



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: June 8, 2011

RE: Indiana Research Group / 005-30139-00104

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:

- (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 impracticable 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.



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www.idem.IN.gov

NEW SOURCE CONSTRUCTION and PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Indiana Research Institute
1402 Hutchins Avenue
Columbus, Indiana 47201**

(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 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.: T005-30139-00104	
Issued by:  For Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: June 8, 2011 Expiration Date: June 8, 2016

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**Attachment A: Standards of Performance for Stationary Compression Ignition Internal Combustion
Engines [40 CFR Part 60, Subpart III] [326 IAC 12]**

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 internal combustion engine manufacturing facility.

Source Address:	1402 Hutchins Avenue, Columbus, Indiana 47201
General Source Phone Number:	(812) 378-5363
SIC Code:	3519
County Location:	Bartholomew
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

IDEM has determined that Cummins Technical Center (Cummins TC), 005-00002, located at 1900 McKinley Avenue, Columbus, Indiana, and Indiana Research Institute (IRI), 005-00104, located at 1402 Hutchins Avenue, Columbus, Indiana, will be considered two (2) sources as defined by 326 IAC 2-7-1(22) because the plants are not under common ownership or common control, neither plant serves as a support facility for the other; and the plants are not located on contiguous or adjacent properties.

A.3 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) Six (6) Low Power Rating (<300 HP) Engine Test Cells, identified as TC1 through TC6, permitted in 2011, each with a maximum capacity of 13.4 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S1 through S6.
- (b) Nine (9) Midrange Power Rating (<600 HP) Engine Test Cells, identified as TC7 through TC15, permitted in 2011, each with a maximum capacity of 13.4 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S7 through S15.
- (c) Three (3) High Power Rating (<1500 HP) Engine Test Cells, identified as TC16 through TC18, permitted in 2011, each with a maximum capacity of 20.0 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S16 through S18.

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).

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, T005-30139-00104, 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.
- (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:
 - (1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and
 - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.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, 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
 - (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 T005-30139-00104 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.

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]

- (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) 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).

- (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.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.

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 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.7 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.8 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.9 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.10 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.11 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.12 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.13 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.14 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.15 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.16 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.17 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.18 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

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Test Cells not subject to 326 IAC 2-2

- (a) Six (6) Low Power Rating (<300 HP) Engine Test Cells, identified as TC1 through TC6, permitted in 2011, each with a maximum capacity of 13.4 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S1 through S6.
- (b) Nine (9) Midrange Power Rating (<600 HP) Engine Test Cells, identified as TC7 through TC15, permitted in 2011, each with a maximum capacity of 13.4 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S7 through S15.
- (c) Three (3) High Power Rating (<1500 HP) Engine Test Cells, identified as TC16 through TC18, permitted in 2011, each with a maximum capacity of 20.0 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S16 through S18.

(The information describing the process contained in this facility 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 PSD Minor Limit [326 IAC 2-2]

- (a) NO_x emissions from each of the engine test cells, identified as TC1 through TC18, shall not exceed 245 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Compliance with the above limit will be demonstrated as follows:

$$E = \frac{(EF_{d1} \times U_{d1}) + (EF_{d2} \times U_{d2}) + (EF_{jp} \times U_{jp})}{2000 \text{ lb/ton}}$$

Where:

- E = Total NO_x emissions, in tons/month.
- U_{d1} = Total diesel fuel used in engines rated <600hp, in gallons/month.
- U_{d2} = Total diesel fuel used in engines rated >600hp, in gallons/month.
- U_{jp} = Total JP-8 fuel used, in gallons/month.
- EF_{d1} = NO_x emission factor for diesel fuel used in engines rated <600hp, in lb/gallon.
- EF_{d2} = NO_x emission factor for diesel fuel used in engines rated >600hp, in lb/gallon.
- EF_{jp} = NO_x emission factor for JP-8 fuel used, in lb/gallon.

These limits are required to limit the potential to emit NO_x from the entire source to less than 250 tons per year. Compliance with these limits makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the entire source.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan (PMP) is required for the engine test cells, identified as TC1 through TC18. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

D.1.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within sixty (60) days after achieving maximum production, but no later than one hundred eighty (180) days of operation, compliance with the NO_x limitation in Condition D.1.4 for engine test cells, identified as TC1 through TC18, shall be determined by performance stack tests

Testing shall be conducted as follows:

- (a) Testing of both diesel and JP-8 fuel in one of the fifteen (15) engine test cells, identified as TC1 through TC15, rated at <600 hp;
- (b) Testing of both diesel and JP-8 fuel in one of the three (3) engine test cells, identified as TC16 through TC18, rated at >600 hp;

such that the engine test cell tested should be rotated during each performance test.

Testing shall be conducted utilizing the methods as approved by the Commissioner. These tests 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 the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

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

D.1.7 Record Keeping Requirements

- (a) In order to document compliance with Conditions D.1.4, the Permittee shall maintain monthly records of the NO_x emissions from the engine test cells, identified as TC1 through TC18.

- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.1.8 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.1.4 shall be submitted using the reporting form located at the end of this permit, or its equivalent, not later than thirty (30) days following the end of each calendar quarter. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION E.1 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII] [326 IAC 12]

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

- (a) Six (6) Low Power Rating (<300 HP) Engine Test Cells, identified as TC1 through TC6, permitted in 2011, each with a maximum capacity of 13.4 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S1 through S6.
- (b) Nine (9) Midrange Power Rating (<600 HP) Engine Test Cells, identified as TC7 through TC15, permitted in 2011, each with a maximum capacity of 13.4 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S7 through S15.
- (c) Three (3) High Power Rating (<1500 HP) Engine Test Cells, identified as TC16 through TC18, permitted in 2011, each with a maximum capacity of 20.0 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S16 through S18.

Under 40 CFR 60, Subpart IIII, the engine test cells, identified as TC1 through TC18, comprise the affected source.

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

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

E.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.4218 and Table 8 to 40 CFR 60, Subpart IIII, the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, apply to the operation of the engine test cells, identified as TC1 through TC18, when certifying engines in accordance with 40 CFR 60, Subpart IIII.

E.1.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart IIII, the Permittee shall comply with the following provisions of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, which are included as Attachment A, for certifying engines in the engine test cells, identified as TC1 through TC18:

- (1) 40 CFR 60.4200(a)(1) and (d)
- (2) 40 CFR 60.4201
- (3) 40 CFR 60.4202
- (4) 40 CFR 60.4203
- (5) 40 CFR 60.4210
- (6) 40 CFR 60.4215
- (7) 40 CFR 60.4216
- (8) 40 CFR 60.4218
- (9) 40 CFR 60.4219
- (10) Table 1 to 40 CFR 60, Subpart IIII

- (11) Table 2 to 40 CFR 60, Subpart IIII
- (12) Table 3 to 40 CFR 60, Subpart IIII
- (13) Table 4 to 40 CFR 60, Subpart IIII
- (14) Table 5 to 40 CFR 60, Subpart IIII
- (15) Table 6 to 40 CFR 60, Subpart IIII
- (16) Table 8 to 40 CFR 60, Subpart IIII

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Indiana Research Institute
Source Address: 1402 Hutchins Avenue, Columbus, Indiana 47201
Part 70 Permit No.: T 005-30139-00104

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify): _____
- Report (specify): _____
- Notification (specify): _____
- Affidavit (specify): _____
- Other (specify): _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Indiana Research Institute
Source Address: 1402 Hutchins Avenue, Columbus, Indiana 47201
Part 70 Permit No.: T 005-30139-00104

This form consists of 2 pages

Page 1 of 2

<input type="checkbox"/>	This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), no later than four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and• The Permittee must submit notice in writing or by facsimile no later than two (2) 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? <input type="checkbox"/> Y <input type="checkbox"/> N Describe:
Type of Pollutants Emitted: <input type="checkbox"/> TSP <input type="checkbox"/> PM-10 <input type="checkbox"/> SO ₂ <input type="checkbox"/> VOC <input type="checkbox"/> NO _x <input type="checkbox"/> CO <input type="checkbox"/> Pb <input type="checkbox"/> 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**

Quarterly Report

Source Name: Indiana Research Institute
Source Address: 1402 Hutchins Avenue, Columbus, Indiana 47201
Part 70 Permit No.: T 005-30139-00104
Facility: Engine Test Cells, TC1 through TC18
Parameter: NO_x Emissions
Limit: Total NO_x emissions shall not exceed 245 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: _____

Month	NO _x Emissions-for This Month (tons)	NO _x Emissions for Previous 11 Months (tons)	NO _x Emissions for 12-Month Period (tons)

- No deviation occurred in this quarter.
- Deviations 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 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Indiana Research Institute
Source Address: 1402 Hutchins Avenue, Columbus, Indiana 47201
Part 70 Permit No.: T 005-30139-00104

Months: _____ to _____ Year: _____

Page 1 of 2

<p>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".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> 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:	

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

Indiana Research Institute
1402 Hutchins Avenue
Columbus, Indiana 47201

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 Indiana Research Institute, located at 1402 Hutchins Avenue, Columbus, Indiana 47201, completed construction of the stationary internal combustion engine manufacturing facility on in conformity with the requirements and intent of the permit application received by the Office of Air Quality on January 21, 2011, and as permitted pursuant to New Source Construction Permit and Part 70 Operating Permit No. T 005-30139-00104, Plant ID No. 005-00104, 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 on this _____ day of _____, 20____. My Commission expires: _____.

Signature _____

Name _____
(typed or printed)

Attachment A: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60, Subpart III]

Source Background and Description

Source Name:	Indiana Research Institute
Source Location:	1402 Hutchins Avenue, Columbus, IN 47201
County:	Bartholomew
SIC Code:	3519
Part 70 Operating Permit No.:	T005-30139-00104
Permit Reviewer:	Kimberly Cottrell

Stationary Compression Ignition Internal Combustion Engines NSPS [40 CFR 60, Subpart III]

Subpart III—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:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \quad (\text{Eq. 1})$$

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:

C_i = concentration of NO_x or PM at the control device inlet,

C_o = concentration of NO_x or PM at the control device outlet, and

R = percent reduction of NO_x 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.

$$C_{\text{adj}} = C_d \frac{5.9}{20.9 - \% \text{O}_2} \quad (\text{Eq. 3})$$

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.

$\% \text{O}_2$ = 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:

$$F_o = \frac{0.209_{\%}}{F_c} \quad (\text{Eq. 4})$$

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:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 5})$$

Where:

X_{CO_2} = 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:

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

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:

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

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:

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

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 III 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 III 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)

Table 4 to Subpart III 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
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

¹For 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.

²For 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.

³In 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 III 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 III 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 speed¹	Torque (percent)²	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

¹Engine speed: ±2 percent of point.

²Torque: 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.
		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.

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
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location; and,	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurement for NO _x concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO _x concentration.
		iv. Measure NO _x at the exhaust of the stationary internal combustion engine	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) NO _x concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet 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.

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
		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.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII			
[As stated in §60.4218, you must comply with the following applicable General Provisions:]			
General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Indiana Department of Environmental Management Office of Air Quality

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

Source Description and Location
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Source Name:	Indiana Research Institute
Source Location:	1402 Hutchins Avenue, Columbus, IN 47201
County:	Bartholomew
SIC Code:	3519
Part 70 Operating Permit No.:	T005-30139-00104
Permit Reviewer:	Kimberly Cottrell

Public Notice Information

On April 6, 2011, the Office of Air Quality (OAQ) had a notice published in *The Republic* in Columbus, Indiana, stating that the Indiana Research Institute (IRI) had applied for a new source construction and Part 70 Operating Permit. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On May 26, 2011, the Office of Air Quality (OAQ) held a public meeting at the Columbus East High School, 230 South Marr Road, Columbus, IN 47201, for citizens and interested parties to discuss questions and concerns related to the project. The public comment period was extended until May 31, 2011.

Comments Received

OAQ received comments from the following people (and groups of people):

- Larry West, owner of West, LLC
- Steve Platt, property owner
- Byrne Carr, resident and property owner
- Nancy Johnson, resident and property owner
- Matthew Sebahar, owner of Columbus Pallet Corporation
- Dennis Orwin, owner of Ruddick-Nugent House
- Arthur Beck, Beck Rocker, P.C., representation for the residents living near the IRI facility.

The comments are summarized in the subsequent pages, with IDEM's corresponding responses.

The IDEM does not amend the Technical Support Document (TSD). The TSD is maintained to document the original review. This addendum to the TSD is used to document comments, responses to comments and changes made from the time the permit was drafted until a final decision is made.

General Comments and IDEM's Responses

The summary of the comments and IDEM, OAQ responses, including changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

Comment 1:

The air quality of the area of Columbus, Indiana, where IRI is located, has improved in recent years since closure of two facilities that had previously contributed significant amounts of air pollution to local area. IRI should not be allowed to test engines adjacent to residential areas because the exhaust will be a detriment to the health of the local residents. The testing of HD engines will create noise and odors that may disrupt local residents. Additionally, the pollution will affect property values and overall quality of life of the local residents. The IRI facility should relocate to a more suitable location that is not in close proximity to residential areas.

IDEM Response:

The level of pollutants allowed by the permit will not endanger the health of local residents. The federal Clean Air Act requires the U.S. EPA to set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, ozone, particulate matter, nitrogen oxides, sulfur dioxide, carbon monoxide and lead. 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. Bartholomew County is in attainment status for all the criteria pollutants. The source's emissions will not cause or contribute to any violation of these national standards.

More information about these 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. Detailed information about the health effects of these common pollutants is available at <http://www.epa.gov/air/urbanair/>. 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/>.

IDEM recognizes that quality of life issues such as noise, odors and property values are very important. IDEM does not have legal authority to regulate zoning, odor or noise; therefore, IDEM does not have the authority to issue or deny a permit based on the proximity to residential property. For issues related to zoning, odor or noise, public should contact their local government officials.

There are no changes to the permit as a result of this comment.

Comment 2:

IRI has proposed expanding the current engine manufacturing facility to test an even greater number of (diesel) engines. Under its proposal, IRI could burn up to 300 new gallons fuel (diesel) per hour in the expanded business and put the exhaust "up the stacks".

For example:

8 hours running = 2400 gallons fuel burned

12 hours running = 3600 gallons

24 hours running = 7200 gallons (potential of 36,000 gallons/5 day work week 24hrs/day)

Tens of thousands of gallons of fuel burned weekly by this plant will add tons of pollution in the air breathed by our community residents that can travel great distances. Fossil fuel pollution has adverse health impacts including difficult breathing, contributing to lung cancer, chronic obstructive pulmonary disease, bronchitis and other lung diseases. I understand that air pollutants can cause heart attacks, strokes, lung cancer and other cancers, birth defects and premature death. The low income/senior citizen/disabled area is already getting cumulative doses of deadly toxins and the addition of 490,000 pounds of hazardous air pollution should not be allowed.

IDEM Response:

The draft permit contains the current state and federal requirements that apply to the operations at IRI. Permit requirements are based on the information provided by the applicant and emission factors and guidance provided by the U.S. EPA for determining the nature and extent of potential emissions to the atmosphere. Specifically, Appendix A to the Technical Support Document summarizes the unrestricted potential emissions as well as the limited potential to emit.

The unrestricted potential emissions are an estimate of the highest amount of emissions that could be discharged to the atmosphere if all of the operations at the facility were operating at maximum capacity continuously at all times (i.e., 24 hours per day, 365 days per year). In general, the unrestricted potential emissions represent an unattainable amount of air pollutant emissions because it is not physically possible for most operations to operate in this manner.

Most industrial processes have scheduled downtime as well as control methods that will reduce the amount of air pollutants that can be emitted at any given time. IRI will be testing engines in test cells. The nature of this operation is that the engines will be operating for a set amount of time while data is gathered regarding the performance of the engine. There will be downtime when the test cell is under preparation for testing as well as when the test is complete and the engine is removed to make room for the next scheduled test.

IRI has chosen to limit the nitrogen oxide (NO_x) emissions from the entire facility to less than the major source level for the federal rule regarding Prevention of Significant Deterioration (PSD). This cap on NO_x emissions will further limit the operating time for the tests cells at the facility. The Appendix A to the Technical Support Document indicates that the allowed operating time could be less than half of the estimated time that was used for the calculation of unrestricted potential emissions whenever diesel fuel is used in the engines. The limit on NO_x emissions is a rolling 12 month total; therefore, the IRI facility must demonstrate compliance with this limitation every month and include the determinations in its quarterly reports to IDEM. These reports and all records used to generate the reports must be made available to IDEM upon request. The IDEM inspector will review these records on a regular basis as part of the compliance inspection process.

Emissions from using fossil fuel can have serious health effects if the level of emissions is high. IRI's limited emissions will not cause or contribute to any violation of the National Ambient Air Quality standards set by the U.S. EPA. As stated in IDEM's previous response, more information about these 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. Detailed information about the health effects of these common pollutants is available at <http://www.epa.gov/air/urbanair/>. 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/>.

There are no changes to the permit as a result of this comment.

Comment 3:

There are technical errors in the application that strongly understate the total amount of pollutants that will be emitted if this permit is allowed. The calculations in the application are all based on assumptions regarding the fuel burned per hour, specifically:

- Six (6) engine test cells rated at <300 hp with a maximum capacity of 13.4 gallons of fuel per hour;
- Nine (9) engine test cells rated at <600 hp with a maximum capacity of 13.4 gallons of fuel per hour;
- Three (3) engine test cells rated at <1500 hp with a maximum capacity of 13.4 gallons of fuel per hour;

The quantity of fuel consumed in a diesel engine is proportional to the power output of the engine; therefore, a 600 HP engine will use approximately two (2) times more fuel than a 300 hp engine, and a 1500 hp engine will use approximately five (5) times more fuel than a 300 hp engine. Several published data specification sheets for Cummins engines show this relationship between horsepower rating and fuel consumption. Based on the power capacity of the proposed engine testing facility and a 300 hp engine utilizing 13.4 gallons of diesel fuel per hour, a 600 hp engine would be expected to use 26.8 gallons of diesel fuel per hour, and a 1500 hp engine would be expected to use 67 gallons of diesel fuel per hour.

Because the fuel usage used for the emission calculations are underestimated, the corrected estimation of regulated pollutants will be substantially higher than what is stated in the calculations for the draft permit.

There are claims made to reduce the amount of NO_x emissions to 245 tons per year; thus keeping the NO_x emissions below the PSD major source level of 250 tons per year. When the emissions are corrected, as noted in the table below, the NO_x emissions would clearly be categorized as "major":

Potential to Emit (ton/yr)				
Process / Emission Unit	NO_x Emissions		PM Emissions	
	<i>original</i>	<i>corrected</i>	<i>original</i>	<i>corrected</i>
Engine Test Cells (TC1 - TC6) <300 hp	212.76	212.76	14.96	14.96
Engine Test Cells (TC1 - TC6) <300 hp	319.14	638.28	22.43	44.86
Engine Test Cells (TC1 - TC6) <300 hp	68.41	229.1735	2.51	8.4085
Paint Booth (P1)	0		0.71	0
Total Uncontrolled PTE	600.31	1080.21	40.61	68.23

IDEM Response:

The emissions estimates discussed by the commenter are for combustion of diesel fuel in internal combustion engines. IDEM used the emission factors that are most commonly used for combustion of diesel fuel in internal combustion engines. These emission factors are compiled in the U.S. EPA's AP 42 Compilation of Air Pollutant Emission Factors, Chapters 3.3 and 3.4. AP-42 provides two (2) sets of emission factors: 1) engines rated as high as 600 hp using diesel as the primary fuel, and 2) large engines rated as more than 600 hp using diesel as the primary fuel. AP-42 emission factors represent the average emission rate that is expected from the emission unit during normal operation.

The emissions from the engines do not vary linearly. IDEM reviewed the permit for a similar facility, issued to Cummins Industrial center (T 071-21065-00015), and found that emission factor for the larger engines is less than the emission factor for the smaller engines. Therefore, the assumptions made by the commenter are not valid.

IDEM calculated the unrestricted potential to emit for the proposed engines based on AP-42 emission factors and information provided in the permit application regarding the size and estimated fuel usage for the engine test cells. The unrestricted potential to emit is a value used to determine the level of permit that will be required for the proposed facility.

IRI has accepted a federally enforceable limitation on nitrogen oxide emissions from the entire facility of 245 tons per twelve consecutive month period with compliance determined each month.

For the IRI facility, IDEM has restricted the amount of NO_x emissions that IRI is allowed to release into the atmosphere to less than half to the estimated unrestricted emissions. IDEM is requiring IRI to perform emissions testing to verify the true emissions rate for the engine test cells. These tests are to be performed within six (6) months of the start of operations and shall be repeated once every five (5) years. For these tests, IRI is required to rotate the engine test cells that are checked such that every emission unit within a size range will be tested once before repeat testing for any of the similar units.

The source specific data that IDEM will gather from the performance testings at IRI will be more accurate than the initial estimates of unrestricted potential to emit because these tests will mimic the performance and emissions potential that the emissions units at IRI can actually achieve, which may be *above or below* IDEM's original estimates.

After the test is performed and validated by the IDEM, IRI shall calculate emissions based on fuel used by the engines in each category, and the emissions factors every month and the compliance with the limit will be verified on a rolling twelve month average basis each month. IRI may not exceed the yearly limitations of 245 tons, demonstrated each month. This will reflect accurate emissions from the IRI's engines.

This means that IRI will be legally required to comply with this emission limitation and failure to do so will be a deviation from the operating permit. Any deviation for a permit requirement has the potential to be a violation that could result in a fine or enforcement action.
There are no changes to the permit as a result of this comment.

Comment 4:

The previous business (Cummins Engine METC) only ran a fraction of proposed application volumes, took all the required safety and environmental measures, and it was determined they failed at preventing their operations from polluting the local environment through fuel leakage (~245,000 gallons) that was "lost" in the ground on the site now occupied by IRI at 1402 Hutchins, Columbus, IN. Does IDEM take this information into consideration in "granting a permit"?

Neighbors are unhappy to learn about the spill years after the fact. It was never made public at that time, I was told.

Is it true that Cummins Engine METC had testing wells installed and is on a "watch list" for ground contamination and water contamination?

ArvinMeritor, a block over from IRI had a Trichlorine spill/leak earlier this year that was 38 times over the limit according to the newspaper.

IDEM Response:

IDEM has no authority to consider how a plant was previously operated when setting out the permit requirements for a new operator. The presence of soil or water pollution does not allow IDEM to deny a permit for a new source construction and operating permit. If ground or water contamination was present at a facility, the current property owner or responsible party would be expected to continue remediation efforts until achieving the appropriate closure levels. There may also be additional air permitting requirements for the remediation system itself. IDEM has no authority to consider a chemical spill or leak at another facility when issuing an air permit.

The fuel leakage mentioned by the commenter was remediated through IDEM's Voluntary Remediation Program. The site was considered closed and Cummins Engine Co., Inc. was presented with a certificate of completion for the successful completion of the Voluntary Remediation Work Plan for Cummins Engine METC, IDEM #6990901, located at 1532 East 14th Street, Columbus, Indiana, on October 27, 2003.

There are no changes to the permit as a result of this comment.

Comment 5:

Why did the April 5, 2011, mailing list only include a couple of neighbors and then the rest people living a far distance away?

IDEM Response:

IDEM sends draft and final permit decisions to those persons that are listed in our files as having requested to be on the mailing list for any permitting activities associated with the facility. Anyone who would like to be added to IDEM's mailing list to receive notice of future action related to this permit application or for this facility should contact IDEM at 1-800-451-6027, and ask for the Permits Administration and Support Section.

There are no changes to the permit as a result of this comment.

Comment 6:

I thought they were not going to start testing engines until the permit was issued.

IDEM Response:

IRI should not have tested any engines until its permit was issued. For a new source construction and operating permit, the applicant is required to wait for issuance of the final permit prior to constructing and operating the emission units that are listed in the operating permit. Additionally, the Permittee is required to get prior approval for any changes to the facility that will trigger new applicable requirements.

The IDEM inspector, David Harrison, visited the facility on Thursday, April 28, 2011, after IDEM received this complaint. IRI was testing an engine, and the operation had started on Tuesday, April 26, 2011. There was a noticeable hum outside the plant and when first arriving driving around the plant, Mr. Harrison knew that the facility was operating an engine. Mr. Harrison explained that the operation was in violation of operating without an operating permit since the draft permit had not yet been issued. IDEM will take appropriate enforcement action regarding this violation.

Mr. Harrison visited the facility one week later and did not find any engine test cells operating at that time. Citizens should contact the IDEM inspector if there are any other compliance related concerns with this facility. IDEM's inspector for this source is Mr. David Harrison. Mr. Harrison may be reached by telephone at (317) 232-8438, toll free (800) 451-6027, FAX (317) 233-6865. Environmental complaints may also be filed on-line at <http://www.IN.gov/idem/5274.htm>.

There are no changes to the permit as a result of this comment.

Comment 7:

Is it true that the person who was in charge of the Cummins Tech building then is the same person who runs IRI now? Does that have an impact on your decision?

IDEM Response:

IDEM has no authority to consider the ownership of a company or the identity of the employees operating a source in determining whether to issue or deny an application for an air permit. When there are questions regarding common ownership or control, IDEM collects additional information in order to determine if two or more sources should be permitted as one source. In response to this comment, IDEM has prepared such an analysis below to define the relationship between IRI and the Cummins Technical Center plant.

Source Definition for Indiana Research Institute (IRI):

Indiana Research Institute (IRI) has purchased an existing building at 1402 Hutchins Avenue, Columbus, across from the Cummins Technical Center (Cummins TC) at 1900 McKinley Avenue, Columbus. IRI plans on supplying parts and engine testing services to Cummins and other manufacturers. IDEM, OAQ has examined whether these two plants are part of the same major source. The term "major source" is defined at 326 IAC 2-7-1(22). In order for these plants to be considered one major source, they must meet all three of the following criteria:

- (1) the plants must be under common ownership or common control;
- (2) the plants must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other; and,
- (3) the plants must be located on contiguous or adjacent properties.

The plants have separate ownership. There are no common controllers, common corporate officers or common directors. Therefore no common ownership exists.

IDEM's Nonrule Policy Document Air-005 sets out two independent tests to determine if common control exists. The first test, the auxiliary activity test, determines whether one source performs an auxiliary activity which directly serves the purpose of the primary activity and whether the owner or operator of the primary activity has a major role in the day-to-day operations of the auxiliary activity. An auxiliary activity directly serves the purpose of a primary activity by supplying a necessary raw material to the primary activity or performing an integral part of the production process for the primary activity.

Day-to-day control of the auxiliary activity by the primary activity may be evidenced by several factors, including:

- is a majority of the output of the auxiliary activity provided to the primary activity?
- can the auxiliary activity contract to provide its products/services to a third-party without the consent of the primary activity?
- can the primary activity assume control of the auxiliary activity under certain circumstances?
- is the auxiliary activity required to complete periodic reports to the primary activity?

If one or a combination of these questions is answered affirmatively, common control may exist.

Initially, all of the IRI plant's output will be provided to Cummins, but not all will be from the Cummins TC plant. The engines IRI will test will come from the Cummins TC plant as well as the other Cummins plants as far away as Minnesota and New York. IRI plans to expand its service to include testing for the military and for other engine manufacturers, with the intention that the Cummins TC plant will not receive a majority of IRI's testing services.

None of the Cummins TC plant's output will be dedicated to the IRI plant. IRI will be free to enter into sales and testing agreements with any other company. Neither company has the power to assume control of the other under any circumstances. Neither is required to submit any reports to the other. IDEM finds that neither plant has a major role in the day to day operation of the other plant. Therefore the first common control test is not met.

The second common control test in the nonrule policy is the but/for test. This test focuses on whether the auxiliary activity would exist absent the needs of the primary activity. If all or a majority of the output of the auxiliary activity is consumed by the primary activity the but/for test is satisfied. Although all of the IRI plant's output might be provided to the Cummins TC plant initially, IRI's business plan is to obtain other customers so that no single customer receives a majority of its output. Cummins already has other sources for parts and does its own engine testing, so it is not reliant on IRI. Therefore the second common control test is also not met. IDEM finds that IRI and Cummins are not under common control. Since neither common ownership nor common control exists, the first part of the definition of major source is not met.

The Cummins CT plant has the two-digit SIC Code 87 for the Major Group Engineering, Accounting, Research, Management, and Related Services. This Major Group includes the four-digit SIC Code 8734 for Testing Laboratories. These are establishments primarily engaged in providing testing services. The IRI plant will also be primarily engaged in providing testing services, so it will have the same two-digit SIC Code.

A plant is a support facility to another plant if it dedicates 50% or more of its output to the other plant. Less than 50% of IRI's production will be dedicated to the Cummins TC plant, as IRI will be testing engines for other Cummins locations and plans on developing other customers besides Cummins. Less than 50% of the Cummins TC plant's engine research will be done at the IRI plant. Neither plant serves as a support facility for the other. Since the plants have the same two-digit SIC Code, even though neither is a support facility to the other, they meet the second part of the major source definition.

The last part of the definition is whether the plants are on contiguous or adjacent properties. The plants are located on separate properties that are about 3500 feet apart. Since they are not on contiguous properties IDEM examined whether the plants are on adjacent properties.

The term "adjacent" is not defined in Indiana's air permitting rules. IDEM, OAQ has located a May 21, 1988 letter from U.S. EPA Region VIII to the Utah Division of Air Quality regarding the term "adjacent". This letter is in no way binding on IDEM, OAQ, but it is persuasive. Region VIII stated that any evaluation of what is "adjacent" must relate to the guiding principal of a common sense notion of "source". The evaluation should look at whether the distance between the plants is sufficiently small that it enables them to operate as a single source. Some sample questions are:

1. Are materials routinely transferred between the plants?
2. Do managers or other workers frequently shuttle back and forth to be involved actively in the plants?
3. Is the production process itself split in any way between the plants?

Very few of the engines from the Cummins TC plant will be sent to IRI for testing. Engines that go through testing at IRI are unlikely to be sold to Cummins customers. The two plants do not share production staff and they do not share plant managers. The only times when a worker from the Cummins TC plant might travel to the IRI plant would be to observe engine testing being done by IRI. Materials are transferred over public roads. There are no dedicated roads, pipelines or rail spurs that connect the two plants. The production process is not split, since IRI will not be testing engines meant for customer sale. The two plants are not close enough to enable them to operate as a single source. Therefore, the two plants are not adjacent.

Since the two plants are not contiguous or adjacent, they do not meet the third element of the major source definition. IDEM, OAQ finds that the IRI plant and the Cummins CT plant do not meet all three parts of the major source definition and therefore the two plants are not part of the same major source.

The following condition is added to Section A of the permit to clarify the relationship between these two sources:

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

IDEM has determined that Cummins Technical Center (Cummins TC), 005-00002, located at 1900 McKinley Avenue, Columbus, Indiana, and Indiana Research Institute (IRI), 005-00104, located at 1402 Hutchins Avenue, Columbus, Indiana, will be considered two (2) sources as defined by 326 IAC 2-7-1(22) because the plants are not under common ownership or common control, neither plant serves as a support facility for the other; and the plants are not located on contiguous or adjacent properties.

Comment 8:

Regarding the Part 70 Air Permit Indiana Research Institute has applied for...we ask IDEM to review the standard listed in 326 Indiana Administrative Code Rule 5-10-5-2 (sic), definition 4. "Large NO_x SIP Call engine" is defined as that which would emit more than 1 ton of NO_x per day during "ozone season" from May 1 through September 30. All engines in a single facility are covered. Also, all facilities are covered under these rules that are owned by the same person.

IDEM Response:

IDEM has reviewed the requirements under 326 IAC 10-5, Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE), and has determined that this rule does not apply to the engines that are proposed for operation at IRI. These requirements only apply to "large NO_x SIP Call engines", and these are defined in 326 IAC 10-5-2 as "a stationary internal combustion engine identified and designated as large in the NO_x SIP Call engine inventory as emitting more than one (1) ton of NO_x per average ozone day in 1995. Since IRI is not currently approved for operation, their emission units did not exist in 1995, and would not be included in the NO_x SIP Call engine inventory. The closed Cummins testing facility that formerly occupied the IRI site was also not subject to this rule.

Additional information of the NO_x SIP Call is available on the U.S. EPA website at <http://www.epa.gov/airmarkets/progsregs/nox/sip.html>.

A document titled "Q&As for Phase II of the NO_x SIP Call " is available on the U.S. EPA website at <http://pubweb.epa.gov/ttn/oarpg/t1/reports/23814qnaasfin.pdf>, and this document addresses how the NO_x SIP Call includes industry growth.

Comment 9:

How often will IDEM check on the operations at IRI to verify compliance with the permit?

IDEM Response:

IDEM will conduct a scheduled inspection every 1-2 years at IRI, since it is a Part 70 source. IDEM will make additional compliance visits, as needed, to investigate any complaints that may be received that indicate a potential permit violation. IRI will be required to conduct performance testing within the first 6 months of operation of the test cells. IDEM will observe those tests. The proposed operating permit contains record keeping and reporting requirements. IRI must keep records for evaluating compliance with the nitrogen oxide emission limit on a monthly basis, and IRI will report its compliance status quarterly. IRI is also required to submit a permit compliance certification and a report on its actual emissions to IDEM annually.

Comment 10:

IRI is actively pursuing acquisition of 4 acres of land adjacent to the facility, and the citizens assume they have plans to expand their operations.

IDEM Response:

If IRI chooses to expand its operations, it will need to get a new construction permit and an updated operating permit for any additional equipment that will have the potential for exhausting air pollutants to the atmosphere.

Comment 11:

IRI should move these operations outside of town to their facility that is located north of Columbus.

IDEM Response:

IDEM has no authority to determine where a source may locate. Zoning matters are the responsibility of local government officials. In addition, IDEM is not aware of any other facility in Bartholomew County that are owned and operated by the same persons that own and operate IRI.

Comment 12:

IRI sneaking in the back door of the community, and few people know about it. Several people did not attend the public meeting at East High School because they did not know about it.

IDEM Response:

IDEM's legal requirements regarding public participation in air permitting are contained in 326 IAC 2-7-17. These requirements for public participation were met with regard to this permit application, as detailed below.

Each applicant for a Part 70 permit shall do the following:

- (1) Place a copy of the permit application, permit modification application, and any additional information submitted to the department for public review at a library in the county where the source is located or will be located not later than ten (10) days after submitting the permit application, permit modification application, or additional information to the department.*
- (2) Provide the commissioner with the location of the library where the copy may be found.*
- (3) Comply with the requirements of subdivisions (1) and (2) when providing any additional material regarding the application to the department.*
- (4) The applicant may remove the Part 70 permit application and related information previously placed at the public library anytime not earlier than sixty (60) days after the final Part 70 permit has become effective.*

IRI placed a copy of the application at the Bartholomew County Library, 536 5th Street, Columbus, IN 47201. IRI notified the mayor of Columbus and seventeen (17) landowners and occupants of properties adjacent to the facility regarding its application for an air permit. These eighteen (18) individuals were notified of the permit application in late January of 2011. One of the persons listed as an adjacent landowner submitted a comment to IDEM on February 9, 2011. The interested party included a copy of one of the pages from the application.

Upon receipt of the application, IDEM added the mayor and the adjacent landowners and occupants to the contact list for the IRI application ("interested parties" for the proposed permit). 326 IAC 2-7-17 further provides that:

All Part 70 permit proceedings, including initial Part 70 permit issuance, significant modifications, minor modifications, and renewals, shall provide adequate procedures for public notice, including offering an opportunity for public comment and a hearing on the draft Part 70 permit as follows:

- (1) Prior to issuing a Part 70 permit, the draft permit shall be available for review in the following manner:
 - (A) The commissioner shall notify the public of the draft Part 70 permit as follows:
 - (i) By publication in a newspaper of general circulation in the area where the source is located or in a state publication designed to give general public notice.***

- (ii) *To persons on a mailing list developed by the commissioner, including those who request in writing to be on the list.*
- (iii) *By other means if necessary to assure adequate notice to the affected public.*

IDEM began the public notice process for the draft permit on April 5, 2011. IDEM mailed the public notice letter to *The Republic* in Columbus, Indiana, uploaded the electronic version of the permit documents to the IDEM website, and mailed a copy of the draft permit to all persons listed as interested parties for the permit. The public notice was printed in *The Republic* on April 5, 2011, so this is the official starting day of the IDEM public notice period.

On April 12, 2011, IDEM received a request for a public hearing. IDEM evaluated this request as well as additional requests for a hearing and decided that a public meeting would better serve the needs of the interested parties for the draft permit. IDEM scheduled a public meeting for May 26, 2011, at Columbus East High School, 230 South Marr Road, Columbus, IN 47201. On May 6, 2011, IDEM sent out a notice of the meeting to the persons on IDEM's mailing list and had a meeting notice published in *The Republic* newspaper.

During the two hour public meeting, IDEM officials responded to questions and comments from many residents and local business owners. IDEM officials also provided everyone an opportunity to be added to the interested parties list for the IRI permit. There were approximately sixty (60) persons in attendance at the public meeting, including five (5) representatives from IDEM.

The original thirty (30) day timeline for public notice would have ended on May 6, 2011. IDEM extended the public comment period an additional twenty-five (25) days, to May 31, 2011, to provide the public with time to submit additional written comments after conclusion of the public meeting.

Comment 13:

Shame on the state for lack of strong environmental laws and shame on IRI for not going above and beyond to insure the safety of our citizens.

IDEM Response:

IDEM encourages all sources in the state to take measures to reduce negative impacts to the environment. IDEM has no authority to create any permit limits or measures in excess of what is legally required for a regulated source.

The Indiana air permitting requirements that are applicable to IRI are part of our state implementation plan (SIP) that is approved by the U.S. EPA. Environmental laws are enacted by the Indiana legislature. The legislature has also given rulemaking authority to the Indiana Air Pollution Control Board. More information about the rulemaking process is available at <http://www.in.gov/idem/4697.htm> on IDEM's Website.

Indiana has made great strides toward achieving its mission of protecting Hoosiers and our environment. In 2009, for the first time since air quality standards were developed in the 1970s, all Hoosiers were breathing air that meets current health-based standards.

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
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 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Part 70 Operating Permit No. T005-30139-00104 in all correspondence.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a New Source Construction and Part 70 Operating Permit

Source Background and Description

Source Name:	Indiana Research Institute
Source Location:	1402 Hutchins Avenue, Columbus, IN 47201
County:	Bartholomew
SIC Code:	3519
Part 70 Operating Permit No.:	T005-30139-00104
Permit Reviewer:	Kimberly Cottrell

The Office of Air Quality (OAQ) has reviewed the operating permit application from Indiana Research Institute relating to the operation of a stationary internal combustion engine manufacturing facility.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

- (a) Six (6) Low Power Rating (<300 HP) Engine Test Cells, identified as TC1 through TC6, permitted in 2011, each with a maximum capacity of 13.4 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S1 through S6.
- (b) Nine (9) Midrange Power Rating (<600 HP) Engine Test Cells, identified as TC7 through TC15, permitted in 2011, each with a maximum capacity of 13.4 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S7 through S15.
- (c) Three (3) High Power Rating (<1500 HP) Engine Test Cells, identified as TC16 through TC18, permitted in 2011, each with a maximum capacity of 20.0 gallons of fuel per hour. Each cell is capable of testing diesel and JP-8 fueled 4 stroke, lean burn, compression ignition, reciprocating internal combustion engines. Emissions are uncontrolled and exhaust to stacks S16 through S18.

Insignificant Activities

The source also consists of the following insignificant activities:

- (a) One (1) paint booth, identified as P1, permitted in 2011, with a maximum capacity of 3.0 engines per day. Emissions are uncontrolled and exhaust to stack PH.
- (b) Closed loop heating and cooling systems.
- (c) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.

- (d) Noncontact cooling tower systems with forced and induced draft cooling tower systems not regulated under a NESHAP.
- (e) Blowdown for compressors and cooling tower.
- (f) Emissions from a laboratory as defined in 326 IAC 2-7-1(21)(F).

Existing Approvals

There have been no previous approvals issued to this source.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Bartholomew County.

Table 1: County Attainment Status	
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 PM _{2.5} .	

- (a) **Ozone Standards**
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Bartholomew County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
 Bartholomew 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. These rules became effective on 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 emissions as a surrogate for PM_{2.5} emissions until 326 IAC 2-2 is revised.

- (c) **Other Criteria Pollutants**
Bartholomew County has been classified as attainment or unclassifiable in Indiana for PM₁₀, SO₂, NO₂, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	Tons/year
CO	145.18
NO _x	600.31
PM	40.61
PM ₁₀	39.89
PM _{2.5}	39.83
SO ₂	38.61
VOC	47.05
HAP Formaldehyde	0.18
Total HAP	0.60

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of CO and NO_x is greater than 100 tons per year, each. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are 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 less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

Actual Emissions

It is a new source

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Table 3: Potential To Emit of the Entire Source After Issuance (ton/yr)							
	CO	NO _x	PM	PM ₁₀ *	SO ₂	VOC	Form.	Total HAP
Engine Test Cells (TC1 - TC6)	45.83	245	14.96	14.96	13.99	17.37	0.0569	0.18
Engine Test Cells (TC7- TC15)	68.75		22.43	22.43	20.99	26.05	0.0854	0.28
Engine Test Cells (TC16 - TC18)	30.60		2.51	1.79	3.64	3.24	0.0419	0.13
Paint Booth (P1)	0		0.71	0.71	0	0.39	0	2.3E-03
Total PTE of Entire Source	145.18	<250	40.61	39.89	38.61	47.05	0.1842	0.60
Title V Major Source Thresholds	100	100	NA	100	100	100	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	NA	NA
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM ₁₀), not particulate matter (PM), is considered as a "regulated air pollutant". Form. = Formaldehyde. Formaldehyde is the worst case single HAP for the Engine Test Cells.								

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 it is not in one of the twenty-eight (28) listed source categories.

Federal Rule Applicability

The following federal rules are applicable to the modification:

- (a) New Source Performance Standards (NSPS)

- (1) The following provisions of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII) apply to the certification of engines in the engine test cells, identified as TC1 through TC18:
 - (A) 40 CFR 60.4200(a)(1) and (d)
 - (B) 40 CFR 60.4201
 - (C) 40 CFR 60.4202
 - (D) 40 CFR 60.4203
 - (E) 40 CFR 60.4210
 - (F) 40 CFR 60.4215
 - (G) 40 CFR 60.4216
 - (H) 40 CFR 60.4218
 - (I) 40 CFR 60.4219
 - (J) Table 1 to 40 CFR 60, Subpart IIII
 - (K) Table 2 to 40 CFR 60, Subpart IIII
 - (L) Table 3 to 40 CFR 60, Subpart IIII
 - (M) Table 4 to 40 CFR 60, Subpart IIII
 - (N) Table 5 to 40 CFR 60, Subpart IIII
 - (O) Table 6 to 40 CFR 60, Subpart IIII
 - (P) Table 8 to 40 CFR 60, Subpart IIII
 - (2) The provisions of the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40 CFR Part 60, Subpart JJJJ) are not applicable to engine test cells, identified as TC1 through TC18 because these test cells do not perform testing on spark ignition internal combustion engines.
- (b) Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)
There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 61) included in the permit for this proposed modification.
- (c) Part 63 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)
There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 20 and 40 CFR Part 63) included in the permit for this proposed modification.
- (1) Pursuant to 40 CFR Part 63.3881(b), the provisions of the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR Part 63, Subpart MMMM) are not applicable to the paint booth, identified as P1, because Indiana Research Institute is not a major source of emissions of HAP.
 - (2) Pursuant to 40 CFR Part 63.4230(b), the provisions of the National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ) are not applicable to stationary compression ignition internal combustion engines that are being tested in the engine test cells/stands.
 - (3) Pursuant to 40 CFR Part 63.9285, the provisions of the National Emission Standards for Hazardous Air Pollutants for Engine Test Cells / Stands (40 CFR Part 63, Subpart PPPPP) are not applicable to the engine test cells, identified as TC1 through TC18, because Indiana Research Institute is not a major source of emissions of HAP.

- (4) Pursuant to 40 CFR Part 63.11169(c), the provisions of the National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources (40 CFR Part 63, Subpart HHHHHH) are not applicable to the paint booth, identified as P1, because the paint booth will not use any coatings containing the target HAP compounds (chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd)).
- (d) Compliance Assurance Monitoring (CAM)
Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:
- (1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;
 - (2) is subject to an emission limitation or standard for that pollutant; and
 - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The unrestricted potential to emit CO, NO_x, PM, PM₁₀, SO₂, and VOC, is less than the major source threshold of one hundred (100) tons per year, from each of the engine test cells, identified as TC1 through TC18; therefore, the requirements of 40 CFR Part 64, CAM, are not applicable to the engine test cells, identified as TC1 through TC18, for CO, NO_x, PM, PM₁₀, SO₂, and VOC.

The unrestricted potential to emit PM, PM₁₀, and VOC, is less than the major source threshold of one hundred (100) tons per year, from the paint booth, identified as P1; therefore, the requirements of 40 CFR Part 64, CAM, are not applicable to the paint booth, identified as P1, for PM, PM₁₀, and VOC.

The unrestricted potential to emit single HAP is less than the major source threshold of ten (10) tons per year, and the unrestricted potential to emit combined HAPs is less than the major source threshold of twenty-five (25) tons per year, from the engine test cells, identified as TC1 through TC18; and the paint booth, identified as P1; therefore, the requirements of 40 CFR Part 64, CAM, are not applicable to the engine test cells, identified as TC1 through TC18; and the paint booth, identified as P1, for single HAP and combined HAPs.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

The source is subject to 326 IAC 1-6-3.

326 IAC 1-5-2 (Emergency Reduction Plans)

The source is subject to 326 IAC 1-5-2.

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 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the 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.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) though (4) are violated pursuant to 326 IAC 6-4-5(c). Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM.

326 IAC 9 (Carbon Monoxide Emission Limits)

Pursuant to 326 IAC 9 (Carbon Monoxide Emission Limits), the source is not subject to this rule because no CO emission limits have been established pursuant to 326 IAC 2-2.

State Rule Applicability – Individual Facilities

326 IAC 2-2 (PSD)

Since the unrestricted potential to emit of this source is greater than two hundred fifty (250) tons of NO_x per year, this source has elected to limit the potential to emit of this source as follows:

- (a) NO_x emissions from each of the engine test cells, identified as TC1 through TC18, shall not exceed 245 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) Compliance with the above limit will be demonstrated as follows:

$$E = \frac{(EF_{d1} \times U_{d1}) + (EF_{d2} \times U_{d2}) + (EF_{jp} \times U_{jp})}{2000 \text{ lb/ton}}$$

Where:

- E = Total NO_x emissions, in tons/month.
- U_{d1} = Total diesel fuel used in engines rated <600hp, in gallons/month.
- U_{d2} = Total diesel fuel used in engines rated >600hp, in gallons/month.
- U_{jp} = Total JP-8 fuel used, in gallons/month.
- EF_{d1} = NO_x emission factor for diesel fuel used in engines rated <600hp, in lb/gallon.
- EF_{d2} = NO_x emission factor for diesel fuel used in engines rated >600hp, in lb/gallon.
- EF_{jp} = NO_x emission factor for JP-8 fuel used, in lb/gallon.

These limits are required to limit the potential to emit NO_x from the entire source to less than 250 tons per year. Compliance with these limits makes 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the entire source.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the engine test cells, TC1 through TC18, and Paint Booth, P1, will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-2 (Particulate Emissions Limitations for Source of Indirect Heating)

The engine test cells, TC1 through TC18, are not subject to 326 IAC 6-2 because the engine test cells are internal combustion sources and not sources of indirect heating.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The engine test cells, TC1 through TC18, are not subject to 326 IAC 6-3-2 because the engine test cells are not manufacturing processes.

The paint booth, P1, is not subject to 326 IAC 6-3-2 because the paint booth uses less than five (5) gallons of coating per day.

326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)

The requirements of 326 IAC 7-1-1 (Sulfur Dioxide Emission Limitations) are not applicable to the engine test cells, TC1 through TC18, because unrestricted SO₂ emissions from each test cell are less than twenty-five (25) tons per year.

326 IAC 8-1 (Volatile Organic Compound Rules)

The requirements of 326 IAC 8-1-1(b) (Volatile Organic Compound Rules) are not applicable to the paint booth, P1, because VOC emissions are less than fifteen (15) pounds per day before control.

326 IAC 8-1-6 (Volatile Organic Compound Rules)

The requirements of 326 IAC 8-1-6 (Volatile Organic Compound Rules) are not applicable to the engine test cells, TC1 through TC18, because unrestricted VOC emissions from each test cell are less than twenty-five (25) tons per year.

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.

Compliance Determination Requirements

The compliance determination requirements applicable to this source are as follows:

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Basis for Requirement
one of the following: TC1-TC15	none	60 days after achieving maximum production; and no later than 180 days of operation	NO _x	every 5 years	326 IAC 2-2.4
one of the following: TC16-TC18					

Compliance Determination Requirements

There are no compliance monitoring requirements included in this permit.

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit be approved. This recommendation is based on the following facts and conditions:

- (a) Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.
- (b) An application for the purposes of this review was received on January 21, 2011. Additional information was received on February 10, 2011.

Conclusion

- (a) The operation of this stationary internal combustion engine manufacturing facility shall be subject to the conditions of the attached Part 70 Operating Permit No. T005-30139-00104.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov.

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
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 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Part 70 Operating Permit No. T005-30139-00104 in all correspondence.

**Indiana Department of Environmental Management
Office of Air Quality**

Appendix A – Emission Calculations
Technical Support Document (TSD)
Initial Part 70 Operating Permit

Source Description and Location

Company Name: Indiana Research Institute
Address City IN Zip: 1402 Hutchins Avenue, Columbus, IN 47201
County: Bartholomew
SIC / NAICS Code: 3519 / 333618
Part 70 Operating Permit No.: T 005-30139-00104
Permit Reviewer: Kimberly Cottrell
Date: March 18, 2011

Summary of Potential to Emit

The tables below summarize the potential to emit calculations for Indiana Research Institute.

Process / Emission Unit	Uncontrolled Potential To Emit (ton/yr)						
	CO	NO _x	PM	PM ₁₀	SO ₂	VOC	Total HAPs
Engine Test Cells (TC1 - TC6)	45.83	212.76	14.96	14.96	13.99	17.37	0.18
Engine Test Cells (TC7- TC15)	68.75	319.14	22.43	22.43	20.99	26.05	0.28
Engine Test Cells (TC16 - TC18)	30.60	68.41	2.51	1.79	18.18	3.24	0.13
Paint Booth (P1)	0	0	0.71	0.71	0	0.39	2.26E-03
Total Uncontrolled PTE	145.18	600.31	40.61	39.89	53.16	47.05	0.60

Process / Emission Unit	HAP Uncontrolled Potential To Emit (ton/yr)						
	Benzene	Toluene	Xylene	Form.	Acet.	Acrolein	PAH
Engine Test Cells (TC1 - TC6)	0.0450	0.0197	0.0137	0.0569	0.0370	0.0045	0.0081
Engine Test Cells (TC7- TC15)	0.0675	0.0296	0.0206	0.0854	0.0555	0.0067	0.0122
Engine Test Cells (TC16 - TC18)	0.0331	0.0145	0.0101	0.0419	0.0272	0.0033	0.0076
Paint Booth (P1)	0	0	0	0	0	0	0
Total Uncontrolled PTE	0.1456	0.0638	0.0445	0.1842	0.1197	0.0144	0.0279

Since all test cells are capable of using diesel or JP-8, the worst case emissions are shown. For most pollutants, the worst case emissions result from combustion of diesel fuel; however, 1, 3 butadiene is only emitted when JP-8 is the fuel. Refer to the following pages to see the analysis for each unit using either fuel.

Process / Emission Unit	Limited Potential To Emit (ton/yr)						
	CO	NO _x	PM	PM ₁₀	SO ₂	VOC	Total HAPs
Engine Test Cells (TC1 - TC6)	45.83	245	14.96	14.96	13.99	17.37	0.18
Engine Test Cells (TC7- TC15)	68.75		22.43	22.43	20.99	26.05	0.28
Engine Test Cells (TC16 - TC18)	30.60		2.51	1.79	18.18	3.24	0.13
Paint Booth (P1)	0	0	0.71	0.71	0	0.39	2.26E-03
Total Limited PTE	145.18	245	40.61	39.89	53.16	47.05	0.60

Engine Test Cells
 for Reciprocating Internal Combustion Engines
 4 Stroke, Lean Burn, Compression Ignition
Fuel Oil #2 -- Diesel

Engine Test Cells	TC1 - TC6	TC7 - TC15	TC16 - TC18	Total	Proposed Limit
Power Range (HP)	<300	<600	<1500		
No. of Test Cells	6	9	3	18	
Diesel Fuel Usage (gal/hr) per test cell	13.40	13.40	20.00		
Maximum Hours Operated per Year	8760	8760	8760		
Total Heat Input Capacity (MMBtu/hr)	11.01	16.52	8.22		
Potential Throughput (MMBtu/yr)	96,490	144,734	72,007		
Maximum Throughput (gal/yr)	704,304	1,056,456	525,600	2,286,360	245 ton/yr
Sulfur Content (S) of Fuel (% by weight)	0.5	0.5	0.5		

	Pollutant					
	CO	NO _x	PM	PM ₁₀	SO ₂	VOC
Emission Factor (<600hp) in lb/MMBtu	0.95	4.41	0.31	0.31	0.29	0.36
Emission Factor (>600hp) in lb/MMBtu	0.85	1.9	0.0697	0.0496	0.505	0.09
Uncontrolled Emissions (tons/yr)						
Engine Test Cells (TC1 - TC6)	45.83	212.76	14.96	14.96	13.99	17.37
Engine Test Cells (TC7 - TC15)	68.75	319.14	22.43	22.43	20.99	26.05
Engine Test Cells (TC16 - TC18)	30.60	68.41	2.51	1.79	18.18	3.24
TOTAL (tons/yr)	145.18	600.31	39.90	39.18	53.16	46.66

PSD Minor Limit for NO_x (ton/yr) 245

NO_x Emission Factor (<600hp) = 0.604 lb/gal diesel
 NO_x Emission Factor (>600hp) = 0.260 lb/gal diesel

	Hazardous Air Pollutants (HAPs)							
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	PAH**	TOTAL
Emission Factor (<600hp) in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	1.18E-03	7.67E-04	9.25E-05	1.68E-04	
Emission Factor (>600hp) in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04	
Uncontrolled Emissions (tons/yr)								
Engine Test Cells (TC1 - TC6)	0.0450	0.0197	0.0137	0.0569	0.0370	0.0045	0.0081	0.1850
Engine Test Cells (TC7 - TC15)	0.0675	0.0296	0.0206	0.0854	0.0555	0.0067	0.0122	0.2775
Engine Test Cells (TC16 - TC18)	0.0279	0.0101	0.0069	0.0028	0.0009	0.0003	0.0076	0.0567
TOTAL (tons/yr)	0.1405	0.0594	0.0413	0.1452	0.0934	0.0114	0.0279	0.5192

Methodology

Emission Factors for Small Engines (<600hp) are from AP 42 (Supplement B 10/96) Tables 3.3-1, 3.3-2, and 3.3-3
 Emission Factors for Large Engines (>600hp) are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, 3.4-4, and 3.4-5

Fuel Heating Value = 137,000 Btu/gal diesel
 Conversion of HP to MMBtu/hr = 0.0025425 MMBtu/hr / HP

Total Heat Input Capacity (MMBtu/hr) = Diesel Fuel Usage (gal/hr) per test cell x No. of cells x Fuel Heating Value (MMBtu/gal)
 Potential Throughput (MMBtu/yr) = Total Heat Input Capacity (MMBtu/hr) x 8760 hr/yr
 Maximum Throughput (gal/yr) = Potential Throughput (MMBtu/yr) / Fuel Heating Value (MMBtu/gal)
 Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operated per Year]
 Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

Compliance Demonstration for NO_x emissions

$$E = \frac{(EFd1 \times Ud1) + (EFd2 \times Ud2) + (EFjp \times Ujp)}{2000 \text{ lb/ton}}$$

Where:

- E = Total NO_x emissions, in tons/month.
- Ud1 = Total diesel fuel used in engines rated <600hp, in gallons/month.
- Ud2 = Total diesel fuel used in engines rated >600hp, in gallons/month.
- Ujp = Total JP-8 fuel used, in gallons/month.
- EFd1 = NO_x emission factor for diesel fuel used in engines rated <600hp, in lb/gallon.
- EFd2 = NO_x emission factor for diesel fuel used in engines rated >600hp, in lb/gallon.
- EFjp = NO_x emission factor for JP-8 fuel used, in lb/gallon.

Engine Test Cells
 for Reciprocating Internal Combustion Engines
 4 Stroke, Lean Burn, Compression Ignition
 Alternate Fuel -- JP-8

Engine Test Cells	TC1 - TC6	TC7 - TC15	TC16 - TC18	Total
Power Range (HP)	<300	<600	<1500	
No. of Test Cells	6	9	3	18
JP-8 Usage (gal/hr) per test cell	13.40	13.40	20.00	
Maximum Hours Operated per Year	8760	8760	8760	
Total Heat Input Capacity (MMBtu/hr)	10.85	16.28	8.10	
Potential Throughput (MMBtu/yr)	95,081	142,622	70,956	
Maximum Throughput (gal/yr)	704,304	1,056,456	525,600	2,286,360
Sulfur Content (S) of Fuel (% by weight)	0.3	0.3	0.3	

	Pollutant					
	CO	NO _x	PM	PM ₁₀	SO ₂	VOC
Emission Factor in lb/MMBtu	0.13	0.604	0.0425	0.0425	0.0397	0.0493
Uncontrolled Emissions (tons/yr)						
Engine Test Cells (TC1 - TC6)	6.18	28.71	2.02	2.02	1.89	2.34
Engine Test Cells (TC7- TC15)	9.27	43.07	3.03	3.03	2.83	3.52
Engine Test Cells (TC16 - TC18)	4.61	21.43	1.51	1.51	1.41	1.75
TOTAL (tons/yr)	20.06	93.21	6.56	6.56	6.13	7.61

PSD Minor Limit for NO_x (ton/yr) 245.00 NO_x Emission Factor = 0.082 lb/gal JP-8

	Hazardous Air Pollutants (HAPs)							TOTAL
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	1,3 Butadiene	
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	1.18E-03	7.67E-04	9.25E-05	3.91E-05	
Uncontrolled Emissions (tons/yr)								
Engine Test Cells (TC1 - TC6)	0.0444	0.0194	0.0135	0.0561	0.0365	0.0044	0.0019	0.1762
Engine Test Cells (TC7- TC15)	0.0665	0.0292	0.0203	0.0841	0.0547	0.0066	0.0028	0.2642
Engine Test Cells (TC16 - TC18)	0.0331	0.0145	0.0101	0.0419	0.0272	0.0033	0.0014	0.1315
TOTAL (tons/yr)	0.1440	0.0631	0.0440	0.1821	0.1184	0.0143	0.0060	0.5719

Methodology

Emission factors for JP-8 adapted from "Emissions from a 6.5 HMMWV Engine on Low Sulfur Diesel Fuel and JP-8", Tables: 2, 2A, and 4. (Interim report TFLRF No. 376 / DAAE-07-99-C-L053 (WD-11))

Fuel Heating Value = 135,000 Btu/gal JP-8
 Conversion of HP to MMBtu/hr = 0.0025425 MMBtu/hr / HP

Total Heat Input Capacity (MMBtu/hr) = JP-8 Usage (gal/hr) per test cell x No. of cells x Fuel Heating Value (MMBtu/gal)
 Potential Throughput (MMBtu/yr) = Total Heat Input Capacity (MMBtu/hr) x 8760 hr/yr
 Maximum Throughput (gal/yr) = Potential Throughput (MMBtu/yr) / Fuel Heating Value (MMBtu/gal)
 Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operated per Year]
 Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

Compliance Demonstration for NO_x emissions

$$E = \frac{(EFd1 \times Ud1) + (EFd2 \times Ud2) + (EFjp \times Ujp)}{2000 \text{ lb/ton}}$$

Where:

- E = Total NO_x emissions, in tons/month.
- Ud1 = Total diesel fuel used in engines rated <600hp, in gallons/month.
- Ud2 = Total diesel fuel used in engines rated >600hp, in gallons/month.
- Ujp = Total JP-8 fuel used, in gallons/month.
- EFd1 = NO_x emission factor for diesel fuel used in engines rated <600hp, in lb/gallon.
- EFd2 = NO_x emission factor for diesel fuel used in engines rated >600hp, in lb/gallon.
- EFjp = NO_x emission factor for JP-8 fuel used, in lb/gallon.

Paint Booth P1
 Air Atomization Spray Coating
 Coating 4 Stroke, Lean Burn, Compression Ignition, Reciprocating Internal Combustion Engines

Material	Density	Weight % Volatile	Weight % Water	Weight % Organics	Weight % Solids	Volume % Volatile	Volume % Water	Volume % Organics	Volume % Solids	Material Usage (gal/unit)	Maximum Capacity (unit/day)	VOC Content (less water & exempt solvents) (lb VOC/gal coating)	VOC Emissions		PM Emissions (ton PM/yr)	lb VOC/gal solids (lb VOC/gal solids)	Transfer Efficiency (%)
	(lb/gal)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)				(lb VOC/day)	(ton VOC/yr)			
09994KWA-1 Cummins 94 Titanium Black Aqua-Zen Enamel	8.72	70.07%	53.80%	16.27%	29.93%	73.46%	56.43%	17.03%	26.54%	0.50	3.0	3.26	2.13	0.39	0.71	5.35	0%

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
 Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
 Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
 Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
 Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
 Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
 Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
 Total = Worst Coating + Sum of all solvents used

Material	Density (lb/gal)	Material Usage (gal/unit)	Maximum Capacity (unit/hr)	Weight % Cobalt	Cobalt (ton/yr)	Weight % Glycol Ethers	Glycol Ethers (ton/yr)	Total HAP (ton/yr)
09994KWA-1 Cummins 94 Titanium Black Aqua-Zen Enamel	8.72	0.50	0.125	0.29%	2.07E-03	0.0496%	1.93E-04	2.26E-03

Annual Coating Usage (estimate)

547.5 gal/yr

13.08 lb/day

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Don Pridgen
Indiana Research Institute
1402 Hutchins Ave
Columbus, IN 47201

DATE: June 8, 2011

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

SUBJECT: Final Decision
Title V
005-30139-00104

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:
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

June 8, 2011

TO: Bartholomew Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Indiana Research Group
Permit Number: 005-30139-00104

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



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TO: Interested Parties / Applicant

DATE: June 8, 2011

RE: Indiana Research Group / 005-30139-00104

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

Mail Code 61-53

IDEM Staff	CDENNY 6/8/2011 Indiana Research Institute 005-30139-00104 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	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		

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		Don Pridgen Indiana Research Institute 1402 Hutchins Ave Columbus IN 47201 (Source CAATS)										
2		Columbus City Council and Mayors Office 123 Washington St Columbus IN 47201 (Local Official)										
3		Mr. Elbert Held 734 Hutchins Columbus IN 47201 (Affected Party)										
4		Mr. Boris Ladwig 333 2nd St Columbus IN 47201 (Affected Party)										
5		Eileen Booher 1316 Chestnut St. Columbus IN 47201 (Affected Party)										
6		Mr. Lcnfc 1039 Sycamore St Columbus IN 47201 (Affected Party)										
7		Bartholomew County Commissioners 440 Third Street Columbus IN 47202 (Local Official)										
8		Mr. Jean Terpstra 3210 Grove Pkwy Columbus IN 47203 (Affected Party)										
9		August Tindell 31 Reo Street Columbus IN 47201 (Affected Party)										
10		Terry Lowe 1110 Central Ave. Columbus IN 47201 (Affected Party)										
11		Mr. Charles Mitch 3210 Grove Parkway Columbus IN 47203 (Affected Party)										
12		Bartholomew County Public Library 536 Fifth St Columbus IN 47202 (Library)										
13		Bartholomew County Health Department 440 3rd Street, Suite 303 Columbus IN 47201 (Health Department)										
14		Craig Brace Cummins, Inc. 500 Jackson Street MC 60910 Columbus IN 47201 (Affected Party)										
15		Byron R & Marilu Carr 1604 Orinoco Ave Columbus IN 47201 (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		BBG Realty Partners, LLC 726 Washington Columbus IN 47201 (Affected Party)										
2		Douglas S Williams & Penny Greenlee 6356 Becks Grove Rd Columbus IN 47201 (Affected Party)										
3		Maxine Toppe Trust 1591 Michigan Ave Columbus IN 47201 (Affected Party)										
4		United Way of Bartholomew County PO Box 827 Columbus IN 47202 (Affected Party)										
5		Columbus Pallet Corp PO Box 1189 Columbus IN 47202 (Affected Party)										
6		West LLC 1502 South Dr Columbus IN 47201 (Affected Party)										
7		Lane Family Revocable Trust PO Box 668 Columbus IN 47202 (Affected Party)										
8		John William Zeihen 1593 Michigan St Columbus IN 47201 (Affected Party)										
9		George A Drab, Jr. 2460 Branch St Madison IN 47250 (Affected Party)										
10		Unknown Occupant 440 Thrid St Columbus IN 47201 (Affected Party)										
11		Stephen D & Richard L Platt 436 Bluff Meadow Dr Ballwin MO 63021 (Affected Party)										
12		Human Services PO Box 588 Columbus IN 47202 (Affected Party)										
13		Nancy L Johnson 1604 Orinoco Columbus IN 47201 (Affected Party)										
14		Orinoco Properties, Inc. 3932 Shoshonee Dr Columbus IN 47203 (Affected Party)										
15		Housing Partnerships 2158 Cottage Aev. Columbus IN 47201 (Affected Party)										

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											Remarks
1		Andy Indiana Research Institute & CleanPOWER 1402 Hutchins Avenue Columbus IN 47201 (Source <i>z</i> addl contact)									
2		Byron Carr 1601 Orinoco Avenue Columbus IN 47201 (Affected Party)									
3		Matthew Sebahar Columbus Pallet Corp 1520 14th Street Columbus IN 47201 (Affected Party)									
4		Carr 10350 E 200 N Hope IN 47201 (Affected Party)									
5		George & Tawnette Lawson 1434 16th Street Columbus IN 47201 (Affected Party)									
6		Doyle and Nancy Marlet 1411 16th Street Columbus IN 47201 (Affected Party)									
7		Dennis Orwin 1210 16th Street Columbus IN 47201 (Affected Party)									
8		Anne Poland 1403 16th Street Columbus IN 47201 (Affected Party)									
9		Clark Barbara and Steve 1820 Tenth Street Columbus IN 47201 (Affected Party)									
10		Vickie Stover 1709 Newton Columbus IN 47201 (Affected Party)									
11		Doyle Marley 1411 16th Street Columbus IN 47201 (Affected Party)									
12		Mark Hasch 2024 11th Street Columbus IN 47201 (Affected Party)									
13		Bush Rick and Jane 1635 Gilmore Street Columbus IN 47201 (Affected Party)									
14		Dunlap John 309 Sunset Drive Columbus IN 47201 (Affected Party)									
15		Kevin Wettschwach 1340 12th Street Columbus IN 47201 (Affected Party)									

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Mail Code 61-53

IDEM Staff	CDENNY 6/8/2011 Indiana Research Institute 30139 (draft/final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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1		Wright 2219 Caldwell Place Columbus IN 47201 (Affected Party)									
2		Gwillane Linda 2216 Caldwell Place Columbus IN 47201 (Affected Party)									
3		Minnis Paul 333 2nd Street Columbus IN 47201 (Affected Party)									
4		McNamee Gary and Cynthia 1639 Gilmore Street Columbus IN 47201 (Affected Party)									
5		Heckman Russell POB 229 Columbus IN 47202 (Affected Party)									
6											
7											
8											
9											
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13											
14											
15											

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