combustion controls in conjunction with an oxidation catalyst. The commenter stated that by employing VOC BACT, Palmer is capable of meeting a VOC emission rate of 0.010 lb/MMBtu, 5.1 pounds per hour and 22.3 tons in any 12 consecutive month period, and that Palmer will base compliance with the short-term VOC emission rates on the average of three 1-hour stack tests. The commenter indicated that Palmer states its emissions are the same as Russell Biomass, LLC, Plan Approval #1-P-05-046 dated December 30, 2008, and that the LGR permit should require the use of an oxidation catalyst in addition to good combustion controls for BACT.

IDEM RESPONSE

IDEM evaluated the technical and economic feasibility for both regenerative thermal oxidation and oxidation catalysts for the control of VOCs emissions. Both control devices are technically feasible but are not economically feasible. The cost of installing a regenerative thermal oxidation and oxidation catalysts is over $20,000/ton of VOC controlled, each, which is outside the range of price to be considered economically feasible. The VOC limits for both Palmer Renewable Energy LLC air permit and the Russell Biomass, LLC air permit have not been tested. Therefore, IDEM is not sure whether these limits are achievable or not, BACT analysis is performed based on proven technologies. Therefore, IDEM cannot use an untested limit for the BACT analysis. The limits used in the permit have been tested and are also the most stringent limit available in the RBLC. Examples of Good Combustion Practices are as follows:

(1) Official documented operating procedure, maintenance procedure, updated as required for equipment or practice change.
(2) Procedure includes startup, shutdown, and malfunction.
(3) Operating logs/record keeping
(4) Training on applicable equipment and procedure.
(5) Routinely schedule evaluation, inspection, overhaul as appropriate for equipment involved.
(6) Maintenance logs/record keeping
(7) Monitor fuel/waste quality
(8) Fuel quality certification from supplier if needed
(9) Periodic fuel/waste sampling and analysis
(10) Fuel/waste handling practices
(11) Fuel/waste sizing specification and checks
(12) Adjustment of air distribution system based on visual observations
(13) Adjustment of air distribution based on continuous or periodic monitoring
(14) Adjustment based on visual observations.

Reference: www.epa.gov/ttn/atw/iccr/dirss/gcp.pdf

No revisions to the draft permit are required as a result of this comment.

Public Comment #139

A commenter requested a copy of LGR's NOx Trading Program application.

IDEM RESPONSE

The source has not submitted an application for the NOx Trading Program because the NOx Trading Program has been replaced by the Clean Air Interstate Rule (326 IAC 24). Pursuant to 326 IAC 24-1(a)(1), this rule applies to any fossil fuel-fired boilers serving at any time after November 15, 1990, with a nameplate capacity of more than twenty-five (25) megawatt electrical producing electricity for sale. 326 IAC 24 defines fossil fuel as natural gas, petroleum, coal, or any form of solid, liquid or gaseous fuel derived from such fuel. 326 IAC 24 defines fossil fuel-fired as a unit combusting any amount of fossil fuel in any calendar year. The generator and boiler will be constructed after November 15, 1990, the generator has a nameplate capacity in excess of 25 MW and it will supply electricity to the grid in excess of 25 MW, and the boiler burns some fossil fuel (propane). Therefore, boiler EU-01 is subject to the requirements of 326 IAC 24. The source shall submit an application for a significant permit modification to incorporate the requirements of 326 IAC 24. The boiler shall not start operation until the permit modification incorporating the requirements of 326 IAC 24 is issued. No revisions to the draft permit are required as a result of this comment.

Public Comment #140

A commenter requested IDEM to address Environmental Justice concerns in the issuance of this permit. Crawford County is one of the poorest in Indiana.

IDEM RESPONSE

This source was not reviewed under 326 IAC 2-2 (Prevention of Significant Deterioration). Environmental Justice concerns were not required to be addressed during this permit review. However, the primary focus of Environmental Justice in regards to new permit actions is to ensure that sufficient and appropriate outreach is done so that residents receive notice and have a meaningful opportunity to comment on the proposed permit. The proposed permit has been the subject of an extensive and well attended public meeting, as well as extensive comments from hundreds of local citizens. No revisions to the draft permit are required as a result of this comment.

Public Comment #141

A commenter asked for an opinion on the number of sources that could be approved in Milltown, Indiana. If IDEM received three applications at the same time for three of these plants, would IDEM approve all three applications?

IDEM RESPONSE

If an applicant meets all of the permitting requirements of 326 IAC 2, IDEM is legally required to issue the permits. No revisions to the draft permit are required as a result of this comment.

Public Comment #142

A commenter was concerned that the Indiana Utility Regulatory Commission (IURC) could issue an emergency order allowing a fuel change at LGR without a permit modification.

IDEM RESPONSE

The LGR facility in Milltown, Indiana can burn clean wood and switchgrass to generate steam in a boiler. A small amount of propane can be used to start up the boiler. Any other fuels must be approved by IDEM and an application for a modification in accordance with 326 IAC 2 is required. Source and permit modifications are subject to the public notification requirements of 326 IAC 2-7-17 (Public Participation and Notice to Affected States) and 326 IAC 2-1.1-6 (Public Notice). The IURC does not have the regulatory authority to issue Part 70 Operating Permits. No revisions to the draft permit are required as a result of this comment.

Public Comment #143

A commenter questioned the ability of LGR to co-fire wood and switchgrass and whether IDEM had the correct rules cited in the draft permit.

IDEM RESPONSE

LGR can burn clean wood and switchgrass in any proportion as long as the specific mix of fuel is the same after the initial performance tests are conducted and approved by IDEM. 40 CFR 60, Subpart Db addresses co-firing fuels in boilers as does 326 IAC 7-1.1. All regulations related to the firing of clean wood and switchgrass have been incorporated into the draft permit. No revisions to the draft permit are required as a result of this comment.

Public Comment #144

A commenter believed emissions from limestone loadout was not included in the emission calculations. The commenter also requested an explanation of how the alkaline sorbent material would be used.

IDEM RESPONSE

Alkaline sorbent is a material used to neutralize acids formed in the combustion of the biomass, such as hydrochloric acid (HCL). Both limestone and the alkaline sorbent will create particulate matter emissions. The potential to emit of both operations is shown in Appendix A to the ATSD. No revisions to the draft permit are required as a result of this comment.

Public Comment #145

A commenter requested an explanation on how this facility would affect non-attainment counties in Kentucky.

IDEM RESPONSE

The rules and regulations regarding the issuance of this permit are based on the county of location of the source. Crawford County, Indiana is in attainment for all criteria pollutants. Modeling analysis performed by the consultant and IDEM indicate emissions from the boiler will not cause a violation of the National Ambient Air Quality Standards. Adjoining states were notified in accordance with 326 IAC 2-7-17 (Public Participation and Notice to Affected States). No revisions to the draft permit are required as a result of this comment.

Public Comment #146

A commenter noticed that the permit did not allow LGR to burn natural gas and that all emissions from natural gas should be included when considering PSD applicability.

IDEM RESPONSE

The general designs of the biomass boilers in Scottsburg, Indiana and Milltown, Indiana are essentially identical with one exception. Natural gas is not available at the Milltown location. Propane will be used for startup operations only. No changes to the draft permit are required as a result of this comment.

Additional IDEM Changes

IDEM, OAQ has decided to make additional revisions to the permit. The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes and will not be updated, but the Permit will have the updated changes. Proposed changes follow:

Permit Attachments

Change #1:

The U.S. EPA has revised 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. The new rule became effective on May 1, 2010 and was amended on June 30, 2010. IDEM has removed and replaced original Attachment C with the new rule, as amended.

Section D Changes

Change #2:

Upon further review, IDEM is revising original condition D.1.13 – Parametric Monitoring to clarify CAM (40 CFR 64) requirements for boiler EU-01. Boiler EU-01 is a large unit under CAM for PM10 and CAM must be addressed in the initial Part 70 Operating Permit. IDEM addressed CAM for PM10 with original Condition D.1.13(a) and added a reference to 40 CFR 64 to the last paragraph. However, a CAM plan for HCL is not required and will be addressed at the first Part 70 Operating Permit Renewal. To eliminate any confusion as to which condition is required under CAM, IDEM is splitting original Condition D.1.13 into two conditions as shown below. Also, IDEM is revising the pressure drop range listed in original Condition D.1.13(a) from 0.5 to 6.0 inches of water to 1.0 to 6.0 inches of water. IDEM understands the pressure drop will be essentially 0.0 inches of water upon bag installation until a filter cake is developed on the bag. A simple note in the pressure drop log indicating the filter bag was replaced would be a reasonable response step to excursions or exceedances in this situation. However, a filter pressure drop reading of 0.5 inches of water during steady state operation would indicate a problem with the filter bag. IDEM is allowing the option of replacing the pressure gauge in place of calibration. IDEM is adding language to clarify the Permittee has an obligation to take reasonable response steps. Finally, a requirement to maintain records of the pressure gauge calibration checks/replacements and compliance stack tests were added to Condition D.1.16. Revisions to the record keeping requirements as a result of this comment are shown in IDEM RESPONSE to EPA Comment #2. All other revisions are shown below:

D.1.13 **Baghouse** Parametric Monitoring Requirements ~~[326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]~~**[40 CFR 64]**

~~(a)~~ The Permittee shall monitor the pressure drop across the baghouse used in conjunction with boiler EU-01 at least once per day when the unit is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of ~~0.5~~**1.0** to 6.0 inches of water or a range established during the latest compliant stack test, the Permittee shall take reasonable response steps**.** ~~in accordance with~~ Section C - Response to Excursions or Exceedances **contains the Permittee's obligation with regard to the reasonable response steps required by this condition**. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps ~~in accordance with Section C - Response to Excursions and Exceedances~~ shall be considered a deviation from this permit.

The instrument used for determining the pressure drop 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. ~~[40 CFR 64]~~

~~(b) If the uncontrolled emission rate of HCL is more than 0.005 lb/MMBtu in compliance testing, the Permittee shall monitor the alkaline sorbent injection rate used with boiler EU-01 at least once per day when the unit is in operation. When for any one reading, the alkaline sorbent injection rate is outside the normal range established during the latest compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. An injection rate reading that is outside the normal range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions and Exceedances shall be considered a deviation from this permit. If the latest compliant stack test indicates the injection of alkaline sorbent is not required to comply with the HCL limitation in Condition~~

~~D.1.6, the Permittee may discontinue the daily injection rate readings and the use of the injection system.~~

D.1.14 Alkaline Sorbent Parametric Monitoring Requirements [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

If the uncontrolled emission rate of HCL is more than 0.005 lb/MMBtu in compliance testing, the Permittee shall monitor the alkaline sorbent injection rate used with boiler EU-01 at least once per day when the unit is in operation. When for any one reading, the alkaline sorbent injection rate is outside the normal range established during the latest compliant stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. An injection rate reading that is outside the normal range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. If the latest compliant stack test indicates the injection of alkaline sorbent is not required to comply with the HCL limitation in Condition D.1.6, the Permittee may discontinue the daily injection rate readings and the use of the injection system.

Section A, Section B and Section C Changes

Change #3:

IDEM, OAQ has made extensive revisions to several Section A, B and C Conditions due to recent revisions to IDEM's standard condition language. The revisions are for clarification purposes or to more accurately summarize the underling rule. To incorporate changes to the standard conditions, IDEM has made the following revisions to the draft permit:

1) IDEM, OAQ has decided to remove all references to the source mailing address. IDEM will continue to maintain records of the mailing address.

2) IDEM, OAQ has decided to clarify Section B – Certification to be consistent with the rule.

3) IDEM, OAQ has decided to clarify Section B – Preventive Maintenance Plan to be consistent with the rule.

4) For clarity, IDEM, OAQ has changed references to the general conditions: "in accordance with Section B", "in accordance with Section C", or other similar language, to " Section C ... contains the Permittee's obligations with regard to the records required by this condition."

5) IDEM, OAQ has decided that the phrases "no later than" and "not later than" are clearer than "within" in relation to the end of a timeline. Therefore all timelines have been switched to "no later than" or "not later than."

6) 326 IAC 2-7 requires that "a responsible official" perform certain actions. 326 IAC 2-7-1(34) allows for multiple people to meet the definition of "responsible official." Therefore, IDEM, OAQ is revising all instances of "the responsible official" to read "a responsible official."

7) IDEM, OAQ has decided to clarify what rule requirements a certification needs to meet. IDEM, OAQ has decided to remove the last sentence dealing with the need for certification from the reporting forms because the Conditions requiring the forms already address this issue.

8) Section B -Duty to Provide Information has been revised.

9) To clarify that Section B - Certification only states what a certification must be,

IDEM, OAQ has revised the condition.

10) IDEM, OAQ is revising Section B - Emergency Provisions to delete paragraph (h). 326 IAC 2-7-5(3)(C)(ii) allows that deviations reported under an independent requirement do not have to be included in the Quarterly Deviation and Compliance Monitoring Report.

11) IDEM, OAQ has decided that having a separate condition for the reporting of deviations is unnecessary. Therefore, IDEM, OAQ has removed Section B - Deviation from Permit Requirements and Conditions and added the requirements of that condition to Section C - General Reporting Requirements. Paragraph (d) of Section C - General Reporting Requirements has been removed because IDEM, OAQ already states the timeline and certification needs of each report in the condition requiring the report.

12) IDEM, OAQ has decided to state which rule establishes the authority to set a deadline for the Permittee to submit additional information. Therefore, Section B - Permit Renewal has been revised.

13) IDEM, OAQ has decided to state that no notice is required for approved changes in Section B - Permit Revision Under Economic Incentives and Other Programs.

14) IDEM, OAQ has added 326 IAC 5-1-1 to the exception clause of Section C - Opacity, since 326 IAC 5-1-1 does list exceptions.

15) IDEM, OAQ has revised Section C - Incineration to more closely reflect the two underlying rules.

16) IDEM, OAQ has removed the first paragraph of Section C - Performance Testing due to the fact that specific testing conditions elsewhere in the permit will specify the timeline and procedures.

17) IDEM, OAQ has revised Section C - Compliance Monitoring. The reference to recordkeeping has been removed due to the fact that other conditions already address recordkeeping. The voice of the condition has been changed to clearly indicate that it is the Permittee that must follow the requirements of the condition.

18) IDEM, OAQ has revised Section C - Response to Excursions or Exceedances. The introduction sentence has been added to clarify that it is only when an excursion or exceedance is detected that the requirements of this condition need to be followed. The word "excess" was added to the last sentence of paragraph (a) because the Permittee only has to minimize excess emissions. The middle of paragraph (b) has been deleted as it was duplicative of paragraph (a). The phrase "or are returning" was added to subparagraph (b)(2) as this is an acceptable response assuming the operation or emission unit does return to normal or its usual manner of operation. The phrase "within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable" was replaced with "normal or usual manner of operation" because the first phrase is just a limited list of the second phrase. The recordkeeping required by paragraph (e) was changed to require only records of the response because the previously listed items are required to be recorded elsewhere in the permit.

19) IDEM, OAQ has revised Section C - Actions Related to Noncompliance Demonstrated by a Stack Test. The requirements to take response steps and minimize excess emissions have been removed because Section C - Response to Excursions or Exceedances already requires response steps related to

exceedances and excess emissions minimization. The start of the timelines was switched from "the receipt of the test results" to "the date of the test". There was confusion if the "receipt" was by IDEM, OAQ, the Permittee, or someone else. Since the start of the timelines has been moved up, the length of the timelines was increased. The new timelines require action within a comparable timeline; and the new timelines still ensure that the Permittee will return to compliance within a reasonable timeframe.

20) Paragraph (b) of Section C - Emission Statement has been removed. It was duplicative of the requirement in Section C - General Reporting Requirements.

21) The voice of paragraph (b) of Section C - General Record Keeping Requirements has been changed to clearly indicate that it is the Permittee that must follow the requirements of the paragraph.

22) IDEM, OAQ has decided to simplify the referencing in Section C - Compliance with 40 CFR 82 and 326 IAC 22-1.

23) IDEM, OAQ has added the Southeastern Regional Office to Section B - Emergency Provisions.

~~Old Section B~~

~~**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 Revocation of Permits [326 IAC 2-1.1-9(5)]~~

~~Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.~~

~~B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]~~

~~This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:~~

~~(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.~~

~~(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.~~

~~(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.~~

~~B.4 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, T 025-27957-00015, 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.5 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.6 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.7 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.8 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.9 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. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). 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.10 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]~~

~~(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.~~

~~(b) One (1) certification shall be included, using the attached Certification Form, 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.11 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~B.12 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) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(b) 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 or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(c) 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.13 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, and 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 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 the certification by the "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.~~

~~(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report. Any emergencies that have been previously reported pursuant to paragraph (b)(5) of this condition and certified by the "responsible official" need only referenced by the date of the original report.~~

~~B.14 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.15 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 T 025-27957-00015 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 combined permit, all previous registrations and permits are superseded by this combined new source review and 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.16 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.17 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]~~

~~(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported 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~~

~~using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.~~

~~The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.~~

~~B.18 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 the certification by the "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.19 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 the certification by the "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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.~~

~~B.20 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 shall be certified by the "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.21 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 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.22 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 the certification by the "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.23 Source Modification Requirement [326 IAC 2-7-10.5]~~

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

~~B.24 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.25 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~~

~~The application which shall be submitted by the Permittee does require the certification by the "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.26 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.27 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.~~

New Section B Conditions

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 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 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, T 025-27957-00015, 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.5 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.6 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.7 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.8 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.9 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.10 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:

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

(ii) 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.11 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent 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.12 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) If required by specific condition(s) in Section D of this permit, 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.

(b) 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).

(c) 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.13 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 or Southeast 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,
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058.

(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.14 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.15 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 T 025-27957-00015 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 combined permit, all previous registrations and permits are superseded by this combined new source review and 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.16 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.17 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.18 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.19 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.20 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.21 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.22 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.23 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.24 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.25 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.26 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.

~~Old Section C Conditions~~

~~**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 5-1-3 (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 or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.~~

~~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 by the "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) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.~~

~~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 certification by the "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 certification by the "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, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 the certification by the "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 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]~~

~~Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.~~

~~C.12 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.13 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 prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.~~

~~(b) These ERPs shall be submitted for approval 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 180 days from the date on which this source commences operation.~~

~~The ERP does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.~~

~~(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.~~

~~(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.~~

~~(f) 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.14 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.15 Response to Excursions or Exceedances [326 IAC 2-7-5][326 IAC 2-7-6]~~

~~(a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.~~

~~(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:~~

~~(1) initial inspection and evaluation;~~

~~(2) recording that operations returned 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 within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.~~

~~(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 maintain the following records:~~

~~(1) monitoring data;~~

~~(2) monitor performance data, if applicable; and~~

~~(3) corrective actions taken.~~

~~C.16 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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.~~

~~(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) 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 the certification by the "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.17 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]~~

~~(a) Pursuant to 326 IAC 2-6-3(b)(3), starting in 2006 and every three (3) years thereafter, the Permittee shall submit by July 1 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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(b) The emission statement 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.18 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]~~

~~(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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.~~

~~C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11]~~

~~(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. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(b) The report required in (a) of this condition and reports required by conditions in Section D of 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~~

~~(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) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(e) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. 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.~~

~~Stratospheric Ozone Protection~~

~~C.20 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 the standards for recycling and emissions reduction:~~

~~(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.~~

~~(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.~~

~~(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.~~

New Section C

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 by using ambient air quality modeling pursuant to 326 IAC 1-7-4. 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 prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval 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 180 days from the date on which this source commences operation.

The ERP 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) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) 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(b)(3), starting in 2006 and every three (3) years thereafter, the Permittee shall submit by July 1 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]

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

(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) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. 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.

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.

Change #4:

IDEM, OAQ is correcting a typographical error and clarifying the PSD applicability explanation in Condition D.2.4. Revisions are shown below:

D.2.4 PSD Minor Limit [326 IAC 2-2]

*** * * * * * * * * ***

Combined with Condition ~~D.1.4~~ **D.1.5** and ~~PM and PM10~~ **potential** emissions from other emission units, these emission limits will limit potential PM and PM10 to less than 250 tons per year each and will render the requirements of 326 IAC 2-2 not applicable to the entire source.

Change #5:

IDEM, OAQ has decided to clarify Section D.2.6 – Preventive Maintenance Plan. Revisions are shown below:

D.2.6 Preventive Maintenance Plan [326 IAC 2-7-5(15)]

A Preventive Maintenance Plan~~, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.~~ **is required for this facility and its control device. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.**

Change #6:

The word "status" has been added to Section D.2.7 and D.2.9. The Permittee has the obligation to document the compliance status. The wording has been revised to properly reflect this. Revisions are shown below:

D.2.7 Particulate Matter Control [326 IAC 2-7-6(6)]

In order to demonstrate **the** compliance **status** with Condition D.2.4, the cartridge vent filters for EU-06, EU-09, EU-14 and EU-15, shall be in use at all times these emission units are in operation.

D.2.9 Record Keeping Requirements

(a) To document **the** compliance **status** with Condition D.2.8, the Permittee shall maintain a weekly record of visible emission notations of the stack exhaust from stacks S-02, S-04, S-06 and S-09. 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 or weather conditions did not permit).

(b) ~~All records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit.~~**Section C – General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.**

Change #6:

The phrase "of this permit" has been added to the paragraph of the Quarterly Deviation and Compliance Monitoring Report to match the underlying rule.

*** * * * * * * * * ***

Page 1 of 2

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".

IDEM Contact

Questions regarding this proposed permit can be directed to:

David J. Matousek
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 (2-8253)
Or dial directly: (317) 232-8253
dmatouse@idem.in.gov

Please reference permit number T025-27957-00015 in all correspondence.

Appendix A to the ATSD: Potential to Emit

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T 025-27957-00015
Plt ID: 025-00015
Reviewer: David J. Matousek
Date: June 4, 2010

Limited Potential to Emit (ton/yr)								
Emission Unit	**PM**	**PM10**	**SO_2**	**VOC**	**CO**	**NOx**	**Single HAP**	**Total HAPs**
Boiler (EU-01) on Biomass	53.48	162.06	248.69	33.73	248.00	245.00	< 9.9	< 24.9
Wood Grinder (EU-16)	31.54	18.92	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Bed Sand Operation (EU-06)	20.63	8.54	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Bottom Ash Operation (EU-07)	2.76	1.14	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Ash Conveying Operation (EU-08)	6.18	2.58	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Ash Loadout Operation (EU-09)	85.96	35.59	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Limestone Operation (EU-14)	17.19	7.12	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Alkaline Sorbent Operation (EU-15)	17.19	7.12	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower (EU-11)	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00
Fire Pump (EU-13)	0.14	0.14	0.13	0.16	0.42	1.94	negligible	negligible
Emergency Generator (EU-12)	0.19	0.19	0.18	0.22	0.58	2.71	negligible	negligible
Total for New Source Construction	236.84	244.98	249.00	34.11	249.00	249.65	< 10.00	< 25.00

Unrestricted Potential to Emit (ton/yr)								
Emission Unit	**PM**	**PM10**	**SO_2**	**VOC**	**CO**	**NOx**	**Single HAP**	**Total HAPs**
Boiler (EU-01) on Biomass	998.29	921.64	248.69	33.73	248.00	392.19	> 10	> 25
Wood Grinder (EU-16)	31.54	18.92	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Bed Sand Operation (EU-06)	206.30	85.41	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Bottom Ash Operation (EU-07)	2.76	1.14	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Ash Conveying Operation (EU-08)	6.18	2.58	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Ash Loadout Operation (EU-09)	343.83	142.35	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Limestone Operation (EU-14)	68.77	28.47	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Alkaline Sorbent Operation (EU-15)	68.77	28.47	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower (EU-11)	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00
Fire Pump (EU-13)	0.14	0.14	0.13	0.16	0.42	1.94	negligible	negligible
Emergency Generator (EU-12)	0.19	0.19	0.18	0.22	0.58	2.71	negligible	negligible
Total for New Source Construction	1,728.35	1,230.89	249.00	34.11	249.00	396.84	> 10	> 25

Appendix A to the ATSD: Emissions Summary
Potential to Emit - Boiler

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T 025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: June 4, 2010

1. Biomass Boiler, Emissions in Ton/Year

Boiler Heat Input Capacity **407.00** **MMBtu/hr**

	Uncontrolled			Limited PTE			
	lb/MMBtu	lb/hr	TPY	Control Efficiency	lb/MMBtu	lb/hr	TPY
PM (Filterable Only)	0.5600	227.92	998.29	94.60%	0.0300	12.21	53.48
PM10(Filterable + Condensible)	0.5170	210.42	921.64	82.59%	0.0900	37.00	162.06
SO_2	0.1394	56.77	248.69	0.00%	0.1394	56.77	248.69
VOC	0.0190	7.70	33.73	0.00%	0.0190	7.70	33.73
CO	0.1391	56.62	248.00	0.00%	0.1391	56.62	248.00
NOx	0.2200	89.54	392.19	37.54%	0.1374	55.93	245.00

Notes:
1) Worst case uncontrolled emission factors from AP-42, Tables 1.6-2, 1.6-3 and 1.6-4, 9/2003 are as follows: PM (Filterable) - 0.56 lb/MMBtu, Filterable PM10 - 0.500 lb/MMBtu, Condensible PM10 - 0.017 lb/MMBtu, NOx - 0.49 lb/MMBtu, SO2 - 0.025 lb/MMBtu, CO - 0.60 lb/MMBtu and VOC - 0.017 lb/MMBtu.
2) The emission factor for the limited PTE of PM (Filterable Only), shown in the table above, is limited by NSPS, Subpart Db to 0.03 lb/MMBtu. The emission factor for the uncontrolled PTE of PM (Filterable Only) used in the table above is the AP-42 emission factor (0.56 lb/MMBtu). The necessary control efficiencies were calculated by IDEM and found to be acceptable.
3) The uncontrolled NOx and CO emission factor were supplied by the applicant and are based on a design specification and a vendor guarantee. The applicant supplied uncontrolled emission factors of 0.126 lb CO/MMBtu and 0.220 lb NOx/MMBtu. IDEM accepted both factors and increased the allowable emissions in the table above to keep the source just under the major source thresholds for PSD. This is to provide a safety margin to the source during day to day operations.
4) The SO2 emission factors shown in the table above 5.6 times the AP-42 emission factor. The applicant requested a more conservative factor for safety.
5) The VOC emission factor shown in the table above is from the BACT determination.
6) The PM10 (Filterable + Condensible) shown above is the AP-42 emission factor with condensible PM added. It is assumed all condensible PM is PM10.

Methodology:
1) PTE (lb/hr) = Heat Input (MMBtu / hr) x (lb Pollutant / MMBtu)

Appendix A to the ATSD: Emissions Summary
Boiler HAP Emissions

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: June 4, 2010

1. Biomass Boiler, Emissions in Ton/Year

Boiler Heat Input Capacity 407.00 MMBtu/hr

Potential to Emit HAPs							
	Emissions Before Control			Limited PTE			Source of Emission Factors
HAP	lb/MMBtu	lb/hr	TPY	lb/MMBtu	lb/hr	TPY	
1,1,1-Trichloroethane	3.10E-05	1.2617E-02	5.5262E-02	3.10E-05	1.2617E-02	5.5262E-02	AP-42, Table 1.6-3 (9/2003)
1,2-Dichloroethane	2.90E-05	1.1803E-02	5.1697E-02	2.90E-05	1.1803E-02	5.1697E-02	AP-42, Table 1.6-3 (9/2003)
1,2-Dichloropropane	3.30E-05	1.3431E-02	5.8828E-02	3.30E-05	1.3431E-02	5.8828E-02	AP-42, Table 1.6-3 (9/2003)
2,3,7,8-Tetrachlorodibenzo-p-dioxins	8.60E-12	3.5002E-09	1.5331E-08	8.60E-12	3.5002E-09	1.5331E-08	AP-42, Table 1.6-3 (9/2003)
2,3,7,8-Tetrachlorodibenzo-p-furans	9.00E-11	3.6630E-08	1.6044E-07	9.00E-11	3.6630E-08	1.6044E-07	AP-42, Table 1.6-3 (9/2003)
2,4,6-Trichlorophenol	2.20E-08	8.9540E-06	3.9219E-05	2.20E-08	8.9540E-06	3.9219E-05	AP-42, Table 1.6-3 (9/2003)
2,4-Dinitrophenol	1.80E-07	7.3260E-05	3.2088E-04	1.80E-07	7.3260E-05	3.2088E-04	AP-42, Table 1.6-3 (9/2003)
2-Methylnaphthalene	1.60E-07	6.5120E-05	2.8523E-04	1.60E-07	6.5120E-05	2.8523E-04	AP-42, Table 1.6-3 (9/2003)
4-Nitrophenol	1.10E-07	4.4770E-05	1.9609E-04	1.10E-07	4.4770E-05	1.9609E-04	AP-42, Table 1.6-3 (9/2003)
Acenaphthene	9.10E-07	3.7037E-04	1.6222E-03	9.10E-07	3.7037E-04	1.6222E-03	AP-42, Table 1.6-3 (9/2003)
Acenaphthylene	5.00E-06	2.0350E-03	8.9133E-03	5.00E-06	2.0350E-03	8.9133E-03	AP-42, Table 1.6-3 (9/2003)
Acetophenone	3.20E-09	1.3024E-06	5.7045E-06	3.20E-09	1.3024E-06	5.7045E-06	AP-42, Table 1.6-3 (9/2003)
Anthracene	3.00E-06	1.2210E-03	5.3480E-03	3.00E-06	1.2210E-03	5.3480E-03	AP-42, Table 1.6-3 (9/2003)
Benzo(a)anthracene	6.50E-08	2.6455E-05	1.1587E-04	6.50E-08	2.6455E-05	1.1587E-04	AP-42, Table 1.6-3 (9/2003)
Benzo(a)pyrene	2.60E-06	1.0582E-03	4.6349E-03	2.60E-06	1.0582E-03	4.6349E-03	AP-42, Table 1.6-3 (9/2003)
Benzo(b)fluoranthene	1.00E-07	4.0700E-05	1.7827E-04	1.00E-07	4.0700E-05	1.7827E-04	AP-42, Table 1.6-3 (9/2003)
Benzo(g,h,i)fluoranthene	9.30E-08	3.7851E-05	1.6579E-04	9.30E-08	3.7851E-05	1.6579E-04	AP-42, Table 1.6-3 (9/2003)
Benzo(j,k)fluoranthene	1.60E-07	6.5120E-05	2.8523E-04	1.60E-07	6.5120E-05	2.8523E-04	AP-42, Table 1.6-3 (9/2003)
Benzo(k)fluoranthene	3.60E-08	1.4652E-05	6.4176E-05	3.60E-08	1.4652E-05	6.4176E-05	AP-42, Table 1.6-3 (9/2003)
bis(2-Ethylhexyl)phthalate	4.70E-08	1.9129E-05	8.3785E-05	4.70E-08	1.9129E-05	8.3785E-05	AP-42, Table 1.6-3 (9/2003)
Bromomethane	1.50E-05	6.1050E-03	2.6740E-02	1.50E-05	6.1050E-03	2.6740E-02	AP-42, Table 1.6-3 (9/2003)
Carbon tetrachloride	4.50E-05	1.8315E-02	8.0220E-02	4.50E-05	1.8315E-02	8.0220E-02	AP-42, Table 1.6-3 (9/2003)
Chlorine	7.90E-04	3.2153E-01	1.4083E+00	7.90E-04	3.2153E-01	1.4083E+00	AP-42, Table 1.6-3 (9/2003)
Chlorobenzene	3.30E-05	1.3431E-02	5.8828E-02	3.30E-05	1.3431E-02	5.8828E-02	AP-42, Table 1.6-3 (9/2003)
Chloroform	2.80E-05	1.1396E-02	4.9914E-02	2.80E-05	1.1396E-02	4.9914E-02	AP-42, Table 1.6-3 (9/2003)
Chloromethane	2.30E-05	9.3610E-03	4.1001E-02	2.30E-05	9.3610E-03	4.1001E-02	AP-42, Table 1.6-3 (9/2003)
Chrysene	3.80E-08	1.5466E-05	6.7741E-05	3.80E-08	1.5466E-05	6.7741E-05	AP-42, Table 1.6-3 (9/2003)
Dichloromethane	2.90E-04	1.1803E-01	5.1697E-01	2.90E-04	1.1803E-01	5.1697E-01	AP-42, Table 1.6-3 (9/2003)
Ethylbenzene	3.10E-05	1.2617E-02	5.5262E-02	3.10E-05	1.2617E-02	5.5262E-02	AP-42, Table 1.6-3 (9/2003)
Fluoranthene	1.60E-06	6.5120E-04	2.8523E-03	1.60E-06	6.5120E-04	2.8523E-03	AP-42, Table 1.6-3 (9/2003)
Fluorene	3.40E-06	1.3838E-03	6.0610E-03	3.40E-06	1.3838E-03	6.0610E-03	AP-42, Table 1.6-3 (9/2003)
Heptachlorodibenzo-p-dioxins	2.00E-09	8.1400E-07	3.5653E-06	2.00E-09	8.1400E-07	3.5653E-06	AP-42, Table 1.6-3 (9/2003)
Heptachlorodibenzo-p-furans	2.40E-10	9.7680E-08	4.2784E-07	2.40E-10	9.7680E-08	4.2784E-07	AP-42, Table 1.6-3 (9/2003)
Hexachlorodibenzo-p-dioxins	1.60E-06	6.5120E-04	2.8523E-03	1.60E-06	6.5120E-04	2.8523E-03	AP-42, Table 1.6-3 (9/2003)
Hexachlorodibenzo-p-furans	2.80E-10	1.1396E-07	4.9914E-07	2.80E-10	1.1396E-07	4.9914E-07	AP-42, Table 1.6-3 (9/2003)
Hydrogen chloride	1.90E-02	7.7330E+00	3.3871E+01	0.005000	2.0350E+00	8.9133E+00	AP-42, Table 1.6-3 (9/2003)
Indeno(1,2,3,c,d)pyrene	8.70E-08	3.5409E-05	1.5509E-04	8.70E-08	3.5409E-05	1.5509E-04	AP-42, Table 1.6-3 (9/2003)
Naphthalene	9.70E-05	3.9479E-02	1.7292E-01	9.70E-05	3.9479E-02	1.7292E-01	AP-42, Table 1.6-3 (9/2003)
Octachlorodibenzo-p-dioxins	6.60E-08	2.6862E-05	1.1766E-04	6.60E-08	2.6862E-05	1.1766E-04	AP-42, Table 1.6-3 (9/2003)
Octachlorodibenzo-p-furans	8.80E-11	3.5816E-08	1.5687E-07	8.80E-11	3.5816E-08	1.5687E-07	AP-42, Table 1.6-3 (9/2003)
o-Xylene	2.50E-05	1.0175E-02	4.4567E-02	2.50E-05	1.0175E-02	4.4567E-02	AP-42, Table 1.6-3 (9/2003)
Pentachlorodibenzo-p-dioxins	1.50E-09	6.1050E-07	2.6740E-06	1.50E-09	6.1050E-07	2.6740E-06	AP-42, Table 1.6-3 (9/2003)
Pentachlorodibenzo-p-furans	4.20E-10	1.7094E-07	7.4872E-07	4.20E-10	1.7094E-07	7.4872E-07	AP-42, Table 1.6-3 (9/2003)
Pentachlorophenol	5.10E-08	2.0757E-05	9.0916E-05	5.10E-08	2.0757E-05	9.0916E-05	AP-42, Table 1.6-3 (9/2003)
Perylene	5.20E-10	2.1164E-07	9.2698E-07	5.20E-10	2.1164E-07	9.2698E-07	AP-42, Table 1.6-3 (9/2003)
Phenanthrene	7.00E-06	2.8490E-03	1.2479E-02	7.00E-06	2.8490E-03	1.2479E-02	AP-42, Table 1.6-3 (9/2003)
Phenol	5.10E-05	2.0757E-02	9.0916E-02	5.10E-05	2.0757E-02	9.0916E-02	AP-42, Table 1.6-3 (9/2003)
Propionaldehyde	6.10E-05	2.4827E-02	1.0874E-01	6.10E-05	2.4827E-02	1.0874E-01	AP-42, Table 1.6-3 (9/2003)
Pyrene	3.70E-06	1.5059E-03	6.5958E-03	3.70E-06	1.5059E-03	6.5958E-03	AP-42, Table 1.6-3 (9/2003)
Tetrachlorodibenzo-p-dioxins	4.70E-10	1.9129E-07	8.3785E-07	4.70E-10	1.9129E-07	8.3785E-07	AP-42, Table 1.6-3 (9/2003)
Tetrachlorodibenzo-p-furans	7.50E-10	3.0525E-07	1.3370E-06	7.50E-10	3.0525E-07	1.3370E-06	AP-42, Table 1.6-3 (9/2003)
Tetrachloroethene	3.80E-05	1.5466E-02	6.7741E-02	3.80E-05	1.5466E-02	6.7741E-02	AP-42, Table 1.6-3 (9/2003)
Trichloroethene	3.00E-05	1.2210E-02	5.3480E-02	3.00E-05	1.2210E-02	5.3480E-02	AP-42, Table 1.6-3 (9/2003)
Vinyl Chloride	1.80E-05	7.3260E-03	3.2088E-02	1.80E-05	7.3260E-03	3.2088E-02	AP-42, Table 1.6-3 (9/2003)
Antimony	7.90E-06	3.2153E-03	1.4083E-02	7.90E-06	3.2153E-03	1.4083E-02	AP-42, Table 1.6-3 (9/2003)
Arsenic	2.20E-05	8.9540E-03	3.9219E-02	2.20E-05	8.9540E-03	3.9219E-02	AP-42, Table 1.6-3 (9/2003)
Beryllium	1.10E-06	4.4770E-04	1.9609E-03	1.10E-06	4.4770E-04	1.9609E-03	AP-42, Table 1.6-3 (9/2003)
Cadmium	4.10E-06	1.6687E-03	7.3089E-03	4.10E-06	1.6687E-03	7.3089E-03	AP-42, Table 1.6-3 (9/2003)
Chromium, total	2.10E-05	8.5470E-03	3.7436E-02	2.10E-05	8.5470E-03	3.7436E-02	AP-42, Table 1.6-3 (9/2003)
Chromium, hexavalent	3.50E-06	1.4245E-03	6.2393E-03	3.50E-06	1.4245E-03	6.2393E-03	AP-42, Table 1.6-3 (9/2003)
Cobalt	6.50E-06	2.6455E-03	1.1587E-02	6.50E-06	2.6455E-03	1.1587E-02	AP-42, Table 1.6-3 (9/2003)
Lead	4.80E-05	1.9536E-02	8.5568E-02	4.80E-05	1.9536E-02	8.5568E-02	AP-42, Table 1.6-3 (9/2003)
Manganese	1.60E-03	6.5120E-01	2.8523E+00	1.60E-03	6.5120E-01	2.8523E+00	AP-42, Table 1.6-3 (9/2003)
Mercury	3.50E-06	1.4245E-03	6.2393E-03	3.50E-06	1.4245E-03	6.2393E-03	AP-42, Table 1.6-3 (9/2003)
Nickel	3.30E-05	1.3431E-02	5.8828E-02	3.30E-05	1.3431E-02	5.8828E-02	AP-42, Table 1.6-3 (9/2003)
Phosphorus	2.70E-05	1.0989E-02	4.8132E-02	2.70E-05	1.0989E-02	4.8132E-02	AP-42, Table 1.6-3 (9/2003)
Selenium	2.80E-06	1.1396E-03	4.9914E-03	2.80E-06	1.1396E-03	4.9914E-03	AP-42, Table 1.6-3 (9/2003)

Continued on Next Page

Appendix A to the ATSD: Emissions Summary
Potential to Emit - Boiler HAPs

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: June 4, 2010

Potential to Emit HAPs							
	Emissions Before Control			Limited PTE			Source of Emission Factors
HAP	lb/MMBtu	lb/hr	TPY	lb/MMBtu	lb/hr	TPY	
1,1,2-Trichloroethane	1.20E-04	4.8840E-02	2.1392E-01	1.20E-04	4.8840E-02	2.1392E-01	NACASI TB-858, Table 20A
1,2,4-Trichlorobenzene	5.50E-05	2.2385E-02	9.8046E-02	5.50E-05	2.2000E-02	1.0000E-01	NACASI TB-858, Table 20A
2,4-Dinitrotoluene	9.40E-07	3.8258E-04	1.6757E-03	9.40E-07	0.0000E+00	0.0000E+00	NACASI TB-858, Table 20A
4,6-Dinitro-2-methyl phenol	2.10E-06	8.5470E-04	3.7436E-03	2.10E-06	1.0000E-03	0.0000E+00	NACASI TB-858, Table 20A
Acetaldehyde	2.30E-04	9.3610E-02	4.1001E-01	2.30E-04	9.4000E-02	4.1000E-01	NACASI TB-858, Table 20A
Acrolein	7.80E-05	3.1746E-02	1.3905E-01	7.80E-05	3.2000E-02	1.4000E-01	NACASI TB-858, Table 20A
Benzene	2.70E-04	1.0989E-01	4.8132E-01	2.70E-04	1.1000E-01	4.8000E-01	NACASI TB-858, Table 20A
Cumene	1.80E-05	7.3260E-03	3.2088E-02	1.80E-05	7.0000E-03	3.0000E-02	NACASI TB-858, Table 20A
Dibenzo(a,h)anthracene	9.10E-09	3.7037E-06	1.6222E-05	9.10E-09	0.0000E+00	0.0000E+00	NACASI TB-858, Table 20A
Di-n-butyl phthalate	3.30E-05	1.3431E-02	5.8828E-02	3.30E-05	1.3000E-02	6.0000E-02	NACASI TB-858, Table 20A
Formaldehyde	7.84E-04	3.1924E-01	1.3983E+00	7.84E-04	3.1900E-01	1.4000E+00	NACASI TB-858, Table 20A
Hexachlorobenzene	1.00E-06	4.0700E-04	1.7827E-03	1.00E-06	0.0000E+00	0.0000E+00	NACASI TB-858, Table 20A
m,p-Xylene	5.30E-06	2.1571E-03	9.4481E-03	5.30E-06	2.0000E-03	1.0000E-02	NACASI TB-858, Table 20A
Methanol	8.60E-04	3.5002E-01	1.5331E+00	8.60E-04	3.5000E-01	1.5300E+00	NACASI TB-858, Table 20A
Methyl Isobutyl Ketone	2.30E-05	9.3610E-03	4.1001E-02	2.30E-05	9.0000E-03	4.0000E-02	NACASI TB-858, Table 20A
N-Hexane	2.90E-04	1.1803E-01	5.1697E-01	2.90E-04	1.1800E-01	5.2000E-01	NACASI TB-858, Table 20A
Styrene	3.20E-05	1.3024E-02	5.7045E-02	3.20E-05	1.3000E-02	6.0000E-02	NACASI TB-858, Table 20A
Toluene	2.70E-05	1.0989E-02	4.8132E-02	2.70E-05	1.1000E-02	5.0000E-02	NACASI TB-858, Table 20A
			Highest HAP - Hcl (TPY)	**33.87**		**< 9.9**	or 0.005528 lb/MMBtu
			Total HAP (TPY)	**45.12**		**< 24.9**	or 0.01397 lb/MMBtu

Notes:
1) NACASI TB-858 is Technical Bulletin 858 from the National Council for Air and Stream Improvement.
2) The applicant believes the HAP emission factors in AP-42 do not accurately reflect the operation of this boiler because the AP-42 emission factors reflects burning all types of wood including treated wood. This boiler burns only clean wood. Emission limits and testing requirements have been added to verify VOC, Hcl and HAP emissions.

Methodology:
1) PTE (lb/hr) = Heat Input (MMBtu / hr) x (lb Pollutant / MMBtu)
2) PTE (ton/yr) = PTE (lb/hr) x (8,760 hr/yr) x (1 Ton / 2,000 lb)
3) Total HAP Limit = (20.12 TPY) x (2000 lb/ton) x (yr / 8760 hr) x (hr / 407 MMBtu)
4) lb/MMBtu HAP = [HAP emissions (ton/yr) x 2000 lb/ton] / [407 MMBtu/hr x 8,760 hr/yr]]

Appendix A to the ATSD: Emissions Summary Sheet

Limited Potential to Emit Particulate Matter from Process Units

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T 025-27957-00015
Plt ID: 025-00015
Reviewer: David J. Matousek
Date: June 4, 2010

					Uncontrolled PM Emissions			Uncontrolled PM10 Emissions			Limited Particulate Emissions				
Emission Unit Description	Emission Unit ID	Stack ID	Throughput (ton/hr)	Emission Factor PM (lb/ton)	PM Emissions (lb/hr)	PM Emissions (TPY)	Emission Factor PM10 (lb/ton)	PM10 Emissions (lb/hr)	PM10 Emissions (TPY)	Overall Control Efficiency	PM Emissions (TPY)	PM10 Emissions (TPY)	PM Emissions (lb/hr)	PM10 Emissions (lb/hr)	326 IAC 6-3-2 Limit (lb PM10/hr)
Wood Conveying System (Insignificant Activity)	EU-02	None	300.0	0.00273	0.82	3.60	0.00129	0.39	1.71	0.00%	3.60	1.71	0.820	0.390	63.01
Saw Dust Conveying (Insignificant Activity)	EU-04	None	100.0	0.00288	0.29	1.28	0.00136	0.14	0.62	0.00%	1.28	0.62	0.290	0.140	51.28
Pneumatic Bed Sand Conveying	EU-06	S-02	30.0	1.57	47.10	206.30	0.65	19.50	85.41	90.00%	20.63	8.54	4.710	1.950	40.04
Pneumatic Bottom Ash Conveying	EU-07	S-03	0.4	1.57	0.63	2.76	0.65	0.26	1.14	0.00%	2.76	1.14	0.630	0.260	2.22
Pneumatic Ash Conveying System (Insignificant Activity)	EU-08	S-04	0.9	1.57	1.41	6.18	0.65	0.59	2.58	0.00%	6.18	2.58	1.411	0.589	3.83
Ash Load Out Operation	EU-09	S-04	50.0	1.57	78.50	343.83	0.65	32.50	142.35	75.00%	85.96	35.59	19.626	8.126	44.58
Pneumatic Limestone Conveying	EU-14	S-06	10.0	1.57	15.70	68.77	0.65	6.50	28.47	75.00%	17.19	7.12	3.925	1.626	19.18
Pneumatic Alkaline Sorbent Conveying	EU-15	S-09	10.0	1.57	15.70	68.77	0.65	6.50	28.47	75.00%	17.19	7.12	3.925	1.626	19.18
Wood Grinder	EU-16	NA	300.0	2.40E-02	7.20	31.54	1.44E-02	4.32	18.92	0.00%	31.54	18.92	7.201	4.320	63.01

Notes:

1) The applicant submitted emission calculations based on the projected air flow and grain loading in the baghouse stacks for each of the emission units listed in this table. This method generally overestimates uncontrolled emissions. IDEM has found that pneumatic loading of cement supplement is similar in nature to boiler ash and lime. The emission factor used for potential to emit calculations for ash, sorbent and lime is from AP-42, Chapter 11.12, Table 11.12-2, SCC 3-05-011-17, Cement Supplement unloading to an elevated storage silo (pneumatic). Emission factors for EU-02, EU-04 and EU-07 are based on AP-42, Section 13.2.4.3, 11/2006. The emission factor for EU-02 was multiplied by a factor of 15 to account for fifteen transfer legs. The emission factor for EU-04 was multiplied by six to account for six transfer legs.
2) Emissions from EU-02 and EU-04 are not included in the potential to emit of the source because they consist of fugitive emissions. Fugitive emissions are not included in PSD applicability determinations. These emission units are subject to 326 IAC 6-4.
3) The emission calculations for wet ash loadout are not shown in the table above because, the emissions from dry pneumatic ash loadout are worst case. The emission factor used for wet ash loadout is 0.20 lb PM/ton ash and 0.01 lb PM10/ton ash with a 75% control efficiency for the pug mixer. The emission factors are from "Uncontrolled Emission Factor Listing for Criteria Air Pollutants," Volume II, Chapter 14, July 2001.
4) The applicant submitted emission factors for log debarking as a substitute for wood grinding. The emission factors are more conservative then the emission factors provided in AP-42 under SCC 30700801 which lists PM emissions as 2E-02 and PM10 as 1.1E-02 lb/ton. IDEM has reviewed and accepted the emission factors.

Methodology:

1) Emissions (lb/hr) = Throughput (ton/hr) x Emission Factor (lb/ton)
2) Emissions (TPY) = Emissions (lb/hr) x 8,760 hr/yr x (1 ton / 2,000 lb)
3) Controlled Emissions (TPY) = Uncontrolled Emissions (TPY) x (1 - overall control efficiency)
4) 326 IAC 6-3-2 Limit (lb/hr) for emission units EU-06, EU-07, EU-08, EU-09, EU-14 and EU-15 = 4.10 x P ^ 0.67 where: P is the process weight rate in tons/hr.
5) 326 IAC 6-3-2 Limit (lb/hr) for emission units EU-02, EU-04 and EU-16 = (55.0 x P ^ 0.11) - 40 where: P is the process weight rate in tons/hr.
6) Wood and Saw Dust emission factors were provided by the applicant and accepted by IDEM.

Appendix A to the ATSD: Emission Calculations
PM/PM10 Emissions - Cooling Tower EU-11

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: June 4, 2010

1. Process Description:

Type of Cooling Tower:	Induced Draft	
Circulation Flow Rate:	36,000	gal/min
Total Drift:	0.0005	% of the circulating flow
Total Dissolved Solids:	4,000	ppm
Density:	8.345	lbs/gal

2. Potential to Emit PM/PM10:

PTE of PM/PM10 (lbs/hr) = 0.36 lbs/hr

PTE of PM/PM10 (tons/yr) = 1.58 tons/yr

Notes:
1) Emission calculations are based on AP-42, Chapter 13.4, Table 13.4-1, January 1995. The default drift is 0.02%. The applicant has chosen high efficiency drift eliminators and an assumed drift rate of 0.005%.
2) PM is assumed to be equal to PM10.

Methodology:
1) Emissions (lb/hr) = [Flow (gal/min) x 60 min/hr x (Drift % / 100) x density (lb/gal) x TDS (ppm)] x (1 / 1,000,000)
2) Emissions (TPY) = Emissions (lb/hr) x 8,760 hr/yr x (1 ton / 2,000 lb)

Appendix A to the ATSD: Emission Calculations
Combustion Emissions - Emergency Fire Pump

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: June 4, 2010

1. Emission Factors: AP-42, Table 3.3-1 (10/1996)

PM/PM10	2.20E-03	lb/hp-hr
SO2	2.05E-03	lb/hp-hr
VOC	2.51E-03	lb/hp-hr
CO	6.68E-03	lb/hp-hr
NOx	3.10E-02	lb/hp-hr

2. Potential Emissions Calculations - Regulated Pollutants

Rated Capacity	250 hp
Proposed Hours of Operation	500 hours

Unlimited Work Potential =	500.00 hr/yr	x	250 hp	=	125,000 hp-hr/yr
Limited Work Potential =	500.00 hr/yr	x	250 hp	=	125,000 hp-hr/yr

Fire Pump Emissions	PM/PM10 (TPY)	SO2 (TPY)	VOC (TPY)	CO (TPY)	NOx (TPY)
PTE	0.14	0.13	0.16	0.42	1.94
Limited PTE	0.14	0.13	0.16	0.42	1.94

3. Potential Emissions Calculation - HAPs, AP-42, Table 3.3-2 (10/1996)

Overall Energy Efficiency	40.00%	
Output HP	250.00	Rated HP Output
Estimated HP Input	625.00	Required HP Input
Estimated Heat Input Rate	1.59	MMBtu/hr

Pollutant	Emission Factor (lb/MMBtu)	PTE (TPY)	Limited PTE (TPY)
Benzene	9.33E-04	0.0004	0.0004
Toluene	4.09E-04	0.0002	0.0002
Xylenes	2.85E-04	0.0001	0.0001
Propylene	2.58E-03	0.0010	0.0010
1,3-Butadiene	3.91E-05	0.0000	0.0000
Formaldehyde	1.18E-03	0.0005	0.0005
Acetaldehyde	7.67E-04	0.0003	0.0003
Acrolein	9.25E-05	0.0000	0.0000
PAHs	1.68E-04	0.0001	0.0001
Total HAPS		**0.0026**	**0.0026**

Methodology:
1) Unlimited Potential to Emit (tons per year) = Emission Factor (lb/hp-hr) x Unlimited Work Potential (hp-hr/yr) / 2,000 lb/ton)
2) Limited Potential to Emit (tons per year) = Emission Factor (lb/hr-hr) x Limited Work Potential (hp-hr/yr) / (2,000 lb/ton)
3) Total polycyclic aromatic hydrocarbons (PAHs) are reported due to the small quantities emitted.
4) Estimated HP Input (HP) = Rated HP Output / Overall Energy Efficiency
5) Estimated Heat Input Rate (MMBtu/hr) = Estimated HP Input (hp) x 2,545 Btu/hp-hr x 1 MMBtu / Btu
6) HAP Emissions (TPY) = Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x (1 ton / 2,000 lb) x 8,760 hr/yr
7) All emission factors are from Chapter 3.3, Table 3.3-1 & 3.3-2, October 1996.

Appendix A to the ATSD: Emission Calculations
Combustion Emissions - Emergency Generator

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T 025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: June 4, 2010

1. Emission Factors: AP-42, Table 3.3-1 (10/1996)

PM/PM10	2.20E-03	lb/hp-hr
SO2	2.05E-03	lb/hp-hr
VOC	2.51E-03	lb/hp-hr
CO	6.68E-03	lb/hp-hr
NOx	3.10E-02	lb/hp-hr

2. Potential Emissions Calculations - Regulated Pollutants

Rated Capacity	350 hp
Proposed Hours of Operation	500 hours

Unlimited Work Potential =	500.00 hr/yr	x	350 hp	=	175,000 hp-hr/yr
Limited Work Potential =	500.00 hr/yr	x	350 hp	=	175,000 hp-hr/yr

Generator Emissions	PM/PM10 (TPY)	SO2 (TPY)	VOC (TPY)	CO (TPY)	NOx (TPY)
PTE	0.19	0.18	0.22	0.58	2.71
Limited PTE	0.19	0.18	0.22	0.58	2.71

3. Potential Emissions Calculation - HAPs, AP-42, Table 3.3-2 (10/1996)

Overall Energy Efficiency	40.00%	
Output HP	350.00	Rated HP Output
Estimated HP Input	875.00	Required HP Input
Estimated Heat Input Rate	2.23	MMBtu/hr

Pollutant	Emission Factor (lb/MMBtu)	PTE (TPY)	Limited PTE (TPY)
Benzene	9.33E-04	0.0005	0.0005
Toluene	4.09E-04	0.0002	0.0002
Xylenes	2.85E-04	0.0002	0.0002
Propylene	2.58E-03	0.0014	0.0014
1,3-Butadiene	3.91E-05	0.0000	0.0000
Formaldehyde	1.18E-03	0.0007	0.0007
Acetaldehyde	7.67E-04	0.0004	0.0004
Acrolein	9.25E-05	0.0001	0.0001
PAHs	1.68E-04	0.0001	0.0001
Total HAPS		**0.0036**	**0.0036**

Methodology:
1) Unlimited Potential to Emit (tons per year) = Emission Factor (lb/hp-hr) x Unlimited Work Potential (hp-hr/yr) / 2,000 lb/ton)
2) Limited Potential to Emit (tons per year) = Emission Factor (lb/hr-hr) x Limited Work Potential (hp-hr/yr) / (2,000 lb/ton)
3) Total polycyclic aromatic hydrocarbons (PAHs) are reported due to the small quantities emitted.
4) Estimated HP Input (HP) = Rated HP Output / Overall Energy Efficiency
5) Estimated Heat Input Rate (MMBtu/hr) = Estimated HP Input (hp) x 2,545 Btu/hp-hr x 1 MMBtu / Btu
6) HAP Emissions (TPY) = Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x (1 ton / 2,000 lb) x 8,760 hr/yr
7) All emission factors are from Chapter 3.3, Table 3.3-1 & 3.3-2, October 1996.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD)
Appendix B – Public Comments List

Source Description and Location

Source Name:	Liberty Green Renewables Indiana, LLC
Source Location:	Intersection SR 64 and SR 66 Milltown, Indiana 47145
County:	Crawford
SIC Code:	4911
Operation Permit No.:	T 025-27957-00015
Permit Reviewer:	David J. Matousek / Josiah Balogun

Public Commenters

Commenter No.	Name
1	Adams, Barbara
2	Albertson, Chris and Amanda
3	Alrefai, Hisham
4	Ammon, J.
5	Andrew, Deborah
6	Archangel, Rob
7	Ash, Paul
8	Aszman, Albert
9	Avery, Shane
10	Azad, Deepak
11	Bednaz, Noel
12	Belcher, Frances
13	Bertuccio, Lucille
14	Beswick, Paul and Onieda
15	Beswick, Richard and Kimberly
16	Blanton, Teri
17	Bowles, John
18	Bowles, Kathy
19	Bowles, Scot
20	Bowman, Hilda
21	Bowman, Lou Ann and David
22	Brashear, Bo
23	Brewer, Gretchen

Commenter No.	Name
24	Brightwell, Maxine and Brian
25	Brown, Anthony
26	Brown, Mally
27	Broyles, Julie
28	Buchler, Tonya / Stillwell, David
29	Buhse, Chuck
30	Buhse, Janet
31	Bunch, Van
32	Burton, Martha
33	Burwinkel, Mark
34	Bye, Larry
35	Ceartas, Devin
36	Chapman, Sue
37	Chicoine, Jana
38	Churchill, Fred
39	Cohen, John
40	Cooke, William
41	Cooper, Brigitte
42	Cornett, Douglas
43	Cornett, Norma
44	Coyte, David
45	Craig, Jennifer
46	Craig, Mike

Commenter No.	Name
47	Crecelius, Lorraine and Melvin
48	Creceluis, Margie
49	Croasdell, John and Lora
50	Cronin, Colleen
51	Czajka, Terri
52	Daily, Erin
53	Davis, Jennifer
54	Doddridge, Tom
55	Donham, Mark
56	Dorrough, Karen
57	Drake, Mr. and Mrs Christopher
58	Dunbar, Lynn
59	Dupont, Diana
60	Eastridge, Janice & Conklin, Donald
61	Ebinger, Mark
62	Eblen, Monica
63	Elliot, Zac
64	Emmert, Rock
65	Emrich, Linda
66	Englert, Mike
67	Erickson, Dustin
68	Evans, Dinda
69	Fay, Susan
70	Floyd, Ronald
71	Fowler, William and Karen
72	Frazier, Penny
73	Funk, James
74	Galli, Bill
75	Geltmaken, Tami
76	Giese, Mark
77	Gill, Rupinder
78	Gillen, Larry
79	Gleitz, Bob
80	Greene, Linda
81	Greene, Terri

Commenter No.	Name
82	Gribbin, Susan
83	Grieser, D.
84	Grimes, Stephen
85	Haile, Randall
86	Hammond, Maryellen
87	Hanson, Kristi
88	Harrell, Helen
89	Harris, Gillian
90	Harrison, Robert
91	Hawkins, Patricia
92	Haynie, Leigh
93	Hendrickson, Lorene
94	Herron, Eric
95	Hicks, Michael
96	Hill, Art
97	Hill, Gina
98	Hill, Jonathan
99	Hill, Lorrie
100	Hill, Matthew
101	Hoersch, Magdalena
102	Holland, Charles
103	Hood, Mary
104	Hulett, Lisa
105	Humphries, Lyn
106	Hunefeld, Larry
107	Jackson, Josh
108	Jenkins, Rodney and Linda
109	Jenks, Kathleen
110	Jones, Cara Beth
111	Kaiser, Clarence J.
112	Kalla, Alec
113	Karmire, Kathy
114	Kho, Eusebio
115	Knieriem, Ricki
116	Kreps, Edwina

Commenter No.	Name
117	Kundysek, Marilyn
118	LaHue, Patricia and Norris
119	Laing, Susan
120	Laird, Drew
121	Langdon, Richard
122	Larsen, Siri
123	Lea, Carey
124	Liles, Bruce
125	Long, Bettina
126	Lucas Oil Products, Inc.
127	Lucas, Forrest
128	Lucas, Janet
129	Mahler, Andy & Lee, Linda
130	Mahoney, Bill and Laura
131	Maloney, Tim
132	Mann, Louis
133	Marshall, Gwen
134	Martin, Joshua
135	Mason, June Ann
136	Mattingly, Gene
137	Mauck, Debra
138	McClain, Frank and Jennifer
139	McSpadden, Bobby
140	McSpadden, Lisa
141	Moore, Amanda
142	Morris, Donis and Ralph
143	Morris, Eric
144	Morris, Stacie
145	Moskowitz, Karyn
146	Muth, Suzanne
147	Neilson, Tom
148	Nunley, Joel
149	Parks, Charles
150	Payne, Christina
151	Phillips, Charles

Commenter No.	Name
152	Pitman, Rick and Penny
153	Poe, Ralph and Sheree
154	Portinova, Sam
155	Pretila, Wayne
156	Primm, Alex
157	Ramsey, Catherine
158	Ransdell, Christine
159	Redoutey, Karolyn
160	Reed, Ernest
161	Reef, Meghan
162	Rhodes, Craig
163	Rice, Mary
164	Riddle, Betty
165	Robinson, Joey
166	Rodgers, Kevin
167	Rushing, Jennifer
168	Sammons, William
169	Schaftlein, Patricia and Ronnie
170	Scherubel, Rich & Marsha
171	Schotter, Albert & Rella
172	Scutt, T.
173	Seidl, Mike
174	Shaffner, Jessica
175	Sheehan, Margaret
176	Shelton, Dewey
177	Situster, Patricia
178	Sivamohan, Dhamy
179	Slotnick, Lauryn
180	Smythe, Diana
181	Snelling, Randy
182	Southerland, Vickie
183	Spring, Janet
184	Spurgeon, Steven
185	Staff, Ron
186	Stern, Billy

Commenter No.	Name
187	Stewart, David
188	Thomas, Sharon
189	Thomas-Adams, Joel
190	Turner, Mike
191	Vanlaningham, Tammy and Ronald
192	Vickers, Amy
193	Wagner, Jim and Virginia
194	Walerczak, Kathleen and Henry

Commenter No.	Name
195	Warst, Michael and Sharon
196	Weber, John
197	Williams, Jerry
198	Wilson, Tim
199	Winings, Rita
200	Woods, Mark
201	Wulf, Christina
202	Young, Bill

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a New Source Construction and Part 70 Operating Permit

Source Description and Location

Source Name:	Liberty Green Renewables Indiana, LLC
Source Location:	Intersection of SR 64 and SR 66 Milltown, Indiana 47145
County:	Crawford
SIC Code:	4911
Operation Permit No.:	T 025-27957-00015
Permit Reviewer:	David J. Matousek / Josiah Balogun

The Office of Air Quality (OAQ) has reviewed a new source construction and Part 70 Operating permit application, submitted by Liberty Green Renewables Indiana, LLC on May 19, 2009, relating to the construction of a stationary electric power generation facility.

History

On May 19, 2009, Liberty Green Renewables Indiana, LLC submitted an application to the Indiana Department of Environmental Management, Office of Air Quality for a New Source Construction and Part 70 Operating Permit to construct and operate a 32 MW biomass-fired renewable energy power generating plant in Milltown, Crawford County, Indiana 47145. The facility will use a 407 MMBtu/hr bubbling fluidized bed boiler to generate steam to drive a turbine to generate electricity. The boiler will burn clean wood and crops consisting of the following: tree and forest-related resources, including mill residues, harvesting residues, tree chips, thinning and trimming debris, slash, brush, storm debris, land clearing debris and right-of-way maintenance debris, solid non-hazardous, cellulosic waste material, agricultural material including orchard tree crops, vineyard, grain, switch grass, corn stover and other crop by-products or residues, and solid wood waste materials, including waste pallets, crates and dunnage, uncoated manufacturing wood waste, construction wood waste and demolition wood wastes, excluding wood wastes consisting of or derived from pressure treated wood, chemically treated wood or fiberboard.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Crawford County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, 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.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 NOx emissions are considered when evaluating the rule applicability relating to ozone. Crawford County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Crawford County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions, and the effective date of these rules was July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM_{10} emissions as a surrogate for $PM_{2.5}$ emissions until 326 IAC 2-2 is revised.

(c) Other Criteria Pollutants
Crawford County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions
Boiler EU-01 is capable of 407 MMBtu/hr of heat input using wood fuels and 168 MMBtu/hr using fossil fuels (propane). Boiler EU-01 is not considered one of twenty-eight listed source categories; because, it is not a fossil fuel-fired steam electric plant of more than 250 MMBtu/hr heat input. Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Emission Units and Pollution Control Equipment Summary

The Office of Air Quality (OAQ) has reviewed a new source construction and Part 70 Operating permit application, submitted by Liberty Green Renewables Indiana, LLC on May 19, 2009, relating to the construction of a 32 MW biomass-fired renewable energy power generating plant in Milltown, Crawford County, Indiana 47145. The facility will use a 407 MMBtu/hr bubbling fluidized bed boiler to create steam to drive a turbine which generates electricity.

The following is a list of the proposed emission units and pollution control devices:

(a) One (1) biomass-fired bubbling fluidized bed boiler, approved for construction in 2010, identified as EU-01, with a design heat input capacity of 407 MMBtu/hr using biomass, with a liquid propane gas (LPG) startup burner rated at 168 MMBtu/hr, using selective non-catalytic reduction (SNCR) to control NOx emissions and an alkaline sorbent injection system for HCL control, if necessary. Opacity is monitored with a continuous opacity monitoring system (COM), NOx and SO_2 are monitored with continuous emission monitors, particulate matter emissions are controlled by a baghouse identified as C-01, exhausting to stack S-01. [Under 40 CFR 60, Subpart Db, EU-01 is a new affected source.]

(b) One (1) pneumatic bed sand receiving operation and storage silo, approved for construction in 2010, identified as EU-06, with a maximum throughput of 30 tons per hour and a maximum storage capacity of 7 tons, emissions are controlled with a cartridge vent filter, exhausting to stack S-02. [326 IAC 6-3-2]

(c) One (1) pneumatic ash truck loadout operation and one (1) wet ash loadout operation with a pug mill mixer, approved for construction in 2010, identified as EU-09, with a maximum throughput capacity of 50 dry tons per hour, emissions are controlled by a cartridge vent filter, exhausting to stack S-04. [326 IAC 6-3-2]

(d) One (1) pneumatic limestone receiving operation and storage silo, approved for construction in 2010, identified as EU-14, with a maximum throughput capacity of 10 tons per hour and a maximum storage capacity of 17 tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-06. [326 IAC 6-3-2]

(e) One (1) pneumatic alkaline sorbent receiving operation and storage silo, approved for construction in 2010, identified as EU-15, with a maximum throughput capacity of 10 tons/hr and a maximum storage capacity of 17 tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-09. [326 IAC 6-3-2]

Insignificant Activities

The following is a list of proposed insignificant activities as defined in 326 IAC 2-7-1(21)(G), which will be listed in the Part 70 Operating Permit:

(a) One (1) pneumatic ash conveying system and ash storage silo, approved for construction in 2010, identified as EU-08, with a maximum throughput capacity of 0.9 dry tons per hour and a maximum storage capacity of 65 dry tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-04. [326 IAC 6-3-2]

(b) One (1) wood receiving, conveying and handling operation consisting of fifteen (15) conveyors, approved for construction in 2010, identified as EU-02, the process has a maximum throughput rate of 300 tons/hr, emissions are uncontrolled. [326 IAC 6-3-2]

(c) One (1) wood storage pile, approved for construction in 2010, identified as EU-03, with a maximum throughput of 300 tons per hour, and a maximum storage capacity of 22,300 tons, emissions are uncontrolled. [326 IAC 6-4]

(d) One (1) sawdust receiving, conveying and handling operation consisting of six (6) conveyors, approved for construction in 2010, identified as EU-04, the process has a maximum throughput rate of 100 ton/hr, emissions are uncontrolled. [326 IAC 6-3-2]

(e) One (1) sawdust storage pile, approved for construction in 2010, identified as EU-05, with a maximum throughput of 100 tons per hour, and a maximum storage capacity of 3,200 tons, emissions are uncontrolled. [326 IAC 6-4]

(f) One (1) pneumatic bottom ash surge handling operation and surge storage bin, approved for construction in 2010, identified as EU-07, with a maximum throughput capacity of 0.4 tons per hour and a maximum storage capacity of 3 tons, emissions are controlled by a cartridge vent filter, exhausting to stack S-03. [326 IAC 6-3-2]

(g) One (1) diesel powered emergency generator, approved for construction in 2010, identified as EU-12, with a maximum rated capacity of 350 HP, emissions are uncontrolled, exhausting to stack S-07. [Under 40 CFR 60, Subpart IIII, EU-12 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-12 is considered a new affected source.]

(h) One (1) diesel powered firewater pump, approved for construction in 2010, identified as EU-13, with a maximum rated capacity of 250 HP, emissions are uncontrolled, exhausting to stack S-08. [Under 40 CFR 60, Subpart IIII, EU-13 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-13 is considered a new affected source.]

(i) Paved and unpaved roads and parking lots with public access. Paved haul roads without public access. [326 IAC 6-4]

(j) One (1) non-contact draft cooling tower system not regulated by a NESHAP, approved for construction in 2010, identified as EU-11, with a maximum circulation rate of 36,000 GPM, emissions are uncontrolled.

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

(l) Cleaners and solvents, subject to 326 IAC 8-3 and characterized as:

(1) having a vapor pressure equal to or less than two (2.0) kilo Pascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pound per square inch) measured at thirty-eight (38) degrees Centigrade (one hundred (100) degrees Fahrenheit); or

(2) having a vapor pressure equal to or less than seven-tenths (0.7) kilo Pascal (five (5) millimeters of mercury or one-tenth (0.1) pound per square inch) measured at twenty (20) degrees Centigrade (sixty-eight (68) degrees Fahrenheit);

the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months.

The source contains the following insignificant activities, without applicable rules, which will not be listed in the Part 70 Operating Permit:

(a) Combustion related activities, including the following:

(1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels: Propane or liquefied petroleum gas or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour.

(b) Fuel dispensing activities, including the following:

(1) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons. Such storage tanks may be in a fixed location or on mobile equipment.

(2) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less.

(c) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons.

(2) Vessels storing the following:

(A) Lubricating oils.

(B) Hydraulic oils.

(C) Machining oils.

(D) Machining fluids.

(d) Production related activities, including the following:

(1) Application of:

(A) oils;

(B) greases;

(C) lubricants; and

(D) nonvolatile material;

as temporary protective coatings.

(2) Closed loop heating and cooling systems.

(e) Water based activities, including the following:

(1) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.

(2) Activities associated with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner or operator, that is, an on-site sewage treatment facility.

(3) Any operation using aqueous solutions containing less than or equal to one percent (1%) by weight of VOCs excluding HAPs.

(4) Water based adhesives that are less than or equal to five percent (5%) by volume of VOCs excluding HAPs.

Oil, grease, or VOC content shall be determined by a test method acceptable to the department and the U.S. EPA.

(f) Repair activities, including the following:

(1) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.

(2) Heat exchanger cleaning and repair.

(3) Process vessel degassing and cleaning to prepare for internal repairs.

(g) Underground conveyors.

(h) Routine 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, including the following:

(1) Purging of gas lines.

(2) Purging of vessels.

(i) Flue gas conditioning systems and associated chemicals, such as ammonia.

(j) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including the following:

(1) Catch tanks.

(2) Temporary liquid separators.

(3) Tanks.

(4) Fluid handling equipment.

(k) Blowdown for the following:

(1) Sight glass.

(2) Boiler.

(3) Cooling tower.

(4) Compressors.

(5) Pumps.

(l) Activities associated with emergencies, including the following:

(1) On-site fire training approved by IDEM.

(m) Emissions from a laboratory as defined in 326 IAC 2-7-1(21)(D).

(n) Other Insignificant Activities with a potential to emit as follows:

(1) Carbon Monoxide (CO) less than or equal to twenty-five (25) pounds per day.

(2) PM_{10} less than or equal to five (5) pounds per hour or twenty-five (25) pounds per day.

(3) Lead less than or equal to six tenths (0.6) tons per year or 3.29 pounds per day.

(4) SO_2 less than five (5) pounds per hour or twenty-five (25) pounds per day.

(5) Nitrogen Oxides less than five (5) pounds per hour or twenty-five (25) pounds per day.

(6) Volatile Organic Compounds (VOC) less than three (3) pounds per hour or fifteen (15) pounds per day.

Trivial Activities

The source contains the following trivial activities which will not be listed in the Part 70 Operating Permit:

(a) Any activity or emission unit:

(1) not regulated by a NESHAP, with potential uncontrolled emissions that are equal to or less than one (1) pound per day on an emission unit basis for any single HAP or combination of HAPs; and

(2) for which the potential uncontrolled emissions meet the exemption levels specified in the following:

(A) For lead or lead compounds measured as elemental lead, potential uncontrolled emissions that are equal to or less than one (1) pound per day.

(B) For carbon monoxide (CO), potential uncontrolled emissions that are equal to or less than one (1) pound per day.

(C) For sulfur dioxide, potential uncontrolled emissions that are equal to or less than one (1) pound per day.

(D) For volatile organic compounds (VOC), potential uncontrolled emissions that are equal to or less than one (1) pound per day.

(E) For nitrogen oxides (NO_x), potential uncontrolled emissions that are equal to or less than one (1) pound per day.

(F) For particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM_{10}), potential uncontrolled emissions that are equal to or less than one (1) pound per day.

(b) Water related activities, including the following:

(1) Production of hot water for on-site personal use not related to any industrial or production process.

(2) Water treatment activities used to provide potable and process water for the plant, excluding any activities associated with wastewater treatment.

(3) Steam traps, vents, leaks, and safety relief valves.

(4) Cooling ponds.

(5) Laundry operations using only water solutions of bleach or detergents.

(6) Demineralized water tanks and demineralizer vents.

(7) Boiler water treatment operations, not including cooling towers.

(8) Oxygen scavenging (deaeration) of water.

(9) Pressure washing of equipment.

(c) Combustion activities, including the following:

(1) Portable electrical generators that can be moved by hand from one (1) location to another. As used in this item, "moved by hand" means that it can be moved without the assistance of any motorized or nonmotorized vehicle, conveyance, or device.

(2) Combustion emissions from propulsion of mobile sources.

(3) Fuel use related to food preparation for on-site consumption.

(4) Tobacco smoking rooms and areas.

(5) Indoor and outdoor kerosene heaters.

(d) Activities related to ventilation, venting equipment, and refrigeration, including the following:

(1) Ventilation exhaust, central chiller water systems, refrigeration, and air conditioning equipment, not related to any industrial or production process, including natural draft hoods or ventilating systems that do not remove air pollutants.

(2) Stack and vents from plumbing traps used to prevent the discharge of sewer gases, handling domestic sewage only, excluding those at wastewater treatment plants or those handling any industrial waste.

(3) Vents from continuous emissions monitors and other analyzers.

(4) Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.

(5) Air vents from air compressors.

(6) Vents for air cooling of electric motors provided the air does not commingle with regulated air pollutants.

(e) Activities related to routine fabrication, maintenance, and repair of buildings, structures, equipment, or vehicles at the source where air emissions from those activities would not be associated with any commercial production process, including the following:

(1) Activities associated with the repair and maintenance of paved and unpaved roads, including paving or sealing, or both, of parking lots and roadways.

(2) Painting, including interior and exterior painting of buildings, and solvent use excluding degreasing operations utilizing halogenated organic solvents.

(3) Brazing, soldering, or welding operations and associated equipment.

(4) Portable blast-cleaning equipment with enclosures.

(5) Blast-cleaning equipment using water as the suspension agent and associated equipment.

(6) Batteries and battery charging stations except at battery manufacturing plants.

(7) Lubrication, including the following:

(A) Hand-held spray can lubrication.

(B) Dipping metal parts into lubricating oil.

(C) Manual or automated addition of cutting oil in machining operations.

(8) Nonasbestos insulation installation or removal.

(9) Tarring, retarring, and repair of building roofs.

(10) Bead blasting of heater tubes.

(11) Instrument air dryer and filter maintenance.

(12) Manual tank gauging.

(13) Open tumblers associated with deburring operations in maintenance shops.

(f) Activities performed using hand-held equipment, including the following:

(1) Application of hot melt adhesives with no VOC in the adhesive formulation.

(2) Buffing.

(3) Carving.

(4) Cutting, excluding cutting torches.

(5) Drilling.

(6) Grinding.

(7) Machining wood, metal, or plastic.

(8) Polishing.

(9) Routing.

(10) Sanding.

(11) Sawing.

(12) Surface grinding.

(13) Turning wood, metal, or plastic.

(g) Housekeeping and janitorial activities and supplies, including the following:

(1) Vacuum cleaning systems used exclusively for housekeeping or custodial activities, or both.

(2) Steam cleaning activities.

(3) Rest rooms and associated cleanup operations and supplies.

(4) Alkaline or phosphate cleaners and associated equipment.

(5) Mobile floor sweepers and floor scrubbers.

(6) Pest control fumigation.

(h) Office related activities, including the following:

(1) Office supplies and equipment.

(2) Photocopying equipment and associated supplies.

(3) Paper shredding.

(4) Blueprint machines, photographic equipment, and associated supplies.

(i) Lawn care and landscape maintenance activities and equipment, including the storage, spraying, or application of insecticides, pesticides, and herbicides.

(j) Storage equipment and activities, including the following:

(1) Pressurized storage tanks and associated piping for the following:

(A) Chlorine.

(B) Liquid petroleum gas (LPG).

(C) Liquid natural gas (LNG) (propane).

(2) Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOC or HAP.

(3) Storage of drums containing maintenance raw materials.

(4) Storage of any non-HAP containing material in solid form stored in a sealed or covered container.

(5) Portable containers used for the collection, storage, or disposal of materials provided the container capacity is equal to or less than forty-six hundredths (0.46) cubic meters and the container is closed, except when the material is added or removed.

(k) Emergency and standby equipment, including the following:

(1) Safety and emergency equipment except engine driven fire pumps, including fire suppression systems and emergency road flares.

(2) Process safety relief devices installed solely for the purpose of minimizing injury to persons or damage to equipment that could result from abnormal process operating conditions, including the following:

(A) Explosion relief vents, diaphragms, or panels.

(B) Rupture discs.

(C) Safety relief valves.

(3) Activities and equipment associated with on-site medical care not otherwise specifically regulated.

(4) Vacuum-producing devices for the purpose of removing potential accidental releases.

(l) Sampling and testing equipment and activities, including the following:

(1) Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.

(2) Hydraulic and hydrostatic testing equipment.

(3) Sampling activities, including the following:

(A) Sampling of waste.

(B) Glove box sampling, charging, and packaging.

(4) Instrument air dryers and distribution.

(m) Activities generating limited amounts of fugitive dust, including road salting and sanding.

(n) Activities associated with production, including the following:

(1) Closed, nonvented tumblers used for cleaning or deburring metal products without abrasive blasting.

(2) Electrical resistance welding.

(3) Application equipment for hot melt adhesives with no VOC in the adhesive formulation.

(4) Air compressors and pneumatically operated equipment, including hand tools.

(5) Compressor or pump lubrication and seal oil systems.

(o) Miscellaneous equipment, but not emissions associated with the process for which the equipment is used, and activities, including the following:

(1) Equipment used for surface coating, painting, dipping, or spraying operation, except those that will emit VOCs or HAPs.

(2) Soil borrow pits.

(3) Manual loading and unloading operations.

(4) Purging of refrigeration devices using a combination of nitrogen and CFC-22 (R-22) as pressure test media.

(5) Construction and demolition operations.

(6) Mechanical equipment gear boxes and vents that are isolated from process materials.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{0}F)
S-01	Wood Fired Boiler (EU-01)	150.0	7.5	160,000	300
S-02	Bed Sand Receiving (EU-06)	---	---	1,500	68
S-04	Ash Handling and Storage (EU-08) and Ash Load Out (EU-09)	---	---	2,500	68
S-06	Limestone Receiving and Storage (EU-14)	---	---	1,000	68
S-09	Alkaline Sorbent Receiving and Storage (EU-15)	---	---	1,000	68

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Unrestricted Potential Emissions – Part 70

This table reflects the unrestricted potential emissions of the source.

PTE Before Controls	
Pollutant	**Potential To Emit** (ton/yr)
PM	1,367.04
PM_{10}	1,338.55
SO_2	235.60
VOC	34.11
CO	225.61
NO_X	396.84

HAPs	**Potential To Emit** (ton/yr)
Hydrogen Chloride	33.87
Acetaldehyde	0.41
Acrolein	0.14
Benzene	0.48
Formaldehyde	1.40
Styrene	0.06
Toluene	0.05
Other HAPs	8.70
Total HAPs	45.11

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10, SO2, CO and NOx are each equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is less than 100 tons per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is 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 greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet 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 tables below summarize the potential to emit, reflecting all limits, of the emission units at Liberty Green Renewables Indiana, LLC. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (TPY)							
Process / Emission Unit	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**Pb**	**Be**
Boiler EU-01 on Biomass	53.48	185.90	235.29	33.73	224.61	245.00	0.09	0.0018
Bed Sand Operation (EU-06)	20.63	8.54	0.00	0.00	0.00	0.00	0.00	0.00
Bottom Ash Operation (EU-07)	2.76	1.14	0.00	0.00	0.00	0.00	0.00	0.00
Ash Conveying Operation (EU-08)	6.18	2.58	0.00	0.00	0.00	0.00	0.00	0.00
Ash Loadout Operation (EU-09)	85.96	35.59	0.00	0.00	0.00	0.00	0.00	0.00
Limestone Operation (EU-14)	17.19	7.12	0.00	0.00	0.00	0.00	0.00	0.00
Alkaline Sorbent Operation (EU-15)	17.19	7.12	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower (EU-11)	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00
Firewater Pump (EU-13)	0.14	0.14	0.13	0.16	0.42	1.94	Negligible	Negligible
Emergency Generator (EU-12)	0.19	0.19	0.18	0.22	0.58	2.71	Negligible	Negligible
Total for New Source Construction	205.30	< 250	235.60	34.11	225.61	< 250	0.09	0.0018
Major Source Threshold	250	250	250	250	250	250	25	250

(a) This new stationary source is not major for PSD because the emissions of each regulated pollutant are less than two hundred fifty (250) tons per year and lead is less than twenty-five (25) tons per year.

(b) Fugitive Emissions
Boiler EU-01 is capable of 407 MMBtu/hr of steam input using wood fuels and 168 MMBtu/hr using fossil fuels (propane). Boiler EU-01 is not considered one of twenty-eight listed source categories; because, it is not a fossil fuel-fired steam electric plant of more than 250 MMBtu/hr heat input. Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Since the unrestricted potential to emit PM and PM10 of this source is greater than 250 tons per year, this source has elected to limit the potential to emit of PM and PM10 as follows:

(a) PM emissions, from EU-01, shall not exceed 12.21 lb/hr. PM includes filterable particulate matter but not condensible particulate matter.

(b) PM10 emissions, from EU-01, shall not exceed 42.45 lb/hr. PM10 includes filterable and condensible particulate matter.

(c) PM emissions from EU-06, shall not exceed 4.71 lb/hr.

(d) PM10 emissions from EU-06, shall not exceed 1.95 lb/hr.

(e) PM emissions from EU-09, shall not exceed 19.63 lb/hr.

(f) PM10 emissions from EU-09, shall not exceed 8.13 lb/hr.

(g) PM emissions from EU-14, shall not exceed 3.93 lb/hr.

(h) PM10 emissions from EU-14, shall not exceed 1.63 lb/hr.

(i) PM emissions from EU-15, shall not exceed 3.93 lb/hr.

(j) PM10 emissions from EU-15, shall not exceed 1.63 lb/hr.

Combined with PM and PM10 emissions from other emission units, these emission limits will limit potential PM and PM10 emissions to less than 250 tons per year each and will render the requirements of 326 IAC 2-2 not applicable to the entire source.

Since the unrestricted potential to emit NOx of this source is greater than 250 tons per year, this source has elected to limit the potential to emit NOx as follows:

(a) NOx emissions, from EU-01, shall be less than 245.00 tons per twelve consecutive month period with compliance determined at the end of each month.

(b) The Permittee shall not combust any fuel other than clean wood and crops consisting of the following: tree and forest-related resources, including mill residues, harvesting residues, tree chips, thinning and trimming debris, slash, brush, storm debris, land clearing debris and right-of-way maintenance debris, solid non-hazardous, cellulosic waste material, agricultural material including orchard tree crops, vineyard, grain, switch grass, corn stover and other crop by-products or residues, and solid wood waste materials, including waste pallets, crates and dunnage, uncoated manufacturing wood waste, construction wood waste and demolition wood wastes, excluding wood wastes consisting of or derived from pressure treated wood, chemically treated wood or fiberboard.

Combined with PM, PM10 and NOx emissions from other emission units, these emission limits will limit the potential to emit of PM, PM10 and NOx emissions to less than 250 tons per year each, and will render the requirements of 326 IAC 2-2 not applicable to the entire source.

The unrestricted potential to emit HCL of this source is greater than 10 tons per year and the unrestricted potential to emit total HAPs of this source is greater than 25 tons per year. The source is requesting the following limits to ensure the source is not major HAPs:

(a) HCL emissions, from boiler EU-01, shall not exceed 0.005 lb HCL/MMBtu.

Combined with HAP emissions from other emission units, these emission limits will limit the potential to emit of a single HAP to less than ten (10) tons per year and the potential to emit of combined HAPs to less than twenty-five (25) tons per year and shall render the requirements of 326 IAC 2-4.1 (MACT) not applicable.

Federal Rule Applicability Determination

The following federal rules are applicable to the source:

NSPS:

(a) Boiler EU-01 is subject to the New Source Performance Standards for Industrial-Commercial-Steam Generating Units (40 CFR 60.40b, Subpart Db), which is incorporated by reference as 326 IAC 12. The unit subject to this rule include the following:

One (1) biomass-fired bubbling fluidized bed boiler, approved for construction in 2010, identified as EU-01, with a design heat input capacity of 407 MMBtu/hr using biomass, with a liquid propane gas (LPG) startup burner rated at 168 MMBtu/hr, using selective non-catalytic reduction (SNCR) to control NOx emissions and an alkaline sorbent injection system for HCL control, if necessary. Opacity is monitored with a continuous opacity monitoring system (COM), NOx and SO_2 are monitored with continuous emission monitors, particulate matter emissions are controlled by a baghouse identified as C-01, exhausting to stack S-01. [Under 40 CFR 60, Subpart Db, EU-01 is a new affected source.]

Boiler EU-01 is subject to the following portions of Subpart Db.

1) 40 CFR 60.40b(a)
2) 40 CFR 60.40b(j)
3) 40 CFR 60.41b
4) 40 CFR 60.42b(k)(2)
5) 40 CFR 60.43b(f)
6) 40 CFR 60.43b(g)
7) 40 CFR 60.43b(h)(1)
8) 40 CFR 60.45b(k)
9) 40 CFR 60.46b(a)
10) 40 CFR 60.46b(b)
11) 40 CFR 60.46b(d)
12) 40 CFR 60.47b(f)
13) 40 CFR 60.48b(a)
14) 40 CFR 60.48b(e)(1)
15) 40 CFR 60.48b(h)(5)
16) 40 CFR 60.49b(a)
17) 40 CFR 60.49b(b)
18) 40 CFR 60.49b(d)(1)
19) 40 CFR 60.49b(f)
20) 40 CFR 60.49b(h)(1)
21) 40 CFR 60.49b(h)(3)
22) 40 CFR 60.49b(o)
23) 40 CFR 60.49b(r)(1)
24) 40 CFR 60.49b(w)

In order for the requirements of 40 CFR 60.44b(l)(1) not to apply to boiler EU-01, the Permittee has requested a federally enforceable annual capacity factor to limit the usage of propane to less than 10% of the heat input to the boiler. The limit is shown below:

(1) Propane heat input to boiler EU-01 shall be limited to less than 356,532 MMBtu per twelve consecutive month period with compliance determined at the end of each month. Propane heat input shall be calculated with the following equation:

$$\text{Propane Heat Input Rate (MMBtu/month)} = \frac{\text{Y (gallon/month) x X (BTU/gallon)}}{\text{(1,000,000 BTU/MMBtu)}}$$

Where:

X = The heating value of propane, no less than 91,500 BTU/gallon
Y = Propane usage for the current month in gallons

(b) The diesel powered emergency generator, EU-12 and the diesel powered fire pump, EU-13 are subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60.4200, Subpart IIII), which is incorporated by reference as 326 IAC 12. The units subject to this rule include the following:

(1) One (1) diesel powered emergency generator, approved for construction in 2010, identified as EU-12, with a maximum rated capacity of 350 HP, emissions are uncontrolled, exhausting to stack S-07. [Under 40 CFR 60, Subpart IIII, EU-12 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-12 is considered a new affected source.]

(2) One (1) diesel powered firewater pump, approved for construction in 2010, identified as EU-13, with a maximum rated capacity of 250 HP, emissions are uncontrolled, exhausting to stack S-08. [Under 40 CFR 60, Subpart IIII, EU-13 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-13 is considered a new affected source.]

EU-12 and EU-13 are subject to the following portions of Subpart IIII.

1) 40 CFR 60.4200
2) 40 CFR 60.4205
3) 40 CFR 60.4206
4) 40 CFR 60.4207
5) 40 CFR 60.4208
6) 40 CFR 60.4209
7) 40 CFR 60.4211
8) 40 CFR 60.4212
9) 40 CFR 60.4213
10) 40 CFR 60.4214
11) 40 CFR 60.4218

NESHAP:

(b) The diesel powered emergency generator, EU-12 and the diesel powered fire pump, EU-13 are subject to the National Emission Standards for Hazardous Air Pollutants for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63.6580, Subpart ZZZZ), which is incorporated by reference as 326 IAC 20-82-1. The units subject to this rule include the following:

(1) One (1) diesel powered emergency generator, approved for construction in 2010, identified as EU-12, with a maximum rated capacity of 350 HP, emissions are uncontrolled, exhausting to stack S-07. [Under 40 CFR 60, Subpart IIII, EU-12 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-12 is considered a new affected source.]

(2) One (1) diesel powered fire pump, approved for construction in 2010, identified as EU-13, with a maximum rated capacity of 240 HP, emissions are uncontrolled, exhausting to stack S-08. [Under 40 CFR 60, Subpart IIII, EU-13 is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, EU-13 is considered a new affected source.]

These emission units are subject to the following portions of Subpart ZZZZ:

1) 40 CFR 63.6585
2) 40 CFR 63.6590
3) 40 CFR 63.6595
4) 40 CFR 63.6645
5) 40 CFR 63.6650
6) 40 CFR 63.6655
7) 40 CFR 63.6660
8) 40 CFR 63.6665

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart ZZZZ.

(c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the Part 70 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 table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Apply ?** (Y/N)	**Large Unit** (Y/N)
Boiler EU-01 / PM & PM10	Y	Y	668.52 / 1,048.22	53.48 / 134.77	100	Y/Y	N/Y
Boiler EU-01 / HCL / Total HAPs	N	Y	Assume HCL < 10 and Total < 25	< 9.9 & < 24.9	10/25	N/N	N/N
Boiler EU-01 / NOx	N	Y	392.19	245.00	100	N	N
Boiler EU-01 / VOC	N	Y	24.79	24.79	100	N	N

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Apply ?** (Y/N)	**Large Unit** (Y/N)
Bed Sand Operation EU-06 / PM10	Y	Y	85.41	8.54	100	N	N
Bottom Ash Operation EU-07 / PM10	Y	N	1.14	1.14	100	N	N
Ash Conveying Operation EU-08 / PM10	Y	N	2.58	2.58	100	N	N
Ash Loadout Operation EU-09 / PM/PM10	Y	Y	343.83 / 142.35	85.96 / 35.59	100	Y	N
Limestone Operation EU-14 / PM10	Y	Y	28.47	7.12	100	N	N
Sorbent Operation EU-15 / PM10	Y	Y	28.47	7.12	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to boiler EU-01 for NOx, single HAP and total HAP. Selective Noncatalytic Reduction and Flue Gas Recirculation are inherent to the design of the boiler and are not considered control devices for NOx. The Permittee will be required to test HCL to determine the applicablility of CAM to the sorbent injection system. CAM applicability will be addressed during application for the first Part 70 Operating Permit renewal.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to boiler EU-01 and ash loadout operation EU-09 for PM/PM10. Boiler EU-01 is a large unit and CAM is applicable upon startup. A CAM plan was submitted for boiler EU-01 with the initial application. Emission unit EU-09 is not a large unit and a CAM plan shall be submitted with the application for the first Part 70 Operating Permit Renewal.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD)
This new stationary source is not major for PSD because the limited PTE of each regulated pollutant is less than two hundred fifty (250) tons per year and twenty-five (25) tons for lead.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of boiler EU-01 will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted triennially. The first report is due no later than July 1, 2012, and subsequent reports are due every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of following operations shall not exceed the pound per hour limit listed in the table below:

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)	Equation Used
EU-06	Bed Sand Receiving	30.0	40.0	a
EU-09	Ash Loadout Operation	50.0	44.6	b
EU-14	Limestone Receiving	10.0	19.2	a
EU-15	Alkaline Sorbent Operation	10.0	19.2	a
EU-08	Ash Conveying System	0.9	3.8	a
EU-02	Wood Receiving	300.0	63.0	b or c
EU-04	Saw Dust Receiving	100.0	51.3	b
EU-07	Bottom Ash Surge Handling	0.4	2.2	a

The pound per hour limitation was calculated with the following equations:

(a) Interpolation of the data for the process weight rate up to sixty thousand (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

(b) 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

(c) Pursuant to 326 IAC 6-3-2(e)(3), since the process weight rate of the wood receiving operation exceeds 200 tons per hour, EU-02 may exceed the emission limitation calculated using equation (b), as long as the concentration of particulate matter in the gas discharged to the atmosphere remains less than 0.1 pounds per 1,000 pounds of gases.

Although emission units EU-03 (Wood Storage Pile) and EU-05 (Saw Dust Storage Pile) are sources of particulate matter emissions, material storage piles are exempt from the requirements of 326 IAC 6-3-2.

326 IAC 3-5 (Continuous Monitoring of Emissions)
Boiler EU-01 is required to perform continuous monitoring for opacity under 326 IAC 12, which incorporates by reference the requirements of 40 CFR 60; therefore, 326 IAC 3-5 applies to emission unit EU-01.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission Limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from boiler EU-01 shall not exceed 0.23 pounds per million Btu heat input (lb/MMBtu). This limitation was calculated using the

following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where; Q = total source heat input capacity (MMBtu/hr). For this unit, Q = 407.0 MMBtu/hr.

This particulate matter emission limitation is inconsistent with the particulate matter limitation contained in 326 IAC 12. In accordance with 326 IAC 6-2-1(g), this rule does not apply to boiler EU-01.

326 IAC 6-4 (Fugitive Dust Emissions)
This rule applies to all sources of fugitive dust; therefore, this rule applies to this source.

326 IAC 6-5-1 (Fugitive Particulate Matter Emission Limitations)
Pursuant to 326 IAC 6-5-1(a), this source is located in an attainment county for particulate matter; therefore, the requirements of 326 IAC 6-5-1 are not applicable.

326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)
This rule applies to all emission units with the potential to emit of sulfur dioxide of twenty-five tons per year or ten pounds per hour by combusting coal, residual oil, distillate oil or coal and oil simultaneously. Boiler EU-01 combusts biomass and propane; therefore, the requirements of 326 IAC 7-1.1-1 do not apply.

326 IAC 8-1-6 (New Facilities General Reduction Requirements)
This rule applies to new facilities as of January 1, 1980 having potential VOC emissions of twenty-five (25) tons or more per year, are located anywhere in the state, and are not otherwise regulated by 326 IAC 20-48 or 326 IAC 20-56. The uncontrolled VOC emissions from boiler EU-01 are greater than 25 tons per year. Pursuant to 326 IAC 8-1-6, IDEM has established BACT for VOC for boiler EU-01 as follows:

Good Combustion Practices to limit Volatile Organic Compounds (VOC) emissions and the corresponding VOC emission limit shall not exceed 0.019 lb/MMBtu and 7.7 pounds per hour.

326 IAC 8-3 (Organic Solvent Degreasing Operations)
This rule applies to new sources constructed after January 1, 1980, performing organic solvent degreasing operations located anywhere in the state. Therefore, this rule applies to the solvent degreasing operations located at this source.

326 IAC 8-5 (Miscellaneous Operations)
This rule applies to new sources which commence operations after January 1, 1980 for asphalt pavers and November 1, 1980 for synthesized pharmaceutical manufacturing operations, rubber tire manufacturers, graphic arts operations and fuel grade ethanol production at dry mills. This source will be constructed after the applicability date; however, the source does not fall into an effected source category.

326 IAC 24 Clean Air Interstate Rule (CAIR)
Pursuant to 326 IAC 24-1(a)(1), this rule applies to any fossil fuel-fired boilers serving at any time after November 15, 1990, with a nameplate capacity of more than twenty-five (25) megawatt electrical producing electricity for sale. 326 IAC 24 defines fossil fuel as natural gas, petroleum, coal, or any form of solid, liquid or gaseous fuel derived from such fuel. 326 IAC 24 defines fossil fuel-fired as a unit combusting any amount of fossil fuel in any calendar year. The generator and boiler will be constructed after November 15, 1990, the generator has a nameplate capacity in excess of 25 MW and it will supply electricity to the grid in excess of 25 MW, and the boiler burns some fossil fuel (propane). Therefore, boiler EU-01 is subject to the requirements of 326 IAC 24. The source shall submit an application for a significant permit modification to incorporate the requirements of 326 IAC

24. The boiler shall not start operation until the permit modification incorporating the requirements of 326 IAC 24 is issued.

326 IAC 21 Acid Deposition Control
326 IAC 21 incorporates by reference the provisions of 40 CFR 72 through 40 CFR 78 for the purposes of implementing an acid rain program that meets the requirements of Title IV of the Clean Air Act and to incorporate monitoring, record keeping, and reporting requirements for nitrogen oxide and sulfur dioxide emissions to demonstrate compliance with nitrogen oxides and sulfur dioxide emission reduction requirements. This source is subject to the requirements of 326 IAC 21 and shall submit an application for a significant permit modification for the incorporation of the requirements of 326 IAC 21. Operation of boiler EU-01 is not permitted until the Acid Rain Permit has been issued.

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 this source are as follows:

Emission Unit	Parameter	Frequency
Boiler EU-01	Operation of Baghouse	At all times, except during periods of start up, shut down or emergency.
EU-06, EU-09, EU-14 and EU-15	Operation of Cartridge vent filter	At all times process is in operation.

Summary of Testing Requirements				
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant**	**Frequency of Testing**
Boiler EU-01	Baghouse C-01	60 days / no later than 180 days	PM	Every 5 Years
Boiler EU-01	Baghouse C-01	60 days / no later than 180 days after publication of the new or revised PM test method by US EPA	PM10	Every 5 Years

Summary of Testing Requirements				
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant**	**Frequency of Testing**
Boiler EU-01	Uncontrolled: Sorbent Injection system is not a control device.	60 days / no later than 180 days	HCL	Every 5 Years
Boiler EU-01	Uncontrolled	60 days / no later than 180 days	VOC	Every 5 Years
Boiler EU-01	Uncontrolled	60 days / no later than 180 days	SO_2	One Time

The Compliance Monitoring Requirements applicable to this source are as follows:

Emission Unit	Parameter	Frequency	Response
Boiler EU-01	Baghouse Pressure Drop [40 CFR 64]	Once per day	Reasonable Response Steps
Boiler EU-01	Operation of COMS [40 CFR 64]	Continuous	Reasonable Response Steps
Cartridge Vent Filter EU-06	Visible Emission Notations	Once per week during loading	Reasonable Response Steps
Cartridge Vent Filter EU-09	Visible Emission Notations	Once per week during loadout	Reasonable Response Steps
Cartridge Vent Filter EU-014	Visible Emission Notations	Once per week during loadout	Reasonable Response Steps
Cartridge Vent Filter EU-15	Visible Emission Notations	Once per week during loadout	Reasonable Response Steps

These monitoring conditions are necessary to ensure compliance with Conditions D.1.4 and D.2.4 and to ensure the requirements of 326 IAC 2-2 are not applicable to this source.

Conclusion and Recommendation

The construction and operation of this proposed facility shall be subject to the conditions of the attached proposed Part 70 Operating Permit No. T 025-27957-00015. The staff recommends to the Commissioner that this Part 70 Operating Permit be approved.

Appendix A: Potential to Emit

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection of SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T 025-27957-00015
Plt ID: 025-00015
Reviewer: David J. Matousek
Date: November 17, 2009

Limited Potential to Emit (ton/yr)

Emission Unit	PM	PM10	SO_2	VOC	CO	NOx	Single HAP	Total HAPs
Boiler (EU-01) on Biomass	53.48	185.90	235.29	33.73	224.61	245.00	< 9.9	< 24.9
Pneumatic Bed Sand Operation (EU-06)	20.63	8.54	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Bottom Ash Operation (EU-07)	2.76	1.14	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Ash Conveying Operation (EU-08)	6.18	2.58	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Ash Loadout Operation (EU-09)	85.96	35.59	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Limestone Operation (EU-14)	17.19	7.12	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Alkaline Sorbent Operation (EU-15)	17.19	7.12	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower (EU-11)	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00
Fire Pump (EU-13)	0.14	0.14	0.13	0.16	0.42	1.94	negligible	negligible
Emergency Generator (EU-12)	0.19	0.19	0.18	0.22	0.58	2.71	negligible	negligible
Total for New Source Construction	205.30	< 250	235.60	34.11	225.61	< 250	< 10.00	< 25.00

Unrestricted Potential to Emit (ton/yr)

Emission Unit	PM	PM10	SO_2	VOC	CO	NOx	Single HAP	Total HAPs
Boiler (EU-01) on Biomass	668.52	1,048.22	235.29	33.73	224.61	392.19	> 10	> 25
Pneumatic Bed Sand Operation (EU-06)	206.30	85.41	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Bottom Ash Operation (EU-07)	2.76	1.14	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Ash Conveying Operation (EU-08)	6.18	2.58	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Ash Loadout Operation (EU-09)	343.83	142.35	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Limestone Operation (EU-14)	68.77	28.47	0.00	0.00	0.00	0.00	0.00	0.00
Pneumatic Alkaline Sorbent Operation (EU-15)	68.77	28.47	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Tower (EU-11)	1.58	1.58	0.00	0.00	0.00	0.00	0.00	0.00
Fire Pump (EU-13)	0.14	0.14	0.13	0.16	0.42	1.94	negligible	negligible
Emergency Generator (EU-12)	0.19	0.19	0.18	0.22	0.58	2.71	negligible	negligible
Total for New Source Construction	1,367.04	1,338.55	235.60	34.11	225.61	396.84	> 10	> 25

Appendix A : Emissions Summary
Potential to Emit - Boiler

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection of SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T 025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: November 17, 2009

1. Biomass Boiler, Emissions in Ton/Year

Boiler Heat Input Capacity **407.00** **MMBtu/hr**

	Before Control			Limited PTE			
	lb/MMBtu	lb/hr	TPY	Control Efficiency	lb/MMBtu	lb/hr	TPY
PM (Filterable Only)	0.375	152.63	668.52	92.00%	0.0300	12.21	53.48
PM10(Filterable + Condensible)	0.588	239.32	1,048.22	82.26%	0.1043	42.45	185.90
SO_2	0.132	53.72	235.29	0.00%	0.1320	53.72	235.29
VOC	0.0190	7.70	33.73	0.00%	0.0190	7.70	33.73
CO	0.126	51.28	224.61	0.00%	0.1260	51.28	224.61
NOx	0.220	89.54	392.19	37.54%	0.1374	55.93	245.00

Notes:
1) Uncontrolled emission factors for condensible PM10, SO2 and lead are based on AP-42, Tables 1.6-2, 1.6-3 and 1.6-4, 9/2003. The SO2 emission factor contains a safety factor of twice the AP-42 emission factor. PM emissions are limited at 0.03 lb/MMBtu by NSPS, Subpart Db.
2) Emissions less than 0.0001 lb/hr are shown as zero.
3) BioMass emissions are worst case.
4) VOC emission factor of .0139 lb VOC/MMBtu is an emission limit to avoid BACT review.
5) The NOx emission factor is from AP-42, Chapter 1.6, Table 1.6-2, September 2003

Methodology:
1) PTE (lb/hr) = Heat Input (MMBtu / hr) x (lb Pollutant / MMBtu)
2) PTE (ton/yr) = PTE (lb/hr) x (8,760 hr/yr) x (1 Ton / 2,000 lb)
3) lb/MMBtu after control = lb/MMBtu before control (1 - Control Efficiency)

Appendix A : Emissions Summary
Boiler HAP Emissions

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection of SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T 025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: November 17, 2009

1. Biomass Boiler, Emissions in Ton/Year

Boiler Heat Input Capacity 407.00 MMBtu/hr

Potential to Emit HAPs							
	Emissions Before Control			Limited PTE			Source of Emission Factors
HAP	lb/MMBtu	lb/hr	TPY	lb/MMBtu	lb/hr	TPY	
1,1,1-Trichloroethane	3.10E-05	0.0126	0.0552	3.10E-05	0.013	0.06	AP-42, Table 1.6-3 (9/2003)
1,2-Dichloroethane	2.90E-05	0.0118	0.0517	2.90E-05	0.012	0.05	AP-42, Table 1.6-3 (9/2003)
1,2-Dichloropropane	3.30E-05	0.0134	0.0587	3.30E-05	0.013	0.06	AP-42, Table 1.6-3 (9/2003)
2,3,7,8-Tetrachlorodibenzo-p-dioxins	8.60E-12	0.0000	0.0000	8.60E-12	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
2,3,7,8-Tetrachlorodibenzo-p-furans	9.00E-11	0.0000	0.0000	9.00E-11	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
2,4,6-Trichlorophenol	2.20E-08	0.0000	0.0000	2.20E-08	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
2,4-Dinitrophenol	1.80E-07	0.0001	0.0004	1.80E-07	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
2-Methylnaphthalene	1.60E-07	0.0001	0.0004	1.60E-07	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
4-Nitrophenol	1.10E-07	0.0000	0.0000	1.10E-07	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Acenaphthene	9.10E-07	0.0004	0.0018	9.10E-07	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Acenaphthylene	5.00E-06	0.0020	0.0088	5.00E-06	0.002	0.01	AP-42, Table 1.6-3 (9/2003)
Acetophenone	3.20E-09	0.0000	0.0000	3.20E-09	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Anthracene	3.00E-06	0.0012	0.0053	3.00E-06	0.001	0.00	AP-42, Table 1.6-3 (9/2003)
Benzo(a)anthracene	6.50E-08	0.0000	0.0000	6.50E-08	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Benzo(a)pyrene	2.60E-06	0.0011	0.0048	2.60E-06	0.001	0.00	AP-42, Table 1.6-3 (9/2003)
Benzo(b)fluoranthene	1.00E-07	0.0000	0.0000	1.00E-07	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Benzo(g,h,i)fluoranthene	9.30E-08	0.0000	0.0000	9.30E-08	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Benzo(j,k)fluoranthene	1.60E-07	0.0001	0.0004	1.60E-07	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Benzo(k)fluoranthene	3.60E-08	0.0000	0.0000	3.60E-08	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
bis(2-Ethylhexyl)phthalate	4.70E-08	0.0000	0.0000	4.70E-08	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Bromomethane	1.50E-05	0.0061	0.0267	1.50E-05	0.006	0.03	AP-42, Table 1.6-3 (9/2003)
Carbon tetrachloride	4.50E-05	0.0183	0.0802	4.50E-05	0.018	0.08	AP-42, Table 1.6-3 (9/2003)
Chlorine	7.90E-04	0.3215	1.4082	7.90E-04	0.322	1.41	AP-42, Table 1.6-3 (9/2003)
Chlorobenzene	3.30E-05	0.0134	0.0587	3.30E-05	0.013	0.06	AP-42, Table 1.6-3 (9/2003)
Chloroform	2.80E-05	0.0114	0.0499	2.80E-05	0.011	0.05	AP-42, Table 1.6-3 (9/2003)
Chloromethane	2.30E-05	0.0094	0.0412	2.30E-05	0.009	0.04	AP-42, Table 1.6-3 (9/2003)
Chrysene	3.80E-08	0.0000	0.0000	3.80E-08	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Dichloromethane	2.90E-04	0.1180	0.5168	2.90E-04	0.118	0.52	AP-42, Table 1.6-3 (9/2003)
Ethylbenzene	3.10E-05	0.0126	0.0552	3.10E-05	0.013	0.06	AP-42, Table 1.6-3 (9/2003)
Fluoranthene	1.60E-06	0.0007	0.0031	1.60E-06	0.001	0.00	AP-42, Table 1.6-3 (9/2003)
Fluorene	3.40E-06	0.0014	0.0061	3.40E-06	0.001	0.00	AP-42, Table 1.6-3 (9/2003)
Heptachlorodibenzo-p-dioxins	2.00E-09	0.0000	0.0000	2.00E-09	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Heptachlorodibenzo-p-furans	2.40E-10	0.0000	0.0000	2.40E-10	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Hexachlorodibenzo-p-dioxins	1.60E-06	0.0007	0.0031	1.60E-06	0.001	0.00	AP-42, Table 1.6-3 (9/2003)
Hexachlorodibenzo-p-furans	2.80E-10	0.0000	0.0000	2.80E-10	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Hydrogen chloride	1.90E-02	7.7330	33.8705	0.005000	2.035	< 9.9	AP-42, Table 1.6-3 (9/2003)
Indeno(1,2,3,c,d)pyrene	8.70E-08	0.0000	0.0000	8.70E-08	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Naphthalene	9.70E-05	0.0395	0.1730	9.70E-05	0.039	0.17	AP-42, Table 1.6-3 (9/2003)
Octachlorodibenzo-p-dioxins	6.60E-08	0.0000	0.0000	6.60E-08	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Octachlorodibenzo-p-furans	8.80E-11	0.0000	0.0000	8.80E-11	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
o-Xylene	2.50E-05	0.0102	0.0447	2.50E-05	0.010	0.04	AP-42, Table 1.6-3 (9/2003)
Pentachlorodibenzo-p-dioxins	1.50E-09	0.0000	0.0000	1.50E-09	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Pentachlorodibenzo-p-furans	4.20E-10	0.0000	0.0000	4.20E-10	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Pentachlorophenol	5.10E-08	0.0000	0.0000	5.10E-08	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Perylene	5.20E-10	0.0000	0.0000	5.20E-10	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Phenanthrene	7.00E-06	0.0028	0.0123	7.00E-06	0.003	0.01	AP-42, Table 1.6-3 (9/2003)
Phenol	5.10E-05	0.0208	0.0911	5.10E-05	0.021	0.09	AP-42, Table 1.6-3 (9/2003)
Propionaldehyde	6.10E-05	0.0248	0.1086	6.10E-05	0.025	0.11	AP-42, Table 1.6-3 (9/2003)
Pyrene	3.70E-06	0.0015	0.0066	3.70E-06	0.002	0.01	AP-42, Table 1.6-3 (9/2003)
Tetrachlorodibenzo-p-dioxins	4.70E-10	0.0000	0.0000	4.70E-10	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Tetrachlorodibenzo-p-furans	7.50E-10	0.0000	0.0000	7.50E-10	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Tetrachloroethene	3.80E-05	0.0155	0.0679	3.80E-05	0.015	0.07	AP-42, Table 1.6-3 (9/2003)
Trichloroethene	3.00E-05	0.0122	0.0534	3.00E-05	0.012	0.05	AP-42, Table 1.6-3 (9/2003)
Vinyl Chloride	1.80E-05	0.0073	0.0320	1.80E-05	0.007	0.03	AP-42, Table 1.6-3 (9/2003)
Antimony	7.90E-06	0.0032	0.0140	7.90E-06	0.003	0.01	AP-42, Table 1.6-3 (9/2003)
Arsenic	2.20E-05	0.0090	0.0394	2.20E-05	0.009	0.04	AP-42, Table 1.6-3 (9/2003)
Beryllium	1.10E-06	0.0004	0.0018	1.10E-06	0.000	0.00	AP-42, Table 1.6-3 (9/2003)
Cadmium	4.10E-06	0.0017	0.0074	4.10E-06	0.002	0.01	AP-42, Table 1.6-3 (9/2003)
Chromium, total	2.10E-05	0.0085	0.0372	2.10E-05	0.009	0.04	AP-42, Table 1.6-3 (9/2003)
Chromium, hexavalent	3.50E-06	0.0014	0.0061	3.50E-06	0.001	0.00	AP-42, Table 1.6-3 (9/2003)
Cobalt	6.50E-06	0.0026	0.0114	6.50E-06	0.003	0.01	AP-42, Table 1.6-3 (9/2003)
Lead	4.80E-05	0.0195	0.0854	4.80E-05	0.020	0.09	AP-42, Table 1.6-3 (9/2003)
Manganese	1.60E-03	0.6512	2.8523	1.60E-03	0.651	2.85	AP-42, Table 1.6-3 (9/2003)
Mercury	3.50E-06	0.0014	0.0061	3.50E-06	0.001	0.00	AP-42, Table 1.6-3 (9/2003)
Nickel	3.30E-05	0.0134	0.0587	3.30E-05	0.013	0.06	AP-42, Table 1.6-3 (9/2003)
Phosphorus	2.70E-05	0.0110	0.0482	2.70E-05	0.011	0.05	AP-42, Table 1.6-3 (9/2003)
Selenium	2.80E-06	0.0011	0.0048	2.80E-06	0.001	0.00	AP-42, Table 1.6-3 (9/2003)

Continued on Next Page

Appendix A : Emissions Summary
Potential to Emit - Boiler HAPs

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection of SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T 025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: November 17, 2009

Potential to Emit HAPs							
	Emissions Before Control			Limited PTE			Source of Emission Factors
HAP	lb/MMBtu	lb/hr	TPY	lb/MMBtu	lb/hr	TPY	
1,1,2-Trichloroethane	1.20E-04	0.0488	0.2137	1.20E-04	0.0490	0.21	NACASI TB-858, Table 20A
1,2,4-Trichlorobenzene	5.50E-05	0.0224	0.0981	5.50E-05	0.0220	0.10	NACASI TB-858, Table 20A
2,4-Dinitrotoluene	9.40E-07	0.0004	0.0018	9.40E-07	0.0000	0.00	NACASI TB-858, Table 20A
4,6-Dinitro-2-methyl phenol	2.10E-06	0.0009	0.0039	2.10E-06	0.0010	0.00	NACASI TB-858, Table 20A
Acetaldehyde	2.30E-04	0.0936	0.4100	2.30E-04	0.0940	0.41	NACASI TB-858, Table 20A
Acrolein	7.80E-05	0.0317	0.1388	7.80E-05	0.0320	0.14	NACASI TB-858, Table 20A
Benzene	2.70E-04	0.1099	0.4814	2.70E-04	0.1100	0.48	NACASI TB-858, Table 20A
Cumene	1.80E-05	0.0073	0.0320	1.80E-05	0.0070	0.03	NACASI TB-858, Table 20A
Dibenzo(a,h)anthracene	9.10E-09	0.0000	0.0000	9.10E-09	0.0000	0.00	NACASI TB-858, Table 20A
Di-n-butyl phthalate	3.30E-05	0.0134	0.0587	3.30E-05	0.0130	0.06	NACASI TB-858, Table 20A
Formaldehyde	7.84E-04	0.3192	1.3981	7.84E-04	0.3190	1.40	NACASI TB-858, Table 20A
Hexachlorobenzene	1.00E-06	0.0004	0.0018	1.00E-06	0.0000	0.00	NACASI TB-858, Table 20A
m,p-Xylene	5.30E-06	0.0022	0.0096	5.30E-06	0.0020	0.01	NACASI TB-858, Table 20A
Methanol	8.60E-04	0.3500	1.5330	8.60E-04	0.3500	1.53	NACASI TB-858, Table 20A
Methyl Isobutyl Ketone	2.30E-05	0.0094	0.0412	2.30E-05	0.0090	0.04	NACASI TB-858, Table 20A
N-Hexane	2.90E-04	0.1180	0.5168	2.90E-04	0.1180	0.52	NACASI TB-858, Table 20A
Styrene	3.20E-05	0.0130	0.0569	3.20E-05	0.0130	0.06	NACASI TB-858, Table 20A
Toluene	2.70E-05	0.0110	0.0482	2.70E-05	0.0110	0.05	NACASI TB-858, Table 20A
		Highest HAP - Hcl (TPY)	**33.87**			**< 9.9**	or 0.005528 lb/MMBtu
		Total HAP (TPY)	**45.11**			**< 24.9**	or 0.01397 lb/MMBtu

Notes:
1) NACASI TB-858 is Technical Bulletin 858 from the National Council for Air and Stream Improvement.
2) Emissions less than 0.001 lb/hr are shown as zero.
3) The applicant believes the HAP emission factors in AP-42 do not accurately reflect the operation of this boiler because the AP-42 emission factors reflects burning all types of wood including treated wood. This boiler burns only clean wood. Emission limits and testing requirements have been added to verify VOC, Hcl and HAP emissions.

Methodology:
1) PTE (lb/hr) = Heat Input (MMBtu / hr) x (lb Pollutant / MMBtu)
2) PTE (ton/yr) = PTE (lb/hr) x (8,760 hr/yr) x (1 Ton / 2,000 lb)
3) Total HAP Limit = (20.12 TPY) x (2000 lb/ton) x (yr / 8760 hr) x (hr / 407 MMBtu)
4) lb/MMBtu HAP = [HAP emissions (ton/yr) x 2000 lb/ton] / [407 MMBtu/hr x 8,760 hr/yr]]

Appendix A: Emissions Summary Sheet
Limited Potential to Emit Particulate Matter from Process Units

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection of SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T 025-27957-00015
Plt ID: 025-00015
Reviewer: David J. Matousek
Date: November 17, 2009

					Uncontrolled PM Emissions			Uncontrolled PM10 Emissions			Limited Particulate Emissions				
Emission Unit Description	Emission Unit ID	Stack ID	Throughput (ton/hr)	Emission Factor PM (lb/ton)	PM Emissions (lb/hr)	PM Emissions (TPY)	Emission Factor PM10 (lb/ton)	PM10 Emissions (lb/hr)	PM10 Emissions (TPY)	Overall Control Efficiency	PM Emissions (TPY)	PM10 Emissions (TPY)	PM Emissions (lb/hr)	PM10 Emissions (lb/hr)	326 IAC 6-3-2 Limit (lb PM10/hr)
Wood Conveying System (Insignificant Activity)	EU-02	None	300.0	0.00273	0.82	3.60	0.00129	0.39	1.71	0.00%	3.60	1.71	0.820	0.390	63.01
Saw Dust Conveying (Insignificant Activity)	EU-04	None	100.0	0.00288	0.29	1.28	0.00136	0.14	0.62	0.00%	1.28	0.62	0.290	0.140	51.28
Pneumatic Bed Sand Conveying	EU-06	S-02	30.0	1.57	47.10	206.30	0.65	19.50	85.41	90.00%	20.63	8.54	4.710	1.950	40.04
Pneumatic Bottom Ash Conveying	EU-07	S-03	0.4	1.57	0.63	2.76	0.65	0.26	1.14	0.00%	2.76	1.14	0.630	0.260	2.22
Pneumatic Ash Conveying System (Insignificant Activity)	EU-08	S-04	0.9	1.57	1.41	6.18	0.65	0.59	2.58	0.00%	6.18	2.58	1.411	0.589	3.83
Ash Load Out Operation	EU-09	S-04	50.0	1.57	78.50	343.83	0.65	32.50	142.35	75.00%	85.96	35.59	19.626	8.126	44.58
Pneumatic Limestone Conveying	EU-14	S-06	10.0	1.57	15.70	68.77	0.65	6.50	28.47	75.00%	17.19	7.12	3.925	1.626	19.18
Pneumatic Alkaline Sorbent Conveying	EU-15	S-09	10.0	1.57	15.70	68.77	0.65	6.50	28.47	75.00%	17.19	7.12	3.925	1.626	19.18

Notes:

1) The applicant submitted emission calculations based on the projected air flow and grain loading in the baghouse stacks for each of the emission units listed in this table. This method generally overestimates uncontrolled emissions. IDEM has found that pneumatic loading of cement supplement is similar in nature to boiler ash and lime. The emission factor used for potential to emit calculations for ash, sorbent and lime is from AP-42, Chapter 11.12, Table 11.12-2, SCC 3-05-011-17, Cement Supplement unloading to an elevated storage silo (pneumatic). Emission factors for EU-02, EU-04 and EU-07 are based on AP-42, Section 13.2.4.3, 11/2006. The emission factor for EU-02 was multiplied by a factor of 15 to account for fifteen transfer legs. The emission factor for EU-04 was multiplied by six to account for six transfer legs.
2) Emissions from EU-02 and EU-04 are not included in the potential to emit of the source because they consist of fugitive emissions. Fugitive emissions are not included in PSD applicability determinations. These emission units are subject to 326 IAC 6-4.
3) The emission calculations for wet ash loadout are not shown in the table above because, the emissions from dry pneumatic ash loadout are worst case. The emission factor used for wet ash loadout is 0.20 lb PM/ton ash and 0.01 lb PM10/ton ash with a 75% control efficiency for the pug mixer. The emission factors are from "Uncontrolled Emission Factor Listing for Criteria Air Pollutants," Volume II, Chapter 14, July 2001.

Methodology:

1) Emissions (lb/hr) = Throughput (ton/hr) x Emission Factor (lb/ton)
2) Emissions (TPY) = Emissions (lb/hr) x 8,760 hr/yr x (1 ton / 2,000 lb)
3) Controlled Emissions (TPY) = Uncontrolled Emissions (TPY) x (1 - overall control efficiency)
4) 326 IAC 6-3-2 Limit (lb/hr) for emission units EU-06, EU-07, EU-08, EU-09, EU-14 and EU-15 = 4.10 x P ^ 0.67 where: P is the process weight rate in tons/hr.
5) 326 IAC 6-3-2 Limit (lb/hr) for emission units EU-02 and EU-04 = (55.0 x P ^ 0.11) - 40 where: P is the process weight rate in tons/hr.
6) Wood and Saw Dust emission factors were provided by the applicant and accepted by IDEM.

Appendix A: Emission Calculations
PM/PM10 Emissions - Cooling Tower EU-11

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection of SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: November 17, 2009

1. Process Description:

Type of Cooling Tower:	Induced Draft	
Circulation Flow Rate:	36,000	gal/min
Total Drift:	0.0005	% of the circulating flow
Total Dissolved Solids:	4,000	ppm
Density:	8.345	lbs/gal

2. Potential to Emit PM/PM10:

PTE of PM/PM10 (lbs/hr) = 0.36 lbs/hr

PTE of PM/PM10 (tons/yr) = 1.58 tons/yr

Notes:
1) Emission calculations are based on AP-42, Chapter 13.4, Table 13.4-1, January 1995. The default drift is 0.02%. The applicant has chosen high efficiency drift eliminators and an assumed drift rate of 0.005%.
2) PM is assumed to be equal to PM10.

Methodology:
1) Emissions (lb/hr) = [Flow (gal/min) x 60 min/hr x (Drift % / 100) x density (lb/gal) x TDS (ppm)] x (1 / 1,000,000)
2) Emissions (TPY) = Emissions (lb/hr) x 8,760 hr/yr x (1 ton / 2,000 lb)

Appendix A: Emission Calculations
Combustion Emissions - Emergency Fire Pump

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection of SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: November 17, 2009

1. Emission Factors: AP-42, Table 3.3-1 (10/1996)

PM/PM10	2.20E-03	lb/hp-hr
SO2	2.05E-03	lb/hp-hr
VOC	2.51E-03	lb/hp-hr
CO	6.68E-03	lb/hp-hr
NOx	3.10E-02	lb/hp-hr

2. Potential Emissions Calculations - Regulated Pollutants

Rated Capacity	250 hp
Proposed Hours of Operation	500 hours

Unlimited Work Potential =	500.00 hr/yr	x	250 hp	=	125,000 hp-hr/yr
Limited Work Potential =	500.00 hr/yr	x	250 hp	=	125,000 hp-hr/yr

Fire Pump Emissions	PM/PM10 (TPY)	SO2 (TPY)	VOC (TPY)	CO (TPY)	NOx (TPY)
PTE	0.14	0.13	0.16	0.42	1.94
Limited PTE	0.14	0.13	0.16	0.42	1.94

3. Potential Emissions Calculation - HAPs, AP-42, Table 3.3-2 (10/1996)

Overall Energy Efficiency	40.00%	
Output HP	250.00	Rated HP Output
Estimated HP Input	625.00	Required HP Input
Estimated Heat Input Rate	1.59	MMBtu/hr

Pollutant	Emission Factor (lb/MMBtu)	PTE (TPY)	Limited PTE (TPY)
Benzene	9.33E-04	0.0004	0.0004
Toluene	4.09E-04	0.0002	0.0002
Xylenes	2.85E-04	0.0001	0.0001
Propylene	2.58E-03	0.0010	0.0010
1,3-Butadiene	3.91E-05	0.0000	0.0000
Formaldehyde	1.18E-03	0.0005	0.0005
Acetaldehyde	7.67E-04	0.0003	0.0003
Acrolein	9.25E-05	0.0000	0.0000
PAHs	1.68E-04	0.0001	0.0001
Total HAPS		**0.0026**	**0.0026**

Methodology:
1) Unlimited Potential to Emit (tons per year) = Emission Factor (lb/hp-hr) x Unlimited Work Potential (hp-hr/yr) / 2,000 lb/ton)
2) Limited Potential to Emit (tons per year) = Emission Factor (lb/hr-hr) x Limited Work Potential (hp-hr/yr) / (2,000 lb/ton)
3) Total polycyclic aromatic hydrocarbons (PAHs) are reported due to the small quantities emitted.
4) Estimated HP Input (HP) = Rated HP Output / Overall Energy Efficiency
5) Estimated Heat Input Rate (MMBtu/hr) = Estimated HP Input (hp) x 2,545 Btu/hp-hr x 1 MMBtu / Btu
6) HAP Emissions (TPY) = Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x (1 ton / 2,000 lb) x 8,760 hr/yr
7) All emission factors are from Chapter 3.3, Table 3.3-1 & 3.3-2, October 1996.

Appendix A: Emission Calculations
Combustion Emissions - Emergency Generator

Company Name: Liberty Green Renewables Indiana, LLC
Address: Intersection of SR 64 and SR 66, Milltown, Indiana 47145
Permit Number: T025-27957-00015
Plant ID: 025-00015
Reviewer: David J. Matousek
Date: November 17, 2009

1. Emission Factors: AP-42, Table 3.3-1 (10/1996)

PM/PM10	2.20E-03	lb/hp-hr
SO2	2.05E-03	lb/hp-hr
VOC	2.51E-03	lb/hp-hr
CO	6.68E-03	lb/hp-hr
NOx	3.10E-02	lb/hp-hr

2. Potential Emissions Calculations - Regulated Pollutants

Rated Capacity	350 hp
Proposed Hours of Operation	500 hours

Unlimited Work Potential =	500.00 hr/yr	x	350 hp	=	175,000 hp-hr/yr
Limited Work Potential =	500.00 hr/yr	x	350 hp	=	175,000 hp-hr/yr

Generator Emissions	PM/PM10 (TPY)	SO2 (TPY)	VOC (TPY)	CO (TPY)	NOx (TPY)
PTE	0.19	0.18	0.22	0.58	2.71
Limited PTE	0.19	0.18	0.22	0.58	2.71

3. Potential Emissions Calculation - HAPs, AP-42, Table 3.3-2 (10/1996)

Overall Energy Efficiency	40.00%	
Output HP	350.00	Rated HP Output
Estimated HP Input	875.00	Required HP Input
Estimated Heat Input Rate	2.23	MMBtu/hr

Pollutant	Emission Factor (lb/MMBtu)	PTE (TPY)	Limited PTE (TPY)
Benzene	9.33E-04	0.0005	0.0005
Toluene	4.09E-04	0.0002	0.0002
Xylenes	2.85E-04	0.0002	0.0002
Propylene	2.58E-03	0.0014	0.0014
1,3-Butadiene	3.91E-05	0.0000	0.0000
Formaldehyde	1.18E-03	0.0007	0.0007
Acetaldehyde	7.67E-04	0.0004	0.0004
Acrolein	9.25E-05	0.0001	0.0001
PAHs	1.68E-04	0.0001	0.0001
Total HAPS		**0.0036**	**0.0036**

Methodology:
1) Unlimited Potential to Emit (tons per year) = Emission Factor (lb/hp-hr) x Unlimited Work Potential (hp-hr/yr) / 2,000 lb/ton)
2) Limited Potential to Emit (tons per year) = Emission Factor (lb/hr-hr) x Limited Work Potential (hp-hr/yr) / (2,000 lb/ton)
3) Total polycyclic aromatic hydrocarbons (PAHs) are reported due to the small quantities emitted.
4) Estimated HP Input (HP) = Rated HP Output / Overall Energy Efficiency
5) Estimated Heat Input Rate (MMBtu/hr) = Estimated HP Input (hp) x 2,545 Btu/hp-hr x 1 MMBtu / Btu
6) HAP Emissions (TPY) = Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x (1 ton / 2,000 lb) x 8,760 hr/yr
7) All emission factors are from Chapter 3.3, Table 3.3-1 & 3.3-2, October 1996.

Indiana Department of Environmental Management
Office of Air Quality

Appendix B – BACT Analyses
Technical Support Document (TSD)

Source Background and Description

Source Name:	Liberty Green Renewables Indiana, LLC
Source Location:	Intersection of SR 64 and SR 66 Milltown, Indiana 47145
County:	Crawford
SIC Code:	4911
NSR TV Permit No.:	T 025-27957-00015
Operation Permit Issuance Date:	Yet to be issued
Permit Reviewer:	Josiah Balogun

Proposed Expansion

On May 19, 2009, the Office of Air Quality (OAQ) received an application from Liberty Green Renewables Indiana, LLC, for the construction of a 32 MW biomass-fired renewable energy power generating plant, located at Intersection of SR 64 and SR 66 Milltown, Indiana. The facility will use a 407 MMBtu/hr bubbling fluidized bed boiler, identified as EU-01 to generate steam to drive a turbine to generate electricity

Requirement for Best Available Control Technology (BACT)

The requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) applies to facilities located anywhere in the state that were constructed on or after January 1, 1980, which have potential volatile organic compounds (VOC) emissions greater than 25 tons per year, and which are not otherwise regulated by other provisions of 326 IAC 8 rule, and requires the reduction of VOC emissions using Best Available Control Technology (BACT). The proposed 407 MMBtu/hr bubbling fluidized bed boiler, identified as EU-01 has potential VOC emissions of greater than 25 tons per year and is therefore subject to this rule.

326 IAC 8-1-6 requires a best available control technology (BACT) review to be performed on the proposed emission unit:

(1) One (1) biomass-fired bubbling fluidized bed boiler, approved for construction in 2010, identified as EU-01, with a design heat input capacity of 407 MMBtu/hr, using biomass, with a liquid propane gas (LPG) startup burner rated at 168 MMBtu/hr, using selective non-catalytic reduction (SNCR) to control NOx emissions and an alkaline sorbent injection system for HCL control, if necessary. Opacity is monitored with a continuous opacity monitoring system (COM), NOx and SO_2 are monitored with continuous emission monitors, particulate matter emissions are controlled by a baghouse identified as C-01, exhausting to stack S-01. [Under 40 CFR 60, Subpart Db, EU-01 is a new affected source.]

Summary of the Best Available Control Technology (BACT) Process

BACT is a mass emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations.

Federal guidance on BACT requires an evaluation that follows a "top down" process. IDEM has adopted this process for BACT analysis required under 326 IAC 8-1-6. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or permit, or controls achieved in practice. The highest level of control is then evaluated for technical feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially "available" control options for each emission unit and for each pollutant under review. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies, innovative technologies, and controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except for the environmental analyses.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible. BACT must, at a minimum, be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

Volatile Organic Compounds (VOC) BACT – Biomass Bubbling Fluidized Bed Boiler

Step 1: Identify Potential Control Technologies

The volatile organic compounds (VOC) emissions can be controlled by the followings:

(1) Destruction Processes;

(2) Reclamation Processes; and /or

(3) Combination of Reclamation and Destruction Technologies.

Destruction technologies reduce VOC concentration by high temperature oxidation into carbon dioxide and water vapor. Reclamation is the capture of VOCs for reuse or disposal.

Step 2: Eliminate Technically Infeasible Options

The test for technical feasibility of any control option is whether it is both available and applicable in reducing VOC emissions from emissions units at power plant. The control technologies listed in the previous section are discussed and evaluated below for their technical feasibility.

Destruction Control Methods

The destruction of organic compounds usually requires temperatures ranging from 1,200 ^{0}F to 2,000^{0}F for direct thermal incinerators or 600 ^{0}F to 1,200 ^{0}F for catalytic systems. Combustion temperature depends on the chemical composition and the desired destruction efficiency. Carbon dioxide and water vapor are the typical products of complete combustion. Turbulent mixing and combustion chamber retention times of 0.5 to 1.0 seconds are needed to obtain high destruction efficiencies.

Combustion control technologies include recuperative thermal incineration, regenerative thermal incineration, recuperative catalytic incineration, regenerative catalytic incineration, and flares.

Recuperative Thermal Oxidation:

Recuperative thermal incinerators are add-on control devices used to control VOC emissions by introducing solvent-laden fume to the oxidizer. The stream is pre-heated by exiting flue gas from the same system in a heat exchanger or recuperator. A burner then heats the air to the required temperature. The air is then passed through an oxidation chamber where the solvent-laden air is converted to carbon dioxide and water. These are then passed through the heat exchanger where incoming fume is preheated by the heat of the exiting flue gas. Finally the clean flue gas is discharged to the atmosphere. The recuperative thermal oxidizer is appropriate for waste streams with a relatively high solvent content and/or consistent pollutant loading. Variation in pollutant loading will require a longer retention time in the oxidizer in order to properly destroy VOC emissions. The boiler streams do not have high solvent content. Based on a review of the RBLC, this type of control has not been used for controlling VOC emissions from wood - fired boiler. This would not be an appropriate control method for low VOC exhaust stream from the bubbling fluidized bed boiler, identified as EU-01.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a Recuperative Thermal Oxidation is not a technically feasible option for the Boiler, identified as EU-01 operations at this source.

Regenerative Thermal Oxidizer (RTO)

A thermal oxidizer controls VOC emissions by using incineration equipment to raise the exhaust gas temperature to the combustion temperature of VOC. A thermal oxidizer can be recuperative or regenerative. A regenerative thermal oxidizer (RTO) uses a direct contact heat exchanger consisting of a bed of porous ceramic packing or other structured, high heat capacity media. These systems can handle variable and low-concentration VOC waste streams.

The inlet gas first passes through a hot ceramic bed thereby heating the stream (and cooling the bed) to its ignition temperature. The hot gases then react (releasing energy) in the combustion chamber and while passing through another ceramic bed, thereby heating it to the combustion chamber outlet temperature. The process flows are then switched, now feeding the inlet stream to the hot bed. This cyclic process affords very high energy recovery (up to 95%). Thermal oxidizers are considered technically feasible to control VOC emissions from boilers. Since this add-on control device is technically feasible to control VOC emissions, economic feasibility will be evaluated. Liberty Green Renewables Indiana, LLC conducted an assessment of the cost effectiveness of the use of a regenerative thermal oxidizer for Boiler, identified as EU-01.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the regenerative thermal oxidizer (RTO) is a technically feasible option for the boiler, identified as EU-01 at this source.

Catalytic Oxidation:

Catalytic incinerators are add-on control devices used to control VOC emissions by using a bed of catalyst that facilitates the oxidation of the combustible gases. The catalyst increases the reaction rate and allows the conversion of VOC at lower temperatures of 700 ^{o}F to 1100 ^{o}F than thermal incinerators. Catalytic oxidation can be used for low-concentration VOC waste streams; however, certain compounds present in waste stream gas may foul the catalyst. The source can achieve a lower temperature with the use of a supplemental fuel (such as natural gas) to reheat the exhaust to about 650 ^{o}F. Though the biomass boiler has a low VOC concentration waste stream, In order to avoid plugging of the catalyst by particulate matter from the wood, the oxidation catalyst system would need to be placed after a baghouse to control PM emissions. The source has proposed a baghouse to control their PM emissions. Oxidation catalyst is considered technically feasible to control VOC emissions from the boiler. Since this add-on control device is technically feasible to control VOC emissions, economic feasibility will be evaluated. Liberty

Green Renewables Indiana, LLC conducted an assessment of the cost effectiveness of the use of an oxidation catalyst for Boiler, identified as EU-01.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Catalytic Oxidation is a technically feasible option for the bubbling fluidized bed boiler, identified as EU-01 at this source.

Flares:
Flaring is used to control VOC emissions by piping VOCs to a remote, usually elevated location and burning them in an open flame in the open air using a specially designed burner tip, auxiliary fuel, and steam or air to promote mixing for nearly complete (> 98%) VOC destruction. While flares are designed to eliminate waste gas streams, they can cause safety and operational problems and the exhaust stream concentration must be high enough to sustain combustion. This exhaust gas have lower concentration of VOC.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a flare is not a technically feasible option for the bubbling fluidized bed boiler, identified as EU-01 operations at this source.

Reclamation Control Methods

Organic compounds may be reclaimed by one of three possible methods; adsorption, absorption (scrubbing) or condensation. In general, the organic compounds are separated from the emission stream and reclaimed for reuse or disposal. Depending on the nature of the contaminant and the inlet concentration of the emission stream, recovery technologies can reach efficiencies of 98%.

Adsorption: is a surface phenomenon where attraction between the carbon and VOC molecules binds the pollutants to the carbon surface. Both carbon and VOC are chemically intact after adsorption. The VOCs may be removed, or desorbed, from the carbon bed reclaimed and destroyed. Adsorption can be used for relatively low VOC exhaust streams. Pollutants present in the gas streams can reduce adsorber efficiency, increase pressure drop and eventually plug the bed. Adsorption processes can be used to capture VOCs in low concentration exhaust; however, it is typically only used for exhaust that is not loaded with other pollutants which can plug the bed.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Carbon adsorption is not a technically feasible option for the bubbling fluidized bed boiler, identified as EU-01 Operation at this source.

Absorption: is a unit operation where components of a gas phase mixture (Pollutants) are selectively transferred to a relatively nonvolatile liquid, usually water. Sometimes, organic liquids, such as mineral oil or nonvolatile hydrocarbons, are suitable absorption solvents. The choice of solvent depends on cost and solubility of the pollutant in the solvent. Absorption is commonly used to recover products or purify gas streams that have high concentrations of organic compounds. Absorption processes are typically used to recover products or purify gas streams with high concentrations of organic compounds such as in the ethanol production and soybean oil refinery industries. However, it is not considered a technically feasible application for VOC control of emissions from the bubbling fluidized bed boiler, identified as EU-01 due to the low concentration of VOC in the exhaust.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of absorption is not a technically feasible option for the bubbling fluidized bed boiler, identified as EU-01 at this source.

Condensation: is the separation of VOCs from an emission stream through a phase change, by increasing the system pressure or, more commonly, lowering the system temperature below the dew point of the VOC vapor. When condensers are used for air pollution control, they usually operate at the pressure of the emission stream, and typically require a refrigeration unit to obtain the temperature necessary to condense the VOCs from the emission stream. These systems are frequently used prior to other control devices (e.g., oxidizers or absorbers) to remove components that may be corrosive or damaging to other parts of the system. Refrigerated condensers are used as air pollution control devices for treating emission streams with high VOC concentrations (usually > 5,000 ppmv). Condensers may be used to control VOC emissions with high VOC concentrations (usually greater than 5,000 ppmv). The RBLC shows that this type of control has been used for botanical extraction processes and petroleum refineries. Condensers are not typically used in the power plant for VOC control and are not considered technically feasible for the application of controlling VOC emissions from the power plant due to the low concentration of VOC in the exhaust.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of condensation is not a technically feasible option for the bubbling fluidized bed boiler, identified as EU-01 at this source.

Combinations of Reclamation and Destruction Control Methods

In some cases, a combination of control technologies offers the most efficient and cost effective VOC control.

The combination of carbon adsorption with recuperative thermal incineration is available commercially. This system concentrates the VOC stream by using carbon adsorption to remove low concentration VOCs in an emission stream and then uses a lower volume of hot air, commonly one-tenth the original flow, to desorb the pollutants. A recuperative incinerator for destroying pollutants in the concentrated stream is much smaller and has lower supplemental fuel requirement than an incinerator sized for the full emission stream volume.

Absorption systems can also be used to concentrate emission streams to reduce the size of destruction equipment. The concentration effect is not as extreme as with carbon adsorption, a concentrated exhaust stream one quarter the volume of the inlet stream seems to be the practical limit. Absorption concentrators are typically suited for batch processes or to equalize pollutant concentrations in a variable stream. The physical characteristics that drive the absorption of pollutants into a liquid also limit the opportunity to remove those pollutants from the liquid stream. This type of control is not typically used in power plants and based on the pollutant loading of the exhaust stream, adsorption is not considered technically feasible for the bubbling fluidized bed boiler, identified as EU-01 operations as plugging of the adsorption media would likely occur.

Fume incinerators typically need supplemental fuel. Concentrated VOC streams with high heat contents obviously require less supplementary fuel than more dilute streams. VOC streams sometimes have a heat content high enough to be self-sustaining, but a supplemental fuel firing rate equal to about 5% of the total incinerator heat input is usually needed to stabilize the burner flame. Natural gas is the most common fuel for VOC incinerators, but fuel oil is an option in some circumstances.

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of a combination of reclamation and destruction control methods due to the fact that the reclamation part of the system is not a technically feasible option for the bubbling fluidized bed boiler, identified as EU-01 at this source.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

Based on the technical feasibility analysis in Step 2, the remaining control technologies may be ranked as follows for controlling VOC emissions from the bubbling fluidized bed boiler, identified as EU-01.

(1) Regenerative thermal oxidation (98% VOC Reduction)

(2) Oxidation Catalytic (98% VOC Reduction)

Step 4: Evaluate the Most Effective Controls and Document the Results

The following table lists the proposed VOC BACT determination along with the existing VOC BACT determinations for Biomass Boiler. All data in the table is based on the information obtained from the permit application submitted by Liberty Green Renewables Indiana, LLC, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), and electronic versions of permits available at the websites of other permitting agencies.

Table 1: Existing VOC BACT Limits - BUBBLING FLUIDIZED BED BOILER

RBLC # and Description	Permit Issued	Boiler Size	Control Type	Emission Limit	Fuel Type
PROPOSED BACT FOR BUBBLING FLUIDIZED BED BOILER					
Liberty Green Renewables Indiana, LLC (Proposed permit T 025-27957-00015) Proposed date, 2010	Proposed Date 2010	407 MMBtu/hr	Good Combustion Practices	0.019lb/MMBtu and 7.7 lbs/hr	Wood and Wood waste, Propane for Startup
OH-0307 Biomass Energy, South Point***	8/16/2007	318 MMBtu/hr	Good Combustion Practices and use of oxidation catalyst Not Built	0.013 lb/MMBtu	Wood
NH-0013**	2/8/2005	720 MMBtu/hr	Good Combustion Practices	0.005 lb/MMBtu	Wood
S.D Warren Company ME-0021	12/12/2002	1300 MMBtu/hr	Good Boiler Design and Combustion Practices	0.007 lb/MMBtu	Bark, Biomass, dewatered mill sludge, waste paper reclaimed specification and off-specification waste oil
AR-0083	7/26/2005	110,000 lb/hr	Good Combustion Practices	0.034 lb/MMBtu	Wood Chips
LA-0178	11/14/2003	454 MMBtu/hr	Good Equipment Design and Proper Combustion Technique	0.034 lb/MMBtu	Bark
ME-0026	4/9/1999	315 MMBtu/hr	Good Combustion Practices	0.03 lb/MMBtu	Wood Waste

Table 1: Existing VOC BACT Limits - BUBBLING FLUIDIZED BED BOILER

RBLC # and Description	Permit Issued	Boiler Size	Control Type	Emission Limit	Fuel Type
GA-0114	10/13/2004	856 MMBtu/hr	Staged Combustion and Good Combustion Practices	0.05 lb/MMBtu	Bark
WA-0327 Sierra Pacific Industries, Skagit County	1/25/2006	430 MMBtu/hr	None Listed	0.019 lb/MMBtu	Bark & Wood Waste
BioEnergy Power, LLC Lafayette	6/9/2009 (Application Submitted)	400 MMBtu/hr	Good Combustion Practices (proposed)	0.03 lb/MMBtu and 12 lbs/hr based on 3-hour block average period (proposed)	Wood

Note: *** This source was never built according to the state officials.
** The state official did not require an initial stack test for VOC. They may require a test in the future. But they would not recommend using this factor to determine BACT or LAER for VOC since they have not confirmed the limit.

The RBLC and IDEM search revealed ten large boilers firing wood wastes that were permitted, or applied for, in the last ten years dating back to 1999. Nine of those boilers have no add-on VOC controls and instead use Good Combustion Practices. One of the boilers used Oxidation Catalyst. The one boiler permitted with Oxidation Catalyst was permitted at 0.013 lbs VOC/MMBtu but the boiler was never built. The boilers with no add-on controls were permitted with emissions performance ranging from 0.005 to 0.050 lb/MMBtu, with the average being 0.025 lb/MMBtu and the median 0.030 lb/MMBtu.The wide variation in permitted emissions is attributable to variations in site/project specific factors such as boiler designs and local fuel supplies.

S.D Warren Company (ME - 0021) has the power boiler #2 which fires a combination of bark, biomass and dewatered mail sludge on a traveling grate, #6 fuel oil, #2 fuel oil as ignition fuel or carry load, tired derived fuel (TDF), waste papers and reclaimed specification and off - specification waste oil, all these type of fuels are different from the one used by Liberty Green Renewables Indiana, LLC (LGF).

The most stringent VOC emission limitation contained in the summary is 0.019 lb/MMBtu at Sierra Pacific-Skagit County in Skagit County, Washington. The VOC emission limit of 0.019 lb/MMBtu at Sierra Pacific-Skagit County in Skagit County, Washington has been tested and the source passed the stack test as stated by the Washington, Department of Ecology official.

Regarding this project, Liberty Green Renewables Indiana, LLC has requested VOC performance information from boiler manufacturers. At present, a final vendor has not been selected, however, emissions performance of 0.019 lbs VOC/MMBtu can be achieved by the design and vendors currently being considered. This proposed emissions rate, achieved by use of Good Combustion Practices, is in line with other permitted wood fired boilers subject to BACT and discussed above that also use Good Combustion Practices.

Economic Analysis for Oxidation Catalyst

The cost-effectiveness results of the analysis are presented in terms of annualized costs per annual ton of pollutant removed ($/ton). For the conservative purposes of this estimate, we assumed that 98% of the VOC would be removed by the oxidation catalyst. In actuality, because the VOC concentration in the boiler exhaust is already so low, removal efficiency would likely be less.

The cost calculations are conservative planning level estimates with no more than +/-30% accuracy. Additionally, where the guidance documents present a cost range, the lowest value for the cost range was used to yield the most conservative cost values. Results from the cost effectiveness analysis are provided in the table below.

Table 2: Cost Effectiveness Analysis for Catalytic Oxidation

Estimate Basis	Total Capital Cost, $	Annual Operating Cost, $	Total Annualized Cost, $	VOC controlled, tpy (assuming 98% eff.)	Cost Effectiveness, $/ton VOC controlled
Cost Control Manual[1]	$1,686,030	$1,162,803	$1,428,485	43.7	**$32,637**
Fact Sheet[2]	$2,445,474	$444,632	$889,263	43.7	**$20,346**

USEPA cost algorithms for estimating total Capital and Annual Cost of the catalytic oxidation system were used. Two approaches are provided below for comparison:
1. USEPA OAQPS Cost Control Manual EPA/452/B-02-001. Section 3 VOC Destruction Controls Ch. 2 Incinerators.
2. USEPA Air Pollution Control Technology Fact Sheet EPA-452/F-03-018 Catalytic Incinerator

The cost-effectiveness values over $20,000(See appendix B, page 1 for cost analysis support) shown in the above table are well above levels that are generally considered reasonable. Therefore, add-on control using catalytic oxidation for the proposed boiler is not reasonably cost-effective. Additionally, use of oxidation catalyst typically requires the use of supplemental fuel (such as natural gas) to reheat the exhaust to about 650 ^{o}F. This additional combustion creates additional NOx emissions.

Economic Analysis for Regenerative thermal Oxidizer (RTO)

The EPA Air Pollution Control Technology Fact Sheets for Regenerative Incinerator (RTO & RCO) and Catalytic Incinerator (OC) show cost ranges for capital and operating costs for these technologies presented on a dollar per scfm basis. A comparison of these cost ranges is presented in the table below. These control devices are all fairly comparable, in fact, the lower end of this range is as low or lower for oxidation catalyst (OC) than the other options. In the below table we have used the lower end of these cost ranges to calculate the cost effectiveness of these three control devices for our source. As this shows, even using the lower end of EPA's cost ranges, all cost effectiveness values are greater than $20,000/ton of VOC controlled. This agrees with the data in the BACT analysis and is too expensive to be considered reasonably cost-effective.

Cost Comparison of Other Oxidation Options

111158 scf/min Stack flow rate

43.7 tons per year controlled assuming 98% control

Cost ranges from USEPA Air Pollution Control Technology Fact Sheets.

Control Devices	Capital $/scfm	O&M $/scfm	Annualized $/scfm
RTO	35-140	4-10	8-33
RCO	35-140	6-20	11-42
OC	22-90	4-25	8-50

Control Devices	Annualized Cost $/scfm	Annualized Cost $/year	Cost-Effectiveness $/ton
RTO	8	$889,264	$20,346
RCO	11	$1,222,738	$27,975
OC	8	$889,264	$20,346

(a) **Proposal**: **Liberty Green Renewables Indiana, LLC – Milltown, IN**
The following has been proposed as BACT for VOC from the proposed bubbling fluidized bed boiler, identified as EU-01:

LGRI proposed that a VOC limit of 0.019 lb/MMBtu using Good Combustion Practices is BACT

The BACT Proposal is based on the following:

(1) This level is the performance level that LGRI's engineering firm and multiple vendors estimate is achievable for this specific facility without add-on controls.

(2) This is comparable to the levels required of other wood fired boilers in the RBLC and Indiana state-only permits.

(3) A cost-effectiveness analysis of add-on controls (oxidation catalyst) shows that add-on controls are not economically reasonable.

Step 5: Select BACT

The Volatile Organic compounds (VOC) BACT for bubbling fluidized bed boiler, identified as EU-01 shall be as follows:

A good combustion practices to limit the Volatile Organic compounds (VOC) emissions and the corresponding VOC emission limit shall not exceed 0.019 lb/MMBtu and 7.7 pounds per hour.

VOC Cost Effectiveness of Catalytic Oxidation System

Purpose

A BACT analysis for the new boiler permit to install application is required. Estimation of the cost effectiveness for catalytic oxidation is documented below.

Data

Wood fired boiler capacity:	407	MMBtu/hr
Gas Flowrate @ Inlet to oxidizer:	160,000	acfm
Temperature @ Inlet to oxidizer:	300	F
VOC content (Design), tpy	44.6	tpy
VOC content (AP-42 EF), tpy	30.3	tpy

Approach

USEPA cost algorithms for estimating total Capital and Annual Cost of the catalytic oxidation system were used. Two approaches are provided below for comparison:
1. USEPA Cost Control Manual EPA/452/B-02-001. Section 3 VOC Destruction Controls Ch. 2 Incinerators; and
2. USEPA Air Pollution Control Technology Fact Sheet EPA-452/F-03-018 Catalytic Incinerator

Calculation of Total Capital Cost for Catalytic Oxidation System

1. USEPA Cost Control Manual

EC = 1443 Q tot ^ 0.5527 Heat Recovery = 70% (eqn. 2.37)
PEC = 1.18 EC
TCC = 1.61 * PEC

Fixed bed or monolith catalytic oxidation system with total flow between 2,000 and 50,000 scfm

Where:
EC = equipment cost, 1999 dollars
Q tot = gas flow rate, scfm
PEC = purchased equipment cost including equipment, instrumentation, taxes & freight
TCC = Total capital cost, including direct & indirect costs

Convert acfm to scfm: SCFM = ACFM x (PSIG + 14.7) x 528 / [(T1 + 460) x 14.7]

SCFM = [160,000 x (14.7) x 528] / [(300+460) x 14.7]
111,158

EC, $= 1443 * Qscfm ^ 0.5527
$887,478
PEC, $ = $1,047,224
TCC, $ = $1,686,030

2. USEPA Air Pollution Control Technology Fact Sheet

	$/scfm	$/scfm
Capital Cost range of $22-$90/scfm (2002 dollars) =	22	90
Total Capital Cost, $ =	$2,445,474	$10,004,211

Calculation of Annualized Cost of Catalytic Oxidation System

VOC Cost Effectiveness of Catalytic Oxidation System

1. USEPA Cost Control Manual (detailed assumptions in Spreadsheet Cat. Oxid. Detailed Cost)

ANNUAL COST CALCULATIONS:		(1997, $)		
DIRECT COSTS				
Operating Labor	OL		$8,213	(Assumes 0.5 hr per 8 hr shift @ $15/hr)
Supervisor Labor, 15% OL			$1,232	
Operating Materials, 0.75% TCC			$12,645	
Maintenance Labor, 20% OL			$1,643	
Maintenance Materials, 1% TCC			$16,860	
Electricity			$188,667	(Assumes 23 in. wc pressure drop across catalyst bed)
Steam			$0	
Natural Gas			$852,496	(Fuel to heat exhaust from 300 F to 650 F w/ 70% heat recovery)
Catalyst			$80,231	(Based on 6 ft^3/1000 ft^3 catalyst required and 5 year life.)
Process Water			$0	
Cooling Water			$0	
Waste Water Treatment			$0	
Total Annual Direct Costs:			$1,161,986	
INDIRECT COSTS				
Overhead, 60% OL & ML			$16,768	
Property Tax, 1% TCC			$16,860	
Insurance, 1% TCC			$16,860	
Administration, 2% TCC			$33,721	
Capital Recovery	CR factor:	0.109794625	$185,117	
Total Annual Indirect Costs:			$269,327	
RECOVERY CREDIT (Nat.Gas)			$4,828	
TOTAL ANNUAL COSTS		(1997 $/yr)	$1,426,485	

2. USEPA Air Pollution Control Technology Fact Sheet

	$/scfm	$/scfm
Annual cost range of $8 - $50/scfm (2002 dollars)	8	50
Total Annual cost, $ =	$889,263	$5,557,895

Calculation of Cost Effectiveness of Catalytic Oxidation System

Cost Effectiveness = Total Annualized cost / tons of VOC controlled

1. USEPA Cost Control Manual, 1999 dollars

Annual cost:	$1,426,485	
Tons VOC control:	43.7	tpy (assuming 98% VOC controlled)
Cost Effectiveness, $/ton:	**$32,637**	

2. USEPA Air Pollution Control Technology Fact Sheet, 2002 dollars

Annual cost:	$889,263	
Tons VOC control:	43.7	tpy (assuming 98% VOC controlled)
Cost Effectiveness, $/ton:	**$20,346**	(using lower range of $8/scfm)

INPUT PARAMETERS:

Variable	(Units)	Input	Default	
Flow (Q2)	scfm	111200	15000	
Heat cap (Cp2)	BTU/scf*oF	0.0182	0.0182	
Heat cap (Cp5)	BTU/scf*oF	0.0184	0.0184	
Heat cont (h1)	BTU/scf	0.0118	0.0646	**
Heat cont (h3)	BTU/scf	1000	1000	
Ex eff (nhe)	fraction	0.7	0.7	
Catalyst req	ft3/1000 scfm	6	6	*
Pressure drop	in wg	23	21	*
Incin eff (nin)	fraction	0.98	0.95	
Capture eff	fraction	1	0.85	
Inlet VOC	ppm	11.8	76	
Captured VOC	ppm	11.8	64.6	*
Mol Wt of VOC	lb/lbmol	72	104	
Rate constant ratio	kx/k95	2.6	1.0	*

-Abbreviations include: Ex - heat exchanger; PC - preheat chamber
CB - catalyst bed

Stream Temp	Input (oF)	Default (oF)	
1 (waste gas)	300	80	
2 (from Ex to PC)	545	446	*
3 (aux fuel to PC)	70	70	
4 (comb air to PC)	NA	NA	
5 (from PC to CB)	650	600	*
6 (from CB to Ex)	651	604	*
7 (from Ex to stack)	244	230	*

* These values are calculatec

** H1 is calculated using inlet VOC concentratior
and VOC heat content of 1000 BTU/scf

COST CALCULATION INPUT PARAMETERS

Variable	(Units)	Input
Operator $	$/h	15
Yr operation	h/yr	8760
Op hrs/shift	h	0.5
Hrs/shift	h	8
Electricity	$/kwh	0.045
Steam	$/1000 lb	5
Nat Gas	$/MBTU	7
Process H2O	$/1000gal	1
Cool H2O	$/1000gal	0.5
WH2O Treat	$/1000gal	2.25
Waste Disposal	$/ton	150
Catalyst	$/ft3	600
Catalyst life	yrs	5
Annual interest rate:	frac	0.07
Control System life:	years	15

INCINERATOR DESIGN

Gas Temp =	545.45	oF	(T2)
X =	2.02	BTU/scf	(X)
Y =	988	BTU/scf	(Y)
Ratio Q3/Q2 =	0.0020	scf natural gas/scf waste gas	
Q3 =	227	scfm	
Q5 =	111427	scfm	
Power Req =	641	Hp	
Catalyst Req =	669	ft3	
Catalyst $ =	401156	(1993 $)	
Catalyst Cost/yr=	80231	$/yr	
VOC Removed =	44	tons/yr	

Ratio (ktau/ktau95)=	2.57894737
Ratio (tau/tau95)=	1.00004587

TOTAL CAPITAL COSTS		1686030	
(Total capital cost from USEPA Cost Control Manual cost algorithms used			
ANNUAL COST CALCULATIONS:		(1997, $)	
DIRECT COSTS			
Operating Labor		8213	(Assumes 0.5 hr per 8 hr shift @ $15/hr)
Supervisor Labor, 15% OL		1232	
Operating Materials, 0.75% TCC		12645	
Maintenance Labor, 20% OL		1643	
Maintenance Materials, 1% TCC		16860	
Electricity		188667	(Assumes 23 in. wc pressure drop across catalyst bed)
Steam		0	
Natural Gas		852496	(Fuel to heat exhaust from 300 F to 650 F w/ 70% heat recovery)
Catalyst		80231	(Based on 6 ft3/1000 ft3 catalyst required and 5 year life.)
Process Water		0	
Cooling Water		0	
Waste Water Treatment		0	
Total Annual Direct Costs:		1161986	
INDIRECT COSTS			
Overhead, 60% OL & ML		16768	
Property Tax, 1% TCC		16860	
Insurance, 1% TCC		16860	
Administration, 2% TCC		33721	
Capital Recovery	CR factor: 0.1098	185117	
Total Annual Indirect Costs:		269327	
RECOVERY CREDIT (Nat.Gas)		4828	
TOTAL ANNUAL COSTS	(1997 $/yr)	1426485	
TONS VOC REMOVED	(tons/yr)	43.88	
COST EFFECTIVENESS	($/ton)	32512	

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: July 30, 2010

RE: Liberty Green Renewables, LLC / 025-27957-00015

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
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Indianapolis, Indiana 46204
(317) 232-8603
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SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Terence P Naulty
Liberty Green Renewables, LLC
3000 Doolittle Hill Road SE
Elizabeth, IN 47117

DATE: July 30, 2010

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

SUBJECT: Final Decision
Part 70 Operating Permit
025-27957-00015

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:
Todd P. Royer – URS Corporation
Nysa Hogue – Indianapolis Power & Light Co.
Michael Erik – URS Corporation
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

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

July 30, 2010

TO: Crawford County Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Liberty Green Renewables, LLC
Permit Number: 025-27957-00015

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 7/30/2010 Liberty Green Renewables Indiana, LLC 025-27957-00015 Final			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Terence P Naulty Liberty Green Renewables Indiana, LLC 3000 Doolittle Hill Rd SE Elizabeth IN 47117 (Source CAATS) via confirmed delivery									
2		Commissioner Crawford County Commissioners 316 South Court Street English IN 47118 *(Local Official)*									
3		Crawford Co Public Library 203 Indiana Ave English IN 47118-0159 *(Library)*									
4		Crawford County Health Department 306 Oak Hill Circle, P.O. Box 246 English IN 47118-0246 *(Health Department)*									
5		Mr. Kerwin Olson Citizens Action Coalition 603 E Washington St Ste 502 Indianapolis IN 46204 *(Affected Party)*									
6		Ms. Terri Czajka Ice, Miller, Donadio & Ryan One American Square, P.O. Box 82001 Indianapolis IN 46282-0002 *(Attorney)*									
7		Mr. Alec Kalla 8733 W. Summit Circle Drive French Lick IN 47432 *(Affected Party)*									
8		Milltown City Council 215 West Main Streetr, PO Box 127 Milltown IN 47145 *(Local Official)*									
9		Mr. John Blair 800 Adams Ave Evansville IN 47713 *(Affected Party)*									
10		Mark Woods 1300 N. Otts Ln. Milltown IN 47145 *(Affected Party)*									
11		Todd P. Royer URS Corporation 325 West Main Street, Suite 1200 Louisville KY 40202 *(Consultant)*									
12		Cara Jones 2315 Cider Fork Rd Marengo IN 47140 *(Affected Party)*									
13		Karen Moskowitz Protect Our Woods 1510 E. Breckinridge St. Louisville KY 40204 (Affected Party)									
14		Ronald G. & Tammy S. Vanlaningham 2137 N. SR 66 Milltown IN 47145 *(Affected Party)*									
15		Stanley G. Hickerson 1671 N. SR 66 Milltown IN 47145 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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1		Mark A. & Donna 1600 N. Liberty View Rd Milltown IN 47145 (Affected Party)									
2		John L. Eiler 9135 E. Old State Rd 64 Milltown IN 47415 *(Affected Party)*									
3		Betty Riddle 9008 E. Old State Rd 64 Milltown IN 47145 *(Affected Party)*									
4		Darold Wayne Loman 8700 Molmes Rd. #102 Kansas City MO 64131 *(Affected Party)*									
5		Victoria E. Hickerson 642 Hancock Rd. Pittsfield MA 01201 *(Affected Party)*									
6		Martha Hickerson 212 Short St Milltown IN 47145 *(Affected Party)*									
7		American Legion Post #332 108 Second Street Milltown IN 47145 *(Affected Party)*									
8		Micheal, Debra & Joseph Averill 6987 East Hardingsburg Rd Marengo IN 47145 *(Affected Party)*									
9		Rodney & Linda Jenkins 9203 E. Old State Rd. 64 Milltown IN 47145 *(Affected Party)*									
10		Paul A. & Lisa A. Walerczak 9297 Old State Rd. 64 E Milltown IN 47145 *(Affected Party)*									
11		Kathleen May 9204 E. Old State Rd. 64 Milltown IN 47145 *(Affected Party)*									
12		Public Service Company of Indiana 1000 E. Main St. Plainfield IN 46168 *(Affected Party)*									
13		Kevin Eldridge Weston Solutions, Inc. 4917 Waters Edge Drive, Suite 235 Raleigh NC 27606 (Affected Party)									
14		Nysa Hogue Indianapolis Power & Light, Co One Monument Circle Indianapolis IN 46204 *(Consultant)*									
15		Tom Doddridge 312 Hill Street NW Depauw IN 47115 *(Affected Party)*									

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1		Lynn Lynns Property, Inc. 112 Tribal Road Louisville KY 40207 (Affected Party)									
2		Mr. & Mrs. Christopher Drake 2301 Shrader Avenue New Albany NY 47150 *(Affected Party)*									
3		Lura Hollis 6131 E Knight Rd Milltown IN 47145 *(Affected State)*									
4		Richardd Hardey 1085 E St Rd 62 Leavenworth IN 47137 *(Affected Party)*									
5		Morton Dale 11047 S Heishman Rd Leavenworth IN 47137 *(Affected Party)*									
6		Dewey Shelton 449 W Tunnel Hill Rd English IN 47118 *(Affected Party)*									
7		Kim & Richard Beswick 9633 E Combs Ln Milltown IN 47145 *(Affected Party)*									
8		Curt Hudson PO Box 64 Milltown IN 47145 *(Affected Party)*									
9		Joey Robinson PO Box 324 Marengo IN 47140 *(Affected Party)*									
10		Rollin Bach 3799 N St Rd 66 Milltown IN 47145 *(Affected Party)*									
11		Bill Byrd PO Box 293 Milltown IN 47145 *(Affected Party)*									
12		Jack Hickerson 3520 N Oak Grove Rd Marengo IN 47140 *(Affected Party)*									
13		Regina Timberlake 7746 S St Rd 66 Sulpher IN 47174 (Affected Party)									
14		Abe Schwartz 2455 S Eckerty Doolittle Rd Eckerty IN 47116 *(Affected Party)*									
15		Brian & Maxine Brightwell 10807 E White Rd Milltown IN 47145 *(Affected Party)*									

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1		Lou Ann & David 4323 Wyandotte Cave Rd Milltown IN 47145 (Affected Party)									
2		Art & Gina Hill 3591 N St Rd 66 Milltown IN 47145 *(Affected Party)*									
3		Don DuBois 6225 E Industrial Lane Leavenworth IN 47137 *(Affected Party)*									
4		Michael Harmon 2111 Kennedy Dr Corydon IN 47112 *(Affected Party)*									
5		C.J. Kaiser 1296 N Williams Ridge Rd Eckerty IN 47116 *(Affected Party)*									
6		Glenn Crecelius 2530 N Crecelius Rd Milltown IN 47145 *(Affected Party)*									
7		Ruth & Shirley Atkins 5017 E. Tunnel Road Marengo IN 47140 *(Affected Party)*									
8		Mike & Debra Averill 6987 E Hardingsburg Road Marengo IN 47140 *(Affected Party)*									
9		Shirley Baylor 2195 N Liberty View Road Milltown IN 47145 *(Affected Party)*									
10		Frances Belcher 3120 S Old State Road 37 Grantsburg IN 47123 *(Affected Party)*									
11		Mary Lou Bell 5517 E Valeene Road Marengo IN 47140 *(Affected Party)*									
12		Paul & Omeda Beswick 9600 E Combs LN Milltown IN 47145 *(Affected Party)*									
13		Tonya Bline 4025 N. Union Chapel Road Milltown IN 47145 (Affected Party)									
14		Hilda Bowman 8993 E State Road 64 Milltown IN 47145 *(Affected Party)*									
15		David & Lou Ann Bowman 4323 S Wyandotte Cave Road Milltown IN 47145 *(Affected Party)*									

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1		James & Bonita 2406 N Liberty View Road Milltown IN 47145 (Affected Party)									
2		Charles & Carole Carpenter 270 S Ohio Vista Drive Leavenworth IN 47137 *(Affected Party)*									
3		Ruby Coomer 5806 N State Road 66 Milltown IN 47145 *(Affected Party)*									
4		Janet Crecelius 8633 E State Road 64 Milltown IN 47145 *(Affected Party)*									
5		Jesse Crecelius 2365 N Liberty View Road Milltown IN 47145 *(Affected Party)*									
6		Josh Crecelius 2410 N Ceredcelius Road Milltown IN 47145 *(Affected Party)*									
7		Melvin & Lorraine Crecelius 2303 N Cider Fork Road Marengo IN 47140 *(Affected Party)*									
8		Monica Eblen 8054 E Speed Road Milltown IN 47145 *(Affected Party)*									
9		Lonnie Edwards 102 Church Street Milltown IN 47145 *(Affected Party)*									
10		Jessica Fannin 4281 S Old State Road 37 Grantsburg IN 47123 *(Affected Party)*									
11		Terry Florence 2746 Benn Ln English IN 47118 *(Affected Party)*									
12		William & Karen Fowler P.O. Box 69 Leavenworth IN 47137 *(Affected Party)*									
13		Elizabeth & Jim Funk 2749 N Liberty View Road Milltown IN 47145 (Affected Party)									
14		Larry Gillen Gillen Engineering 2864 E Co Road 840 S Marengo IN 47140 *(Affected Party)*									
15		Freida Grant 2562 N Liberty View Road Milltown IN 47145 *(Affected Party)*									

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1		Hary & Rita 1752 E Beasley Road English IN 47118 (Affected Party)									
2		J.H. & W.V. Haug 6010 Cardinal Drive NW Depauw IN 47115 *(Affected Party)*									
3		Lyn Humphries 1484 N Hoosier Energy Rd English IN 47118 *(Affected Party)*									
4		Ricki Knieriem 5255 N State Raod 66 Milltown IN 47145 *(Affected Party)*									
5		Norris & Patricia La Hue 1576 N Liberty View Road Milltown IN 47145 *(Affected Party)*									
6		Richard Langdon P.O. Box 232 English IN 47118 *(Affected Party)*									
7		Julian Lewis Indiana Karst Conservancy 17903 State Road 60 Borden IN 47106 *(Affected Party)*									
8		Bruce Liles 1316 Kurdek Jasper IN 47546 *(Affected Party)*									
9		Andy Mahler Heartwood 3875 S County Road 50 W Paoli IN 47454 *(Affected Party)*									
10		Jeanne Melchior 880 Church Ave Jasper IN 47546 *(Affected Party)*									
11		John & Tammy Mills 9135 E Old Highway 64 Milltown IN 47145 *(Affected Party)*									
12		Cary Murphy 3156 N State Road 64 Marengo IN 47140 *(Affected Party)*									
13		Joni Murphy 296 N Meridian Street Marengo IN 47140 (Affected Party)									
14		Joshua Maugle 5362 E Goodman Ridge Road Marengo IN 47140 *(Affected Party)*									
15		Bill Osborne 5858 Old Lanesville Road Georgetown IN 47222 *(Affected Party)*									

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1		Charles 10074 E White Road Milltown IN 47145 (Affected Party)									
2		Catherine Ramsey 3761 S Vernon Road Milltown IN 47145 *(Affected Party)*									
3		Christina Ridenour 705 Poplar Street New Salisbury IN 47161 *(Affected Party)*									
4		Audna Robinson 3638 N State Road 66 Milltown IN 47145 *(Affected Party)*									
5		Jennifer Rushing 6509 Lantana Ct Louisville KY 40229 *(Affected Party)*									
6		Ervin Kyle Sammons IV 250 W Cherry Street Marengo IN 47140 *(Affected Party)*									
7		Darlene Satterfield 115 Spencer St NW # 24 Depauw IN 47115 *(Affected Party)*									
8		Raymond Scharfenberger Sr. 11099 E White Road Milltown IN 47145 *(Affected Party)*									
9		Patricia Shuster 14995 John Hazelwood Road Depauw IN 47115 *(Affected Party)*									
10		David Stillwell 204 Indiana Ave Milltown IN 47145 *(Affected Party)*									
11		Kevin Strunk 6350 Glen Coe Dr Indianapolis IN 46260 *(Affected Party)*									
12		Connie Thompson 104 Harrison Ave NW Depauw IN 47115 *(Affected Party)*									
13		Henry & Kathleen Walerzcak 214 Hancock St Milltown IN 47145 (Affected Party)									
14		J Scott Waters IV 1947 E Spring Street New Albany IN 47150 *(Affected Party)*									
15		Bobby & Mary Wiseman 6744 E Hardingsburg Road Marengo IN 47140 *(Affected Party)*									

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1		Kerry SNL Energy 1700 N Moore #1110 Arlington VA 22209 (Affected Party)									
2		Chris & Amanda Albertson 595 West Green St Scottsburg IN 47170 *(Affected Party)*									
3		Norma Cornett 925 E. State Road 356 Scottsburg IN 47170 *(Affected Party)*									
4		Jonathan Hill Washington County Family YMCA 1709 N. Shelby St Salem IN 47167 *(Affected Party)*									
5		Shane Avery P.O. Box 290, 1465 N Gardner Ave Scottsburg IN 47170 *(Affected Party)*									
6		Karen Dorrough P.O. Box 9 De Pauw IN 47115 *(Affected Party)*									
7		Doris & Ralph Morris 12695 S. Cape Sandy Road Leavenworth IN 47137 *(Affected Party)*									
8		Stacie Morris 13251 S. Parr Lane Leavenworth IN 47137 *(Affected Party)*									
9		Gene Mattingly 2550 E. Beasley Road English IN 47118 *(Affected Party)*									
10		Mark S. Ebinger 1450 S. Denbo Road English IN 47118 *(Affected Party)*									
11		Jennifer Davis 2450 N. Cider Fork Marengo IN 47140 *(Affected Party)*									
12		Michael & Sharon Warst PO Box 216 Milltown IN 47145 *(Affected Party)*									
13		Eric Herron 502 South Roberson Road English IN 47118 (Affected Party)									
14		Robert Harrison 5516 E. Hillcrest Drive Milltown IN 47145 *(Affected Party)*									
15		Sue Chapman 1244 S. Whiskey Run Ranch Road Milltown IN 47145 *(Affected Party)*									

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1		Albert 13483 S. Parr Lane Leavenworth IN 47137 (Affected Party)									
2		Bobby McSpadden 2946 E. Chanley Road Leavenworth IN 47137 *(Affected Party)*									
3		Bill & Laura Mahoney 2315 N. Liberty View Road Milltown IN 47145 *(Affected Party)*									
4		Bo Brashear 2406 N. Liberty View Road Milltown IN 47145 *(Affected Party)*									
5		Steven Spurgeon P.O. Box 64 Marengo IN 47140 *(Affected Party)*									
6		Bob Gleitz 3621 E. Magnolia Road English IN 47118 *(Affected Party)*									
7		Fred Churchill 6885 W. Pay Drive Depauw IN 47115 *(Affected Party)*									
8		Patricia & Ronnie Schaftlein 9634 E. Bowles Milltown IN 47145 *(Affected Party)*									
9		Diana DuPont 4298 E. Old Courthouse Road Leavenworth IN 47137 *(Affected Party)*									
10		Janet Lucas P.O. Box 13 Henryville IN 47126 *(Affected Party)*									
11		Rick & Penny Pitman P.O. Box 218 Milltown IN 47145 *(Affected Party)*									
12		Tami Geltmaker Milltown Elementary School 518 Speed Road Milltown IN 47145 *(Affected Party)*									
13		Ralph & Sheree Poe 1500 N. St Road 66 Milltown IN 47145 (Affected Party)									
14		Mike Seidl 418 Cottonwood Lane Jasper IN 47546 *(Affected Party)*									
15		David Coyte Audubon Society 1813 Frankfort Ave. #2 Louisville IN 40206 *(Affected Party)*									

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1		Lisa 4721 E. Archibald Falls Road Leavenworth IN 47137 (Affected Party)									
2		Matthew Hill 10396 South State Road 66 Hardinsburg IN 47125 *(Affected Party)*									
3		Christine Ransdell 9665 Weathers Road NW Depauw IN 47115 *(Affected Party)*									
4		Mally & Anthony Brown 5925 E. Speed Road Milltown IN 47145 *(Affected Party)*									
5		Ronald Floyd 5261 S. State Road 66 English IN 47137 *(Affected Party)*									
6		Larry Bye 190 S. State Road 66 Marengo IN 47140 *(Affected Party)*									
7		Debra M. Mauck PO Box 183 Milltown IN 47145 *(Affected Party)*									
8		Kathy L., John R. & Scot. R Bowles 725 N. Hardy Rd Marengo IN 47140 *(Affected Party)*									
9		Jennifer McClain 1715 W. Leota Road Scottsburg IN 47170 *(Affected Party)*									
10		Kathleen Walerczak 214 Hancock Street Milltown IN 47145 *(Affected Party)*									
11		Suzanne F. Muth 1450 S. Denbo Road English IN 47118 *(Affected Party)*									
12		Bridgette Cooper 4475 Lost Creek Rd NW Ramsey IN 47166 *(Affected Party)*									
13		Lorene Hendrickson 6556 S Wyandotte Cave Road Leavenworth IN 47137 (Affected Party)									
14		John F. & Lora L. Croasdell 1471 Mallard Crossing Scottsburg IN 47170 *(Affected Party)*									
15		Margie Crecelius 8120 E. Northridge Road Milltown IN 47145 *(Affected Party)*									

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FACSIMILIE OF PS Form 3877

Mail Code 61-53

IDEM Staff	GHOTOPP 7/30/2010 Liberty Green Renewables Indiana, LLC 025-27957-00015 Final			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Rita 1083 N. Limp School Rd Birdseye IN 47513 (Affected Party)									
2		Jessica Shoffner 708 Valle View Trace New Albany IN 47150 *(Affected Party)*									
3		Albert & Rella Schotter 8155 E. Knight Road Milltown IN 47145 *(Affected Party)*									
4		Patricia Hawkins 7718 E. SR 64 Marengo IN 47140 *(Affected Party)*									
5		William A. H. Sammons, M.D. PO Box 292 Lincoln MA 01773 *(Affected Party)*									
6		Charles Holland 405 Glenview Heights New Albany IN 47150 *(Affected Party)*									
7		Janice Eastridge & Donald Conklin 6092 E. Knight Rd Milltown IN 47145 *(Affected Party)*									
8		Sharon Thomas 508 Spring Street Milltown IN 47145 *(Affected Party)*									
9		Mark Donham RR #1, Box 308 Brookport IL 62910 *(Affected Party)*									
10		Meghan Reef 1808 South Rogers Street Bloomington IN 47403 *(Affected Party)*									
11		Mary Rice 1215 E. Hunter Ave Bloomington IN 47401 *(Affected Party)*									
12		Paul Ash 6781 S 600 E Ferdinand IN 47532 *(Affected Party)*									
13		Mike Turner 3051 W. 39th Ave Denver CO 80211 (Affected Party)									
14		Helen Harrell 1784 Freeman Road Spencer IN 47460 *(Affected Party)*									
15		Susan Laing 47 Phillips Street Greenfield MA 01301 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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1		Chris WDRB TV 624 West Muhammad Ali Blvd Louisville KY 40203 (Affected Party)									
2		Michael Erik URS Corporation 325 West Main St. Suite 1200 Louisville KY 40202 *(Consultant)*									
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Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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