INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 23, 2007

RE: Cummins, Inc. / 005-17553-00002

FROM: Nisha Sizemore
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, Room 1049, 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 impractible to raise such issues, or if the grounds for such objection arose after the comment period.

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

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

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

Enclosures
FNTVOP.dot 03/23/06

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PART 70 OPERATING PERMIT RENEWAL
OFFICE OF AIR QUALITY

Cummins Inc., Technical Center - Plant 5
1900 McKinley Avenue
Columbus, Indiana 47201

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

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

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

Operation Permit No.: T 005-17553-00002	
Original Signed By: Nisha Sizemore, Chief Office of Air Quality	Issuance Date: May 23, 2007 Expiration Date: May 23, 2012

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary research and development source for diesel-powered engines.

Source Address:	1900 McKinley Avenue, Columbus, Indiana 47201
Mailing Address:	P.O. Box 3005 - MC 50235, Columbus, Indiana 47201
General Source Phone Number:	(812) - 377 - 7182
SIC Code:	8734
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 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) Three (3) natural gas or diesel-fired boilers, identified as #1, #2, and #3, installed in 1964, exhausting through Stack 1, rated at 25.0 million British thermal units per hour, each.

(b) Two (2) natural gas or diesel-fired boilers, identified as #4 and #5, installed in 1969 and 1973, respectively, exhausting through Stack 1, rated at 14.6 million British thermal units per hour, each.

(c) Forty-seven (47) diesel/biodiesel-powered internal combustion engine test cells, identified as 101 - 122, 217 - 218, 301 - 322, and 401, five (5) of the test cells, identified as 318 - 322, may be alternatively powered by liquid propane gas and eleven (11) of the test cells, identified as 121, 122, 303, 316 - 322, and 401, may be alternatively powered by natural gas, all installed prior to 1967, exhausting through Stacks 101 - 122, 217 - 218, 301 - 322, and 401, respectively, rated at 500 horsepower, each.

(d) Twenty-one (21) diesel/biodiesel-powered internal combustion engine test cells, identified as 201 - 215, 219, 402, 403, and 417 - 419, five (5) of the test cells, identified as 203, 204, and 417 - 419, may be alternatively powered by liquid propane gas or natural gas, all installed prior to 1967, exhausted through Stacks 201 - 215, 219, 402, 403, and 417 - 419, respectively, rated at 1,000 horsepower, each.

(e) Eleven (11) diesel/biodiesel-powered internal combustion engine test cells, identified as 220 - 222, 404 - 409, 421, and 422, one (1) of the test cells, identified as 220, may be alternatively powered by liquid propane gas or natural gas, all installed prior to 1967, exhausting through Stacks 220 - 222, 404 - 409, 421, and 422, respectively, rated at 1,500 horsepower, each.

(f) Seven (7) diesel/biodiesel-powered internal combustion engine test cells, identified as 410 - 415, and 420, one (1) of the test cells, identified as 420, may be alternatively powered by

liquid propane gas, two (2) of the test cells, identified as 410 and 414, may be alternatively powered by natural gas, all installed prior to 1967, exhausting through Stacks 410 - 415, and 420, respectively, rated at 2,000 horsepower, each.

(g) One (1) diesel/biodiesel-powered internal combustion engine test cell, identified as 416, installed prior to 1967, exhausting through Stack 416, rated at 3,000 horsepower.

(h) One (1) diesel/biodiesel-powered internal combustion engine test cell, identified as 423, installed prior to 1994, exhausting through Stack 401, rated at 500 horsepower.

(i) Two (2) diesel/biodiesel-powered chassis dynamometer internal combustion test cells, identified as 731 and 732, installed prior to 1994, exhausting through Stack CD, rated at 500 horsepower, each.

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

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

(a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

(b) Mineral spirits parts washer - VOC emissions approximately 0.44 pound per hour. [326 IAC 8-3-2] [326 IAC 8-3-5]

(c) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

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

(a) This permit, T 005-17553-00002, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

B.4 Enforceability [326 IAC 2-7-7]

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ , within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

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

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

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

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

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

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) 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.

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

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

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

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

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

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

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

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

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ 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 Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(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 Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T 002-17513-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

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

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

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.16 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 non-compliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

(1) That this permit contains a material mistake.

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

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

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

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(c), 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.17 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

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

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

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

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

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

B.18 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12][40 CFR 72]

(a) Permit amendments and modification 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

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

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

B.20 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at in 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(c)]
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.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 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.23 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

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

B.24 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.25 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 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

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

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

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

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

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

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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

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

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
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

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

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

(g) Indiana Accredited 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 Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

C.7 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

C.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, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

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

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

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other

approved methods as specified in this permit.

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

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

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

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

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

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

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on July 15, 2004.

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

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

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

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

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation

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

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

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

(1) monitoring results;

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

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

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

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

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

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

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

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

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

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

(a) Pursuant to 326 IAC 2-6-3(b)(3), starting in 2006 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4 (c) and shall meet the following requirements:

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

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

The statement must be submitted to:

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

The emission statement does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

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

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

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

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

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

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

Stratospheric Ozone Protection

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

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

emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

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

(a) Three (3) natural gas or diesel-fired boilers, identified as #1, #2, and #3, installed in 1964, exhausting through Stack 1, rated at 25.0 million British thermal units per hour, each.

(b) Two (2) natural gas or diesel-fired boilers, identified as #4 and #5, installed in 1969 and 1973, respectively, exhausting through Stack 1, rated at 14.6 million British thermal units per hour, each.

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

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

D.1.1 Particulate [326 IAC 6-2-3]

(a) Pursuant to 326 IAC 6-2-3(d) (PM Emissions Limitations) the PM emissions from the three (3) natural gas or diesel-fired boilers known as #1, #2, and #3, rated at 25.0 million British thermal units per hour, each, shall not exceed 0.800 pound per million British thermal unit heat input.

(b) Pursuant to 326 IAC 6-2-3(d) (PM Emissions Limitations) the PM emissions from the one (1) natural gas or diesel-fired boiler known as #4, rated at 14.6 million British thermal units, shall not exceed 0.774 pound per million British thermal unit heat input.

(c) Pursuant to 326 IAC 6-3-2(e) (PM Emissions Limitations) the PM emissions from the one (1) natural gas or diesel-fired boiler known as #5, rated at 14.6 million British thermal units shall not exceed 0.6 pound per million British thermal unit heat input.

(d) The PM emission limitation in (b) was established by the following equation:

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

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 million British thermal units per hour heat input.

h = Stack height in feet. If a number of stacks of different heights exist, the average stack height will be computed using a weighted average of stack heights.

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

D.1.2 Visible Emissions Notations

(a) Visible emission notations of the boiler stack exhaust (Stack 1) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

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

D.1.3 Record Keeping Requirements

(a) To document compliance with Condition D.1.2, the Permittee shall maintain records of visible emission notations of the boilers stack exhaust once per day or a record of the reason why the visible emission notations were not taken.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.4 Reporting Requirements

The natural gas boiler certification shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or its equivalent, within thirty (30) days after the end of the six (6) month period being reported. The natural gas-fired boiler certification does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Engine Test Cells

(c) Forty-seven (47) diesel/biodiesel-powered internal combustion engine test cells, identified as 101 - 122, 217 - 218, 301 - 322, and 401, five (5) of the test cells, identified as 318 - 322, may be alternatively powered by liquid propane gas and eleven (11) of the test cells, identified as 121, 122, 303, 316 - 322, and 401, may be alternatively powered by natural gas, all installed prior to 1967, exhausting through Stacks 101 - 122, 217 - 218, 301 - 322, and 401, respectively, rated at 500 horsepower, each.

(d) Twenty-one (21) diesel/biodiesel-powered internal combustion engine test cells, identified as 201 - 215, 219, 402, 403, and 417 - 419, five (5) of the test cells, identified as 203, 204, and 417 - 419, may be alternatively powered by liquid propane gas or natural gas, all installed prior to 1967, exhausted through Stacks 201 - 215, 219, 402, 403, and 417 - 419, respectively, rated at 1,000 horsepower, each.

(e) Eleven (11) diesel/biodiesel-powered internal combustion engine test cells, identified as 220 - 222, 404 - 409, 421, and 422, one (1) of the test cells, identified as 220, may be alternatively powered by liquid propane gas or natural gas, all installed prior to 1967, exhausting through Stacks 220 - 222, 404 - 409, 421, and 422, respectively, rated at 1,500 horsepower, each.

(f) Seven (7) diesel/biodiesel-powered internal combustion engine test cells, identified as 410 - 415, and 420, one (1) of the test cells, identified as 420, may be alternatively powered by liquid propane gas, two (2) of the test cells, identified as 410 and 414, may be alternatively powered by natural gas, all installed prior to 1967, exhausting through Stacks 410 - 415, and 420, respectively, rated at 2,000 horsepower, each.

(g) One (1) diesel/biodiesel-powered internal combustion engine test cell, identified as 416, installed prior to 1967, exhausting through Stack 416, rated at 3,000 horsepower.

(h) One (1) diesel/biodiesel-powered internal combustion engine test cell, identified as 423, installed prior to 1994, exhausting through Stack 401, rated at 500 horsepower.

(i) Two (2) diesel/biodiesel-powered chassis dynamometer internal combustion test cells, identified as 731 and 732, installed prior to 1994, exhausting through Stack CD, rated at 500 horsepower, each.

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

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

D.2.1 Visible Emissions Notations

(a) Visible emission notations of the engine test cells stack exhaust (Stacks 101 - 122, Stacks 201 - 215, Stacks 217 - 222, Stacks 301 - 322, Stacks 401 - 422, and Stack CD) shall be performed once per day during normal daylight operations, when operating on diesel oil. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

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

D.2.2 Record Keeping Requirements

(a) To document compliance with Condition D.2.1, the Permittee shall maintain records of visible emission notations of the diesel/biodiesel-powered internal combustion engine test cell stack exhaust once per day or a record of the reason why the visible emission notations were not taken.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

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

(a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

(b) Mineral spirits parts washer - VOC emissions approximately 0.44 pound per hour. [326 IAC 8-3-2] [326 IAC 8-3-5]

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

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

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

(a) Equip the cleaner with a cover;

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

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

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

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

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

D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the Permittee of a cold cleaner degreaser facility construction of which commenced after July 1, 1990, shall ensure that the following control equipment requirements are met:

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

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

(B) The solvent is agitated; or

(C) The solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kilopascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)) then the drainage facility

must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

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

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

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

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

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

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

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the Permittee of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

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

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Cummins Inc., Technical Center - Plant 5
Source Address: 1900 McKinley Avenue, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005 - MC 50235, Columbus, Indiana 47201
Part 70 Permit No.: T 005-17553-00002

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

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify) _____

☐ Report (specify) _____

☐ Notification (specify) _____

☐ Affidavit (specify) _____

☐ Other (specify) _____

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

Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

COMPLIANCE BRANCH
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Cummins Inc., Technical Center - Plant 5
Source Address: 1900 McKinley Avenue, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005 - MC 50235, Columbus, Indiana 47201
Part 70 Permit No.: T 005-17553-00002

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
SEMI-ANNUAL NATURAL GAS-FIRED BOILER CERTIFICATION

Source Name: Cummins Inc., Technical Center - Plant 5
Source Address: 1900 McKinley Avenue, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005 - MC 50235, Columbus, Indiana 47201
Part 70 Permit No.: T 005-17553-00002

☐ Natural Gas Only ☐ Alternate Fuel burned From _____ To: _____

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:

A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Cummins Inc., Technical Center - Plant 5
Source Address: 1900 McKinley Avenue, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005 - MC 50235, Columbus, Indiana 47201
Part 70 Permit No.: T 005-17553-00002

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a Part 70 Operating Permit

Source Name:	**Cummins Inc., Technical Center – Plant 5**
Source Location:	**1900 McKinley Avenue, Columbus, Indiana 47201**
County:	**Bartholomew**
SIC Code:	**8734**
Operation Permit No.:	**T 005-17553-00002**
Permit Reviewer:	**Brian J. Pedersen/MES**

On March 26, 2007, the Office of Air Quality (OAQ) had a notice published in the Republic, Columbus, Indiana, stating that Cummins Inc., Technical Center – Plant 5 had applied for a Part 70 Operating Permit to operate a stationary research and development source for diesel/biodesiel-powered engines. The notice also stated that OAQ proposed to issue a Part 70 Operating Permit for this operation and provided information on how the public could review the proposed Part 70 Operating 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 Part 70 Operating Permit should be issued as proposed.

On April 24, 2007, Todd Walterman of Cummins Inc., Technical Center – Plant 5 submitted comments on the proposed Part 70 Operating Permit. The comments are as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded.**

Comment 1:

The permit currently states "Cummins Engine Company, Columbus Technical Center – Plant 5". The company's legal name is Cummins Inc. Therefore, the permit should state, Cummins Inc., Technical Center – Plant 5.

Response 1:

The legal name "Cummins Inc., Technical Center – Plant 5" has been used as the company name throughout the permit document, as follows: ~~Cummins Engine Company, Columbus Technical Center - Plant 5~~ **Cummins Inc., Technical Center – Plant 5.**

Comment 2:

On page 9 of Appendix A the emissions calculations are based on 500 ppm sulfur for the boilers. The source is actually using low sulfur fuel with a maximum concentration of 350 ppm, could you adjust the calculations accordingly.

Response 2:

Even though Cummins Inc., Technical Center – Plant 5 currently uses No. 2 fuel oil with a sulfur content of 350 ppm, the permit currently allows for higher sulfur contents to be used. Using a sulfur content of 500 ppm allows Cummins Inc., Technical Center – Plant 5 to use higher sulfur content fuel oils, if necessary, and is more conservative in calculating potential emissions. Furthermore, changing the sulfur content would not result in any changes to the permit conditions. Therefore, IDEM, OAQ has decided not to make any changes due to this comment.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	**Cummins Engine Company, Columbus Technical Center - Plant 5**
Source Location:	**1900 McKinley Avenue, Columbus, Indiana 47201**
County:	**Bartholomew**
SIC Code:	**8734**
Operation Permit No.:	**T 005-7466-00002**
Operation Permit Issuance Date:	**December 29, 1998**
Permit Renewal No.:	**T 005-17553-00002**
Permit Reviewer:	**Brian J. Pedersen**

The Office of Air Quality (OAQ) has reviewed a Part 70 Operating Permit Renewal application from Cummins Engine Company, Columbus Technical Center - Plant 5 relating to the operation of a stationary research and development source for diesel/biodesiel-powered engines.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Three (3) natural gas or diesel-fired boilers, identified as #1, #2, and #3, installed in 1964, exhausting through Stack 1, rated at 25.0 million British thermal units per hour, each.

(b) Two (2) natural gas or diesel-fired boilers, identified as #4 and #5, installed in 1969 and 1973, respectively, exhausting through Stack 1, rated at 14.6 million British thermal units per hour, each.

(c) Forty-seven (47) diesel/biodiesel-powered internal combustion engine test cells, identified as 101 - 122, 217 - 218, 301 - 322, and 401, five (5) of the test cells, identified as 318 - 322, may be alternatively powered by liquid propane gas and eleven (11) of the test cells, identified as 121, 122, 303, 316 - 322, and 401, may be alternatively powered by natural gas, all installed prior to 1967, exhausting through Stacks 101 - 122, 217 - 218, 301 - 322, and 401, respectively, rated at 500 horsepower, each.

(d) Twenty-one (21) diesel/biodiesel-powered internal combustion engine test cells, identified as 201 - 215, 219, 402, 403, and 417 - 419, five (5) of the test cells, identified as 203, 204, and 417 - 419, may be alternatively powered by liquid propane gas or natural gas, all installed prior to 1967, exhausted through Stacks 201 - 215, 219, 402, 403, and 417 - 419, respectively, rated at 1,000 horsepower, each.

(e) Eleven (11) diesel/biodiesel-powered internal combustion engine test cells, identified as 220 - 222, 404 - 409, 421, and 422, one (1) of the test cells, identified as 220, may be alternatively powered by liquid propane gas or natural gas, all installed prior to 1967, exhausting through Stacks 220 - 222, 404 - 409, 421, and 422, respectively, rated at 1,500 horsepower, each.

(f) Seven (7) diesel/biodiesel-powered internal combustion engine test cells, identified as 410 - 415, and 420, one (1) of the test cells, identified as 420, may be alternatively powered by liquid propane gas, two (2) of the test cells, identified as 410 and 414, may be alternatively powered by natural gas, all installed prior to 1967, exhausting through Stacks 410 - 415, and 420, respectively, rated at 2,000 horsepower, each.

(g) One (1) diesel/biodiesel-powered internal combustion engine test cell, identified as 416, installed prior to 1967, exhausting through Stack 416, rated at 3,000 horsepower.

(h) One (1) diesel/biodiesel-powered internal combustion engine test cell, identified as 423, installed prior to 1994, exhausting through Stack 401, rated at 500 horsepower.

(i) Two (2) diesel/biodiesel-powered chassis dynamometer internal combustion test cells, identified as 731 and 732, installed prior to 1994, exhausting through Stack CD, rated at 500 horsepower, each.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Advanced Source Modification Approval

There are no proposed emission units during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(c) The following VOC and HAP storage containers: Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons; vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

(d) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume.

(e) Noncontact cooling tower systems with either of the following: Forced and induced draft cooling tower system not regulated under a NESHAP.

(f) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

(g) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

(h) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(i) On-site fire and emergency response training approved by the department.

(j) Emergency generators as follows: Diesel generators not exceeding 1,600 horsepower.

(k) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(l) Miscellaneous Air Conditioning Equipment - CFCs.

(m) Underground storage tanks.

(n) Mineral spirits parts washer - VOC emissions approximately 0.44 pound per hour. [326 IAC 8-3-2] [326 IAC 8-3-5]

(o) Incidental - use paint booth - VOC emissions approximately 0.24 pound per hour.

(p) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

Existing Approvals

The source has been operating under the previous Part 70 Operating Permit T 005-7466-00002 issued on December 29, 1998 and the following amendments and modifications:

(a) Reopening, T 005-13151-00002, issued on October 9, 2001; and

(b) AA 005-23291-00002, issued on January 2, 2007.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this proposed permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

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:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 Operating Permit renewal application for the purposes of this review was received on March 26, 2003. Additional information was received on December 6, 2005, and January 31, 2006.

Emission Calculations

See pages 1 through 10 of Appendix A of this document for detailed emission calculations.

Unrestricted Potential Emissions

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

Pollutant	Potential to Emit (tons/yr)
PM	14.1
PM_{10}	14.1
SO_2	26.2
VOC	39.0
CO	95.5
NO_X	192

HAPs	Potential to Emit (tons/yr)
Hexane	0.822
Formaldehyde	0.820
Acetaldehyde	0.524
Benzene	0.524
Toluene	0.264
Xylene	0.183
Polycyclic Compounds	0.105
Acrolein	0.052
1, 3 Butadiene	0.026
Selenium	0.007
Lead	0.004
Manganese	0.003
Arsenic	0.002
Nickel	0.002
Chromium	0.002
Cadmium	0.002
Beryllium	0.001
Mercury	0.001
Dichlorobenzene	0.001
Total	3.32

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of NO_X is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of 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.

(c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Potential to Emit of the Source

The source was issued a Part 70 Operating Permit on August 19, 1998. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of the original Part 70 Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential To Emit (tons/yr)						
Process/Emission Unit	PM	PM_{10}	SO_2	VOC	CO	NO_x	HAPs
Test Cells/ 101 - 122, 201 - 215, 217 – 222, 301 - 322, 401 - 423, 731, and 732	2.61	2.61	1.13	34.5	55.2	125	2.46
Boilers/ #1, #2, #3, #4, and #5	6.52	6.52	23.1	2.51	38.3	65.2	0.861
Insignificant Activities	5.00	5.00	2.00	2.00	2.00	2.00	-
Total Emissions	14.1	14.1	26.2	39.0	95.5	192	3.32

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2003 OAQ emission data.

Pollutant	**Actual Emissions (tons/year)**
PM	Not reported
PM_{10}	4.00
SO_2	2.00
VOC	1.00
CO	19.0
NO_x	131
HAP	Not reported

County Attainment Status

The source is located in Bartholomew County.

Pollutant	Status
$PM_{2.5}$	Attainment
PM_{10}	Attainment
SO_2	Attainment
NO_2	Attainment
8-Hour Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) 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. See the State Rule Applicability - Entire Source section of this document.

(b) Bartholomew County has been classified as unclassifiable or attainment for $PM_{2.5}$. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for $PM_{2.5}$ emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for $PM_{2.5}$ emissions, it has directed states to regulate PM_{10} emissions as a surrogate for $PM_{2.5}$ emissions. See the State Rule Applicability - Entire Source section of this document.

(c) Bartholomew County has been classified as attainment or unclassifiable in Indiana for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section of this document.

(d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 redesignating Delaware, Greene, Jackson, Vanderburgh, Vigo and Warrick Counties to attainment for the eight-hour ozone standard, redesignating Lake County to attainment for the sulfur dioxide standard, and revoking the one-hour ozone standard in Indiana.

Part 70 Operating Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 Operating Permits.

(b) Monitoring and related record keeping requirements which assure that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Federal Rule Applicability

(a) This source does involve a pollutant-specific emissions unit as defined in 40 CFR 64.1 that has the potential to emit before controls equal to or greater than the major source threshold for NO_X and CO. However, the diesel/biodiesel-powered internal combustion engines do not have an emission limitation or standard for CO or NO_X.

Therefore, the requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not applicable to this source.

(b) The requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60 Subpart Da) Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units are not included in the permit for the five (5) diesel or natural gas-fired boilers (#1, #2, #3, #4, and #5) because the construction of these units commenced prior to September 18, 1978, the applicability date of this rule.

(c) The requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60 Subpart Db) Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units are not included in the permit for the five (5) diesel or natural gas-fired boilers (#1, #2, #3, #4, and #5) because the construction of these units commenced prior to June 19, 1984, the applicability date of this rule.

(d) The requirements of the New Source Performance Standard, 326 IAC 12 (40 CFR 60 Subpart Dc) Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units are not included in the permit for the five (5) diesel or natural gas-fired boilers (#1, #2, #3, #4, and #5) because the construction of these units commenced prior to June 9, 1989, the applicability date of this rule.

(e) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart PPPPP, Engine Test Cells/Stands, are not included in the permit because this source is not a major source of HAPs, as defined in 40 CFR 63.2.

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart ZZZZ, Reciprocating Internal Combustion Engines, are not included in the permit because this source is not a major source of HAPs, as defined in 40 CFR 63.2.

(h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart DDDDD, Industrial/Commercial/Institutional Boilers and Process Heaters, are not included in the permit because this source is not a major source of HAPs, as defined in 40 CFR 63.2.

(i) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 included in the permit for this source.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

The unrestricted potential emissions of each attainment criteria pollutant are less than two hundred-fifty (250) tons per year. Therefore, this source, which is not one of the twenty-eight (28) listed source categories, is a minor source pursuant to 326 IAC 2-2, PSD.

326 IAC 2-4.1-1 (New source toxics control)

This stationary research and development source for diesel/biodiesel-powered engines will emit less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 do not apply.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7, Part 70. In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted by July 1 of 2006 and 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 alternative opacity limitations), 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.

State Rule Applicability – Individual Facilities

326 IAC 6-2-3(d) (Particulate emission limitations for sources of indirect heating)

Boilers #1 through #3 each rated at 25.0 million British thermal units per hour, installed in 1964, and #4 rated at 14.6 million British thermal units per hour, installed in 1969, must comply with the particulate matter emission rate specified by the following equation given in 326 IAC 6-2-3(a). The total heat input capacity for boilers #1 through #3 is 75.0 million British thermal units per hour and 89.6 million British thermal units per hour for boilers #1 through #4 .

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

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 million British thermal units per hour heat input.

h = Stack height in feet. If a number of stacks of different heights exist, the average stack height will be computed using a weighted average of stack heights.

(a) Boilers #1 through #3

Pt = (50 $\mu g/m^3$ × 0.67 × 51.5 ft) / (76.5 × $75^{0.75}$ × $1^{0.25}$) = 0.885 lb PM / MMBtu for boilers #1 through #3

This number is greater than the allowable emissions stated in 326 IAC 6-2-3(d). Therefore the allowable emissions for the boilers constructed on or before June 8, 1972 shall be limited to 0.8 lb of PM per million British thermal units. The potential PM emissions of the three (3) boilers are shown on pages 8 and 10 of 11 of the TSD Appendix A and are as follows:

PM = 0.624 tons of PM per year / 75.0 MMBtu per hour = 0.143 pounds of PM per hour / 75.0 MMBtu per hour = 0.002 pounds of PM per million British thermal units, when operated with natural gas.

PM = 4.69 tons of PM per year / 75.0 MMBtu per hour = 1.07 pounds of PM per hour / 75.0 MMBtu per hour = 0.014 pounds of PM per million British thermal units, when operated with #2 fuel oil.

Therefore, boilers #1 through #3 will comply with this rule.

(b) Boilers #1 through #4

Pt = (50 $\mu g/m^3$ × 0.67 × 51.5 ft) / (76.5 × $89.6^{0.75}$ × $1^{0.25}$) = 0.774 lb PM / MMBtu for boiler #4

Boiler #4 will be limited to emissions of 0.774 pound PM per million British thermal units (MMBtu). The potential PM emissions of boiler #4 are shown on pages 8 and 10 of 11 of the TSD Appendix A and are as follows:

PM = 0.122 tons of PM per year / 14.6 MMBtu per hour = 0.028 pounds of PM per hour / 14.6 MMBtu per hour = 0.002 pounds of PM per million British thermal units, when operated with natural gas.

PM = 0.914 tons of PM per year / 14.6 MMBtu per hour = 0.209 pounds of PM per hour / 14.6 MMBtu per hour = 0.014 pounds of PM per million British thermal units, when operated with #2 fuel oil.

Therefore, boiler #4 will comply with this rule.

326 IAC 6-2-3(e) (Particulate Emissions Limitations for Facilities Constructed after June 8, 1972)

Boiler #5, installed in 1973 must comply with the particulate matter emission rate specified by the following equation given in 326 IAC 6-2-3(e). The total boiler heat input capacity for the source at this time is 104.2 million British thermal units per hour.

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

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter for a period not to exceed a sixty (60) minute time period.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 million British thermal units per hour heat input.

h = Stack height in feet. If a number of stacks of different heights exist, the average stack height will be computed using a weighted average of stack heights.

$Pt = (50\ \mu g/m^3 \times 0.67 \times 51.5\ ft) / (76.5 \times 104.2^{0.75} \times 1^{0.25}) = 0.692$ lb PM / MMBtu

This number is greater than the allowable emissions stated in 326 IAC 6-2-3(e), therefore the allowable emissions for the boiler constructed after June 8, 1972 shall be limited to 0.6 lb PM per million British thermal units.

The potential PM emissions of boiler #5 are shown on pages 8 and 10 of 11 of the TSD Appendix A and are as follows:

PM = 0.122 tons of PM per year / 14.6 MMBtu per hour = 0.028 pounds of PM per hour / 14.6 MMBtu per hour = 0.002 pounds of PM per million British thermal units, when operated with natural gas.

PM = 0.914 tons of PM per year / 14.6 MMBtu per hour = 0.209 pounds of PM per hour / 14.6 MMBtu per hour = 0.014 pounds of PM per million British thermal units, when operated with #2 fuel oil.

Therefore, boiler #5, will comply with this rule.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limits)

When operating with diesel and biodiesel fuel, neither the test cell engines nor the boilers, identified as 101 - 122, 201 - 222, 301 - 322, 731, 732, 401 - 423, and, Boilers #1 - #5 have the potential to emit of twenty five (25) tons per year or ten (10) pounds per hour or greater of SO_2. Therefore, the requirements of 326 IAC 7-1.1 do not apply to any of these facilities.

326 IAC 8-1-6 (New facilities; General reduction requirements)

The engine test cells with potential VOC emissions greater than twenty five (25) tons per year were constructed prior to January 1, 1980. No individual test cells constructed after January 1, 1980 have potential VOC emissions greater than twenty five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

326 IAC 8-6 (Organic Solvent Emission Limitation)

All test cells have been constructed prior to 1974 and therefore the requirements of 326 IAC 8-6 do not apply.

326 IAC 9-1 (CO Emission Limits)

This source does not engage in petroleum refining, ferrous metal smelting, or refuse incineration. Therefore, the requirements of 326 IAC 9-1 do not apply.

326 IAC 10-1 (NO_X Control In Clark and Floyd Counties)

Since this source is not in Clark or Floyd counties, the requirements of 326 IAC 10-1 do not apply.

Insignificant Activities

326 IAC 8-2-9 (Miscellaneous Metal Coating)

The incidental-use spray paint booth will emit less than fifteen (15) pounds of VOC per day. Therefore, the requirements of 326 IAC 8-2-9 do not apply.

326 IAC 8-3-2 (Cold Cleaner Operations)

Pursuant to 326 IAC 8-3-2, for the cold cleaner operations, the Permittee shall:

(a) equip the cleaner with a cover;

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

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

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

(e) provide a permanent, conspicuous label summarizing the operating requirements;

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

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the Permittee of a cold cleaner degreaser facility construction of which commenced after July 1, 1990, shall ensure that the following control equipment requirements are met:

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

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

(B) The solvent is agitated; or

(C) The solvent is heated.

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

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

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

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

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

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

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

(b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for a cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:

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

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

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

Testing Requirements

Since there are no applicable emission limitations or requirements, no testing shall be required.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less 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 requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions 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 approporiate corrective actions within a specific time period.

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

The engine test cells, identified as 101 - 122, 201 - 222, 301 - 322, 731, 732, and 401 - 423, have applicable compliance monitoring conditions as specified below:

(a) Visible emission notations of the engine test cells stack exhaust (Stacks 101 - 122, Stacks 201 - 215, Stacks 216 - 222, Stacks 301 - 322, Stacks 401 - 422, and Stack CD) shall be performed once per day during normal daylight operations, when operating on diesel oil. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

These monitoring conditions are necessary to ensure compliance with 326 IAC 5-1 (Opacity Limitations) and 326 IAC 2-7 (Part 70).

The boilers, identified as Boiler #1 through Boiler #5, have applicable compliance monitoring conditions as specified below:

(b) Visible emission notations of the boiler stack exhaust (Stack 1) shall be performed once per day during normal daylight operations, when operating on diesel oil. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. If abnormal emissions are observed, the Permittee shall take

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

These monitoring conditions are necessary to ensure compliance with 326 IAC 5-1 (Opacity Limitations) and 326 IAC 2-7 (Part 70).

Conclusion

The operation of this stationary research and development source for diesel/biodiesel-powered engines shall be subject to the conditions of this **Part 70 Operating Permit T 005-17553-00002**.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **Cummins Engine Company, Columbus Technical Center - Plant 5**
Address City IN Zip: **1900 McKinley Avenue, Columbus, Indiana 47201**
Permit Number: **T 005-17553-00002**
Plt ID: **005-00002**
Reviewer: **Brian J. Pedersen**
Application Date: **March 26, 2003**

Unit ID	Capacity (MMBTU/hr)
#1	25.0
#2	25.0
#3	25.0
#4	14.6
#5	14.6
Total	**104.2**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
104.2	913

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.90	7.60	0.600	100 **see below	5.50	84.0
Potential Emission in tons/yr	0.867	3.47	0.274	45.6	2.51	38.3

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 8 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: **Cummins Engine Company, Columbus Technical Center - Plant 5**
Address City IN Zip: **1900 McKinley Avenue, Columbus, Indiana 47201**
Permit Number: **T 005-17553-00002**
Plt ID: **005-00002**
Reviewer: **Brian J. Pedersen**
Application Date: **March 26, 2003**

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	0.00210	0.00120	0.07500	1.80000	0.00340
Potential Emission in tons/yr	0.000958	0.000548	0.034230	0.821513	0.001552

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	
Emission Factor in lb/MMcf	0.0005	0.0011	0.0014	0.0004	0.0021	**Total**
Potential Emission in tons/yr	0.00023	0.00050	0.00064	0.00017	0.00096	**0.861**

Methodology is the same as page 7.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: HAPs Calculations
Engine Test Cells

Company Name: **Cummins Engine Company, Columbus Technical Center - Plant 5**
Address City IN Zip: **1900 McKinley Avenue, Columbus, Indiana 47201**
Permit Number: **T 005-17553-00002**
Plt ID: **005-00002**
Reviewer: **Brian J. Pedersen**
Application Date: **March 26, 2003**

Source	Pollutant	HAPs Content (lb/gal)	Potential Fuel Used (kilogal/yr)	Fuel Type	Potential HAPs (lbs/yr)	Potential HAPs (tons/yr)
Test Cells	Acetaldehyde	0.0002	5238	#2 diesel	1048	0.524
	Acrolien	0.00002	5238	#2 diesel	105	0.0524
101-122	Benzene	0.0002	5238	#2 diesel	1048	0.524
201-215, 217- 222	1, 3 Butadiene	0.00001	5238	#2 diesel	52.4	0.0262
301-322	Formaldehyde	0.0003	5238	#2 diesel	1571	0.786
401-423	Toluene	0.0001	5238	#2 diesel	524	0.262
731-732	Xylenes	0.00007	5238	#2 diesel	367	0.183
	Polycyclic Organic Matter	0.00004	5238	#2 diesel	210	0.105
				Total Potential HAPs:		**2.46**

1) Emission factors for the diesel test cells were supplied by the applicant from 1994 source testing data.

2) Potential HAPs (tons/yr) = HAP content (lb/gal) * Potential Fuel Used (kilogallon/yr) * (1000 gallons/kilogallon) * (1 ton/2000 pounds)
Potential is based upon 8760 hours per year

Appendix A: Emission Calculations
Comparison of Engine Test Cells on #2 Diesel Oil, LPG, Natural Gas and Biodiesel

Company Name: Cummins Engine Company, Columbus Technical Center - Plant 5
Address City IN Zip: 1900 McKinley Avenue, Columbus, Indiana 47201
Permit Number: T 005-17553-00002
Plt ID: 005-00002
Reviewer: Brian J. Pedersen
Application Date: November 21, 2006

Capacity = 80,000 HP
Limited to 11830 HP due to cooling tower restrictions

For PM/PM10 the worst case fuels are a combination of diesel and liquid propane

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	PM/PM10 Factor (lbs/unit)	Potential PM/PM10 ((lbs/hr)/cell)	Potential PM/PM10 ((tons/yr)/cell)	Potential ((PM/PM10/hp)/cell) (tons/yr)	Potential PM/PM10-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case PM/PM10 (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	#2 Diesel	0.00324	3.3	0.0107	0.047	0.000094	2.25	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	#2 Diesel	0.00675	3.3	0.0223	0.098	0.000098	2.05	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	**1078**	98.0	kilogallons	#2 Diesel	0.0112	3.3	0.037	0.162	0.000108	1.78	16500	**8330**	**0.898**
410 - 415, and 420	7	2000	784	112.0	kilogallons	#2 Diesel	0.0128	3.3	0.042	0.185	0.000092	1.29	14000	0	0.00
416	1	3000	196	196.0	kilogallons	#2 Diesel	0.0224	3.3	0.074	0.32	0.000108	0.32	3000	0	0.00
318 - 322	5	500	45.7	9.1	kilogallons	LPG	0.00104	5.0	0.0052	0.023	0.000046	0.114	2500	0	0.00
203, 204, and 417 - 419	5	1000	91.4	18.3	kilogallons	LPG	0.0021	5.0	0.0104	0.046	0.000046	0.23	5000	0	0.00
220	1	1500	**137**	137.2	kilogallons	LPG	0.0157	5.0	0.0783	0.343	**0.000229**	**0.343**	**1500**	**1500**	**0.343**
420	1	2000	**549**	548.7	kilogallons	LPG	0.0626	5.0	0.313	1.37	**0.000686**	**1.37**	**2000**	**2000**	**1.37**
121, 122, 303, 316 - 322, and 401	11	500	24.3	2.2	MM SCF	Natural Gas	0.000252	10.0	0.00252	0.0110	0.000022	0.122	5500	0	0.00
203, 204, and 417 - 419	5	1000	18.3	3.7	MM SCF	Natural Gas	0.00042	10.0	0.0042	0.0183	0.000018	0.092	5000	0	0.00
220	1	1500	13.7	13.7	MM SCF	Natural Gas	0.00156	10.0	0.0156	0.0685	0.000046	0.069	1500	0	0.00
410 and 414	2	2000	18.3	9.2	MM SCF	Natural Gas	0.00104	10.0	0.0104	0.0458	0.000023	0.092	4000	0	0.00
731 and 732	2	500	13.1	6.6	kilogallons	#2 Diesel	0.00075	3.3	0.0025	0.011	0.000022	0.022	1000	0	0.00
													Partial HP used:	**11830**	**2.61**

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	PM/PM10 Factor (lbs/unit)	Potential PM/PM10 ((lbs/hr)/cell)	Potential PM/PM10 ((tons/yr)/cell)	Potential ((PM/PM10/hp)/cell) (tons/yr)	Potential PM/PM10-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case PM/PM10 (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	biodiesel	0.00324	4.8	0.0154	0.068	0.000135	3.25	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	biodiesel	0.00675	4.8	0.0322	0.141	0.000141	2.96	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	1078	98.0	kilogallons	biodiesel	0.0112	4.8	0.053	0.234	0.000156	2.57	16500	0	0.000
410 - 415, and 420	7	2000	784	112.0	kilogallons	biodiesel	0.0128	4.8	0.061	0.267	0.000134	1.87	14000	0	0.00
416	1	3000	196	196.0	kilogallons	biodiesel	0.0224	4.8	0.107	0.47	0.000156	0.47	3000	0	0.00
731 and 732	2	500	13.1	6.6	kilogallons	biodiesel	0.00075	4.8	0.0036	0.016	0.000031	0.031	1000	0	0.00
													Partial HP used:	0	0.00

1) Potential all cells (tons/yr) = Operating rate ((units/hr) / cell) * PM Emission factor (lbs/unit) * (8760 hours/ 1 year) * total number of cells
2) Worst case (tons/year) = Potential all cells (tons/yr) * Total Capacity (HP) / Partial Capacity (HP)
3) Partial Capacity is the limited capacity available due to restrictions from the cooling tower
4) Some test cells may powered by different fuels (ie diesel , natural gas, or liquid propane)
5) Emission factors for the biodiesel were from an EPA study "Biodiesel Handling and Use Guidelines" September 2001
6) Emission factors for the diesel test cells were supplied by the applicant from 2005 source testing data.
7) Emission factors for the LPG test cells were supplied by the applicant
8) Emission factors for the natural gas test cells were supplied by 1990 AIRS Facility Subsystem Classification Codes and Emission Factor Listing For Criteria Air Pollutants
Note: The worse case emissions, due to the limited 11,830 HP cooling tower restrictions, are calculated with the worse case emission factors for a combination of test cells and fuels

Appendix A: Emission Calculations
Comparison of Engine Test Cells on #2 Diesel Oil, LPG, Natural Gas and Biodiesel

Company Name: Cummins Engine Company, Columbus Technical Center - Plant 5
Address City IN Zip: 1900 McKinley Avenue, Columbus, Indiana 47201
Permit Number: T 005-17553-00002
Plt ID: 005-00002
Reviewer: Brian J. Pedersen
Application Date: November 21, 2006

Capacity = 80,000 HP
Limited to 11830 HP due to cooling tower restrictions

The worst case fuels for NOx are a combination of liquid propane and natural gas

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	NOx Factor (lbs/unit)	Potential NOx ((lbs/hr)/cell)	Potential NOx ((tons/yr)/cell)	Potential ((NOx/hp)/cell) (tons/yr)	Potential NOx-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case NOx (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	#2 Diesel	0.00324	95.0	0.31	1.35	0.0027	64.6	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	#2 Diesel	0.00675	95.0	0.64	2.8	0.0028	59.0	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	**1078**	98.0	kilogallons	#2 Diesel	0.0112	95.0	1.06	4.7	0.0031	51.2	16500	0	0.00
410 - 415, and 420	7	2000	784	112.0	kilogallons	#2 Diesel	0.0128	95.0	1.21	5.3	0.0027	37.2	14000	0	0.00
416	1	3000	196	196.0	kilogallons	#2 Diesel	0.0224	95.0	2.13	9.3	0.0031	9.3	3000	0	0.00
318 - 322	5	500	45.7	9.1	kilogallons	LPG	0.00104	139.0	0.145	0.64	0.0013	3.2	2500	0	0.00
203, 204, and 417 - 419	5	1000	91.4	18.3	kilogallons	LPG	0.0021	139.0	0.29	1.27	0.0013	6.4	5000	0	0.00
220	1	1500	**137**	137.2	kilogallons	LPG	0.0157	139.0	2.18	9.54	0.0064	9.54	1500	0	0.00
420	1	2000	**549**	548.7	kilogallons	LPG	0.0626	139.0	8.71	38.1	**0.0191**	**38.1**	**2000**	**2000**	**38.1**
121, 122, 303, 316 - 322, and 401	11	500	24.3	2.2	MM SCF	Natural Gas	0.000252	3400.0	0.86	3.76	0.0075	41.3	**5500**	**4330**	**32.5**
203, 204, and 417 - 419	5	1000	18.3	3.7	MM SCF	Natural Gas	0.00042	3400.0	1.42	6.2	0.0062	31.1	5000	0	0.0
220	1	1500	13.7	13.7	MM SCF	Natural Gas	0.00156	3400.0	5.32	23.3	**0.0155**	**23.3**	**1500**	**1500**	**23.3**
410 and 414	2	2000	18.3	9.2	MM SCF	Natural Gas	0.00104	3400.0	3.55	15.6	**0.0078**	**31.1**	**4000**	**4000**	**31.11**
731 and 732	2	500	13.1	6.6	kilogallons	#2 Diesel	0.00075	95.0	0.07	0.31	0.0006	0.6	1000	0	0.00
													Partial HP used:	**11830**	**125**

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	NOx Factor (lbs/unit)	Potential NOx ((lbs/hr)/cell)	Potential NOx ((tons/yr)/cell)	Potential ((NOx/hp)/cell) (tons/yr)	Potential NOx-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case NOx (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	biodiesel	0.00324	375.6	1.2157	5.325	0.010650	255.59	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	biodiesel	0.00675	375.6	2.5358	11.107	0.011107	233.24	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	1078	98.0	kilogallons	biodiesel	0.0112	375.6	4.202	18.404	0.012269	202.44	16500	0	0.00
410 - 415, and 420	7	2000	784	112.0	kilogallons	biodiesel	0.0128	375.6	4.802	21.033	0.010517	147.23	14000	0	0.00
416	1	3000	196	196.0	kilogallons	biodiesel	0.0224	375.6	8.404	36.81	0.012269	36.81	3000	0	0.00
731 and 732	2	500	13.1	6.6	kilogallons	biodiesel	0.00075	375.6	0.2808	1.230	0.002460	2.460	1000	0	0.00
													Partial HP used:	0	0.00

1) Potential all cells (tons/yr) = Operating rate ((units/hr) / cell) * PM Emission factor (lbs/unit) * (8760 hours/ 1 year) * total number of cells
2) Worst case (tons/year) = Potential all cells (tons/yr) * Total Capacity (HP) / Partial Capacity (HP)
3) Partial Capacity is the limited capacity available due to restrictions from the cooling tower
4) Some test cells may powered by different fuels (ie diesel , natural gas, or liquid propane)
5) Emission factors for the biodiesel were from an EPA study "Biodiesel Handling and Use Guidelines" September 2001
6) Emission factors for the diesel test cells were supplied by the applicant from 2005 source testing data.
7) Emission factors for the LPG test cells were supplied by the applicant
8) Emission factors for the natural gas test cells were supplied by 1990 AIRS Facility Subsystem Classification Codes and Emission Factor Listing For Criteria Air Pollutants
Note: The worse case emissions, due to the limited 11,830 HP cooling tower restrictions, are calculated with the worse case emission factors for a combination of test cells and fuels

Appendix A: Emission Calculations
Comparison of Engine Test Cells on #2 Diesel Oil, LPG, Natural Gas and Biodiesel

Company Name: Cummins Engine Company, Columbus Technical Center - Plant 5
Address City IN Zip: 1900 McKinley Avenue, Columbus, Indiana 47201
Permit Number: T 005-17553-00002
Plt ID: 005-00002
Reviewer: Brian J. Pedersen
Application Date: November 21, 2006

Capacity = 80,000 HP
Limited to 11830 HP due to cooling tower restrictions

The worst case fuels for VOC are a combination of liquid propane and diesel

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	VOC Factor (lbs/unit)	Potential VOC ((lbs/hr)/cell)	Potential VOC ((tons/yr)/cell)	Potential ((VOC/hp)/cell) (tons/yr)	Potential VOC-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case VOC (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	#2 Diesel	0.00324	4.8	0.0155	0.068	0.000136	3.27	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	#2 Diesel	0.00675	4.8	0.032	0.142	0.000142	2.98	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	**1078**	98.0	kilogallons	#2 Diesel	0.0112	4.8	0.054	0.235	0.000157	2.59	16500	0	0.00
410 - 415, and 420	7	2000	784	112.0	kilogallons	#2 Diesel	0.0128	4.8	0.061	0.27	0.000134	1.88	14000	0	0.000
416	1	3000	196	196.0	kilogallons	#2 Diesel	0.0224	4.8	0.107	0.47	0.000157	0.470	3000	0	0.00
318 - 322	5	500	45.7	9.1	kilogallons	LPG	0.00104	83.0	0.087	0.38	**0.000759**	**1.90**	**2500**	**2500**	**1.90**
203, 204, and 417 - 419	5	1000	91.4	18.3	kilogallons	LPG	0.0021	83.0	0.173	0.76	**0.000759**	**3.79**	**5000**	**5000**	**3.79**
220	1	1500	**137**	137.2	kilogallons	LPG	0.0157	83.0	1.30	5.69	**0.003796**	**5.69**	**1500**	**1500**	**5.69**
420	1	2000	**549**	548.7	kilogallons	LPG	0.0626	83.0	5.20	22.8	**0.011386**	**22.8**	**2000**	**2000**	**22.8**
121, 122, 303, 316 - 322, and 401	11	500	24.3	2.2	MM SCF	Natural Gas	0.000252	82.9	0.0209	0.092	0.000183	1.01	5500	0	0.00
203, 204, and 417 - 419	5	1000	18.3	3.7	MM SCF	Natural Gas	0.00042	82.9	0.0346	0.152	0.000152	0.759	5000	0	0.00
220	1.00	1500	13.7	13.70	MM SCF	Natural Gas	0.00156	82.9	0.1296	0.568	**0.000379**	**0.568**	**1500**	**830**	**0.314**
410 and 414	2	2000	18.3	9.2	MM SCF	Natural Gas	0.00104	82.9	0.087	0.379	0.000190	0.759	4000	0	0.00
731 and 732	2	500	13.1	6.6	kilogallons	#2 Diesel	0.00075	4.8	0.0036	0.016	0.000031	0.031	1000	0	0.00
													Partial HP used:	**11830**	**34.5**

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	VOC Factor (lbs/unit)	Potential VOC ((lbs/hr)/cell)	Potential VOC ((tons/yr)/cell)	Potential ((VOC/hp)/cell) (tons/yr)	Potential VOC-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case VOC (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	biodiesel	0.00324	7.8	0.0253	0.111	0.000222	5.32	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	biodiesel	0.00675	7.8	0.0528	0.231	0.000231	4.86	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	1078	98.0	kilogallons	biodiesel	0.0112	7.8	0.087	0.383	0.000255	4.21	16500	0	0.000
410 - 415, and 420	7	2000	784	112.0	kilogallons	biodiesel	0.0128	7.8	0.100	0.438	0.000219	3.07	14000	0	0.00
416	1	3000	196	196.0	kilogallons	biodiesel	0.0224	7.8	0.175	0.77	0.000255	0.77	3000	0	0.00
731 and 732	2	500	13.1	6.6	kilogallons	biodiesel	0.00075	7.8	0.0058	0.026	0.000051	0.051	1000	0	0.00
													Partial HP used:	0	0.00

1) Potential all cells (tons/yr) = Operating rate ((units/hr) / cell) * PM Emission factor (lbs/unit) * (8760 hours/ 1 year) * total number of cells
2) Worst case (tons/year) = Potential all cells (tons/yr) * Total Capacity (HP) / Partial Capacity (HP)
3) Partial Capacity is the limited capacity available due to restrictions from the cooling tower
4) Some test cells may powered by different fuels (ie diesel , natural gas, or liquid propane)
5) Emission factors for the biodiesel were from an EPA study "Biodiesel Handling and Use Guidelines" September 2001
6) Emission factors for the diesel test cells were supplied by the applicant from 2005 source testing data.
7) Emission factors for the LPG test cells were supplied by the applicant
8) Emission factors for the natural gas test cells were supplied by 1990 AIRS Facility Subsystem Classification Codes and Emission Factor Listing For Criteria Air Pollutants
Note: The worse case emissions, due to the limited 11,830 HP cooling tower restrictions, are calculated with the worse case emission factors for a combination of test cells and fuels

Appendix A: Emission Calculations
Comparison of Engine Test Cells on #2 Diesel Oil, LPG, Natural Gas and Biodiesel

Company Name: Cummins Engine Company, Columbus Technical Center - Plant 5
Address City IN Zip: 1900 McKinley Avenue, Columbus, Indiana 47201
Permit Number: T 005-17553-00002
Plt ID: 005-00002
Reviewer: Brian J. Pedersen
Application Date: November 21, 2006

Capacity = 80,000 HP
Limited to 11830 HP due to cooling tower restrictions

The worst case fuel for SO2 is diesel

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	SO2 Factor (lbs/unit)	Potential SO2 ((lbs/hr)/cell)	Potential SO2 ((tons/yr)/cell)	Potential ((SO2/hp)/cell) (tons/yr)	Potential SO2-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case SO2 (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	#2 Diesel	0.00324	2.92	0.0095	0.041	0.000083	1.99	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	#2 Diesel	0.00675	2.92	0.0197	0.086	0.000086	1.81	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	**1078**	98.0	kilogallons	#2 Diesel	0.0112	2.92	0.0327	0.143	**0.000095**	**1.57**	**16500**	**11830**	**1.13**
410 - 415, and 420	7	2000	784	112.0	kilogallons	#2 Diesel	0.0128	2.92	0.037	0.164	0.000082	1.14	14000	0	0.00
416	1	3000	196	196.0	kilogallons	#2 Diesel	0.0224	2.92	0.065	0.286	0.000095	0.286	3000	0	0.00
318 - 322	5	500	45.7	9.1	kilogallons	LPG	0.00104	0.350	0.00037	0.00160	0.000003	0.008	2500	0	0.00
203, 204, and 417 - 419	5	1000	91.4	18.3	kilogallons	LPG	0.0021	0.350	0.00073	0.0032	0.000003	0.016	5000	0	0.00
220	1	1500	**137**	137.2	kilogallons	LPG	0.0157	0.350	0.00548	0.0240	0.000016	0.024	1500	0	0.00
420	1	2000	**549**	548.7	kilogallons	LPG	0.0626	0.350	0.0219	0.0960	0.000048	0.096	2000	0	0.00
121, 122, 303, 316 - 322, and 401	11	500	24.3	2.2	MM SCF	Natural Gas	0.000252	0.600	0.000151	0.00066	0.000001	0.007	5500	0	0.00
203, 204, and 417 - 419	5	1000	18.3	3.7	MM SCF	Natural Gas	0.00042	0.600	0.000251	0.00110	0.000001	0.005	5000	0	0.00
220	1	1500	13.7	13.7	MM SCF	Natural Gas	0.00156	0.600	0.000938	0.00411	0.000003	0.004	1500	0	0.00
410 and 414	2	2000	18.3	9.2	MM SCF	Natural Gas	0.00104	0.600	0.00063	0.00275	0.000001	0.005	4000	0	0.00
731 and 732	2	500	13.1	6.6	kilogallons	#2 Diesel	0.00075	2.92	0.0022	0.010	0.000019	0.019	1000	0	0.00
													Partial HP used:	**11830**	**1.13**

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	SO2 Factor (lbs/unit)	Potential SO2 ((lbs/hr)/cell)	Potential SO2 ((tons/yr)/cell)	Potential ((SO2/hp)/cell) (tons/yr)	Potential SO2-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case SO2 (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	biodiesel	0.00324	2.4	0.0079	0.034	0.000069	1.65	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	biodiesel	0.00675	2.4	0.0164	0.072	0.000072	1.51	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	1078	98.0	kilogallons	biodiesel	0.0112	2.4	0.027	0.119	0.000079	1.31	16500	0	0.000
410 - 415, and 420	7	2000	784	112.0	kilogallons	biodiesel	0.0128	2.4	0.031	0.136	0.000068	0.95	14000	0	0.00
416	1	3000	196	196.0	kilogallons	biodiesel	0.0224	2.4	0.054	0.24	0.000079	0.24	3000	0	0.00
731 and 732	2	500	13.1	6.6	kilogallons	biodiesel	0.00075	2.4	0.0018	0.008	0.000016	0.016	1000	0	0.00
													Partial HP used:	0	0.00

1) Potential all cells (tons/yr) = Operating rate ((units/hr) / cell) * PM Emission factor (lbs/unit) * (8760 hours/ 1 year) * total number of cells
2) Worst case (tons/year) = Potential all cells (tons/yr) * Total Capacity (HP) / Partial Capacity (HP)
3) Partial Capacity is the limited capacity available due to restrictions from the cooling tower
4) Some test cells may powered by different fuels (ie diesel , natural gas, or liquid propane)
5) Emission factors for the biodiesel were from an EPA study "Biodiesel Handling and Use Guidelines" September 2001
6) Emission factors for the diesel test cells were supplied by the applicant from 2005 source testing data.
7) Emission factors for the LPG test cells were supplied by the applicant
8) Emission factors for the natural gas test cells were supplied by 1990 AIRS Facility Subsystem Classification Codes and Emission Factor Listing For Criteria Air Pollutants
Note: The worse case emissions, due to the limited 11,830 HP cooling tower restrictions, are calculated with the worse case emission factors for a combination of test cells and fuels

Appendix A: Emission Calculations
Comparison of Engine Test Cells on #2 Diesel Oil, LPG, Natural Gas and Biodiesel

Company Name: Cummins Engine Company, Columbus Technical Center - Plant 5
Address City IN Zip: 1900 McKinley Avenue, Columbus, Indiana 47201
Permit Number: T 005-17553-00002
Plt ID: 005-00002
Reviewer: Brian J. Pedersen
Application Date: November 21, 2006

Capacity = 80,000 HP
Limited to 11830 HP due to cooling tower restrictions

The worst case fuel for CO is a combination of liquid propane and natural gas

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	CO Factor (lbs/unit)	Potential CO ((lbs/hr)/cell)	Potential CO ((tons/yr)/cell)	Potential ((CO/hp)/cell) (tons/yr)	Potential CO-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case CO (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	#2 Diesel	0.00324	30.5	0.099	0.432	0.00086	20.8	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	#2 Diesel	0.00675	30.5	0.206	0.90	0.00090	18.9	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	**1078**	98.0	kilogallons	#2 Diesel	0.0112	30.5	0.341	1.49	0.00100	16.4	16500	0	0.00
410 - 415, and 420	7	2000	784	112.0	kilogallons	#2 Diesel	0.0128	30.5	0.390	1.71	0.00085	12.0	14000	0	0.00
416	1	3000	196	196.0	kilogallons	#2 Diesel	0.0224	30.5	0.68	2.99	0.00100	2.99	3000	0	0.00
318 - 322	5	500	45.7	9.1	kilogallons	LPG	0.00104	129	0.135	0.59	**0.00118**	**2.95**	**2500**	**1830**	**2.16**
203, 204, and 417 - 419	5	1000	91.4	18.3	kilogallons	LPG	0.00209	129	0.27	1.18	**0.00118**	**5.90**	**5000**	**5000**	**5.90**
220	1	1500	**137**	137.2	kilogallons	LPG	0.0157	129	2.02	8.85	**0.00590**	**8.85**	**1500**	**1500**	**8.85**
420	1	2000	**549**	548.7	kilogallons	LPG	0.0626	129	8.08	35.4	**0.01770**	**35.4**	**2000**	**2000**	**35.4**
121, 122, 303, 316 - 322, and 401	11	500	24.3	2.2	MM SCF	Natural Gas	0.000252	430	0.108	0.475	0.00095	5.2	5500	0	0.00
203, 204, and 417 - 419	5	1000	18.3	3.7	MM SCF	Natural Gas	0.00042	430	0.180	0.79	0.00079	3.9	5000	0	0.00
220	1	1500	13.7	13.7	MM SCF	Natural Gas	0.00156	430	0.672	2.95	**0.00196**	**2.95**	**1500**	**1500**	**2.95**
410 and 414	2	2000	18.3	9.2	MM SCF	Natural Gas	0.00104	430	0.449	1.97	0.00098	3.9	4000	0	0.00
731 and 732	2	500	13.1	6.6	kilogallons	#2 Diesel	0.00075	30.5	0.023	0.100	0.00020	0.2	1000	0	0.00
													Partial HP used:	**11830**	**55.2**

Unit ID	# of test Cells per year	Individual Capacities (HP)	Potential Fuel Used per year	Potential fuel per cell/yr	Fuel Units	Fuel Type	Operating Rate ((units/hr)/cell)	CO Factor (lbs/unit)	Potential CO ((lbs/hr)/cell)	Potential CO ((tons/yr)/cell)	Potential ((CO/hp)/cell) (tons/yr)	Potential CO-all cells (tons/yr)	Total Capacity HP	Partial HP used	Worst case CO (tons/yr)
101 - 122, 217 - 218, 301 - 322, 401, and 423	48	500	1361	28.4	kilogallons	biodiesel	0.00324	31.7	0.1026	0.449	0.000899	21.57	24000	0	0.00
201 - 215, 219, 402, 403, and 417 - 419	21	1000	1242	59.1	kilogallons	biodiesel	0.00675	31.7	0.2140	0.937	0.000937	19.68	21000	0	0.00
220 - 222, 404 - 409, 421, and 422	11	1500	1078	98.0	kilogallons	biodiesel	0.0112	31.7	0.355	1.553	0.001035	17.08	16500	0	0.00
410 - 415, and 420	7	2000	784	112.0	kilogallons	biodiesel	0.0128	31.7	0.405	1.775	0.000887	12.42	14000	0	0.00
416	1	3000	196	196.0	kilogallons	biodiesel	0.0224	31.7	0.709	3.11	0.001035	3.11	3000	0	0.00
731 and 732	2	500	13.1	6.6	kilogallons	biodiesel	0.00075	31.7	0.0237	0.104	0.000208	0.208	1000	0	0.00
													Partial HP used:	0	0.00

1) Potential all cells (tons/yr) = Operating rate ((units/hr) / cell) * PM Emission factor (lbs/unit) * (8760 hours/ 1 year) * total number of cells
2) Worst case (tons/year) = Potential all cells (tons/yr) * Total Capacity (HP) / Partial Capacity (HP)
3) Partial Capacity is the limited capacity available due to restrictions from the cooling tower
4) Some test cells may powered by different fuels (ie diesel , natural gas, or liquid propane)
5) Emission factors for the biodiesel were from an EPA study "Biodiesel Handling and Use Guidelines" September 2001
6) Emission factors for the diesel test cells were supplied by the applicant from 2005 source testing data.
7) Emission factors for the LPG test cells were supplied by the applicant
8) Emission factors for the natural gas test cells were supplied by 1990 AIRS Facility Subsystem Classification Codes and Emission Factor Listing For Criteria Air Pollutants
Note: The worse case emissions, due to the limited 11,830 HP cooling tower restrictions, are calculated with the worse case emission factors for a combination of test cells and fuels

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#1 and #2 Fuel Oil

Company Name: **Cummins Engine Company, Columbus Technical Center - Plant**
Address, City IN Zip: **1900 McKinley Avenue, Columbus, Indiana 47201**
Permit Number: **T 005-17553-00002**
Plt ID: **005-00002**
Reviewer: **Brian J. Pedersen**
Application Date: **March 26, 2003**

Unit ID	Capacity (MMBTU/hr)
#1	25.0
#2	25.0
#3	25.0
#4	14.6
#5	14.6
Total	**104.2**

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
104.2	6520	0.050

	Pollutant				
	PM*	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.00	7.1 *(142.0S)*	20.0	0.340	5.00
Potential Emission in tons/yr	6.52	23.1	65.2	1.108	16.30

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton
See page 10 for HAPs emission calculations.

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#1 and #2 Fuel Oil
HAPs Emissions

Company Name: **Cummins Engine Company, Columbus Technical Center - Plant**
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	HAPs - Metals				
	Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/mmBtu	0.000004	0.000003	0.000003	0.000003	0.000009
Potential Emission in tons/yr	0.0018	0.0014	0.0014	0.0014	0.004

	HAPs - Metals (continued)				
	Mercury	Manganese	Nickel	Selenium	
Emission Factor in lb/mmBtu	0.000003	0.000006	0.000003	0.00002	**Total**
Potential Emission in tons/yr	0.0014	0.0027	0.0014	0.007	**0.022**

Methodology

No data was available in AP-42 for organic HAPs.
Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

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