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: June 1, 2007

RE: Cummins Engine Company/ 005-19461-00047
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
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100 North Senate Avenue
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Indianapolis, Indiana 46204-2251
(317) 232-8603
(800) 451-6027
www.in.gov/idem

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Cummins Engine Company - Midrange Engine Plant
I-65 at Highway 58
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 005-19461-00047	
Issued by: Original signed by Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date:June 1, 2007 Expiration Date:June 1, 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 an internal combustion engine manufacturing source.

Source Address:	I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address:	Box 3005, Mail Code 71327, Columbus, Indiana 47202-3005
General Source Phone Number:	(812) 377-6694
SIC Code:	3519
County Location:	Bartholomew
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act

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) Two (2) natural gas-fired boilers with No. 2 fuel oil backup, collectively identified as EU-B01, installed in 1972, exhausted through stack S10, rated at 61.5 million British thermal units per hour, each.

(b) One (1) paint spray booth, identified as EU-P01, installed in October 1991, equipped with five (5) electrostatic air atomization applicators, and dry filters for overspray control, exhausted to stack S01, maximum capacity: 37.5 engines per hour.

(c) Five (5) diesel or biodiesel (B1-B20) -powered engine test cells, collectively identified as EU-P02, located in the main facility, exhausted to stack S02, four (4) installed in October 1991, and one (1) installed in 2005, capacity: 655,949 gallons of diesel fuel per year, total.

(d) Five (5) diesel or biodiesel (B1-B20) -powered engine attribute cells, collectively identified as EU-P03, located in the main facility, three (3) installed in October 1991, and two (2) installed in 2001, exhausted to stack S03, capacity: 442,380 gallons of diesel fuel per year, total.

(e) Two (2) diesel-powered engine test cells, collectively identified as EU-P04, located in the noise lab, installed in 1973 and 1979, exhausted to stack S04, capacity: 35,040 gallons of diesel fuel per year, total.

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) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:

(1) One (1) space heater with a heat input capacity of 2.5 million British thermal units per

hour;

(2) One (1) cure oven with a heat input capacity of 4.2 million British thermal units per hour; and

(3) One (1) boiler, constructed in 1993, with a heat input capacity of 6.8 million British thermal units per hour. [326 IAC 6-2-4]

(b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 (One (1) degreaser, D-1, constructed after 1990, with a maximum throughput to 120 gallons per 12 months). [326 IAC 8-3-2 and 326 IAC 8-3-5(a)]

(c) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotive, automobiles, having a storage capacity less than or equal to 10,500 gallons, including one (1) three hundred (300) gallon gasoline tank, installed in June 2005, with a maximum throughput of fifteen (15) gallons per minute. [40 CFR 63] [326 IAC 8-1-6]

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, 005-19461-00047, 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

The submittal by the Permittee does require the certification by the "responsible official" as

defined by 326 IAC 2-7-1(34).

B.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: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the

attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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 005-19461-00047 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

B.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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

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

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

(b) 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

(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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

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

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

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

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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

B.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. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

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

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

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

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

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

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

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

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

(g) Indiana 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.8 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the

reasons for the inability to meet this date.

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

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

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

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 December 5, 2000.

(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 and 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

MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

C.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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

(e) 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 EMISSIONS UNIT OPERATION CONDITIONS

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

(a) Two (2) natural gas-fired boilers with No. 2 fuel oil backup, collectively identified as EU-B01, installed in 1972, exhausted through stack S10, rated at 61.5 million British thermal units per hour, each.

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

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

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

Pursuant to 326 IAC 6-2-3 (Particulate emission limitations for sources of indirect heating) the particulate emissions from the two (2) boilers, identified as EU-B01, constructed in 1972, with maximum capacities of 61.5 million British thermal units per hour, each, shall be limited to particulate emissions of 0.415 pound per million British thermal units of heat input. This limit is based upon the following calculation:

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

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.

D.1.2 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2, the SO_2 emissions from each of the two (2) boilers shall not exceed five-tenths (0.5) pound per million British thermal units when operating on No. 2 fuel oil.

D.1.3 PSD Minor Limit [326 IAC 2-2]

(a) The No. 2 fuel oil usage at the two (2) boilers, identified as EU-B01, shall be limited to less than 800,000 gallons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. The sulfur content of the No. 2 fuel oil shall not exceed 0.5%, which is equal to an SO_2 emission rate of 71 pounds per 1,000 gallons of fuel oil used, and the NO_X emission rate shall not exceed 20 pounds per 1,000 gallons of fuel oil used.

(b) Each million cubic feet of natural gas shall be equivalent to 5.00 gallons of No. 2 fuel oil.

(c) The NO_X emissions when operating on natural gas shall not exceed 100 pounds per million cubic feet of natural gas and the SO_2 emissions shall not exceed 0.60 pounds per million cubic feet of natural gas.

Compliance with these limits, in combination with Condition D.3.1 and uncontrolled SO_2 and NO_X emissions from insignificant activities, shall limit the source-wide SO_2 and NO_X emissions to less than 250 tons per year, each, and render 326 IAC 2-2 not applicable to this source.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the two (2) boilers.

Compliance Determination Requirements

D.1.5 Sulfur Dioxide Emissions and Sulfur Content

Compliance with the sulfur content limitations in Conditions D.1.2 and D.1.3 shall be determined utilizing one of the following options.

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input and 0.5% by weight by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification, or

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the two (2) boilers, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

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

D.1.6 Visible Emissions Notations

(a) Visible emission notations of the two (2) boilers stack (S10) exhaust shall be performed once per day during normal daylight operations when operating on fuel 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 Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.7 Record Keeping Requirements

(a) To document compliance with the sulfur content limits in Conditions D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (5) below.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;

If the fuel supplier certification is used to demonstrate compliance, when burning alternate fuels and not determining compliance pursuant to 326 IAC 3-7-4, the following, as a minimum, shall be maintained:

(3) Fuel supplier certifications;

(4) The name of the fuel supplier; and

(5) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(b) To document compliance with Condition D.1.3, the Permittee shall maintain records of the amount of natural gas and No. 2 fuel oil used on a monthly basis.

(c) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of the two (2) boilers stack (S10) exhaust once per day when operating on No. 2 fuel oil.

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

D.1.8 Reporting Requirements

(a) 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).

(b) A quarterly summary of the information to document compliance with Condition D.1.3 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 their equivalent, within thirty (30) days after the end of the six (6) month period being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Coating and Degreasing

(b) One (1) paint spray booth, identified as EU-P01, installed in October 1991, equipped with five (5) electrostatic air atomization applicators, and dry filters for overspray control, exhausted to stack S01, maximum capacity: 37.5 engines per hour.

Insignificant Activity

(c) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 (One (1) degreaser, D-1, constructed after 1990, with a maximum throughput to 120 gallons per 12 months). [326 IAC 8-3-2 and 326 IAC 8-3-5(a)]

(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.2.1 Particulate [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d), particulate from the surface coating operations shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

D.2.2 Volatile Organic Compound (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, the owner or operator shall not allow the discharge into the atmosphere VOC in excess of four and three-tenths (4.3) for clear coatings and three and five-tenths (3.5) for air dried, forced warm air dried, and extreme performance coatings, excluding water, as delivered to the applicators.

D.2.3 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9 (f)]

Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from the application equipment of the one (1) paint spray booth, identified as EU-P01, during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

D.2.4 Hazardous Air Pollutants (HAP) Minor Limit [40 CFR 63, Subparts MMMM, PPPP and PPPPP] [326 IAC 2-4.1]

Pursuant to Significant Permit Modification No.: 005-22853-00047, issued on November 17, 2006, and revised by this permit:

(a) the usage of hexane at the one (1) paint spray booth, identified as EU-P01, and the insignificant degreaser, including material storage, shall not exceed 8.91 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(b) the usage of each individual HAP, other than hexane, at the one (1) paint spray booth, identified as EU-P01, and the insignificant degreaser, including material storage, shall not exceed 9.85 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month; and

(c) the usage of total HAPs at the one (1) paint spray booth, identified as EU-P01, and the insignificant degreaser, including material storage, shall not exceed 23.4 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.

These limitations, in combination with the potential HAPs emissions from the boilers, engine test cells, gasoline fuel transfer and dispensing, emergency generators, and other insignificant activities will limit the hazardous air pollutant (HAP) emissions from this source to less than ten (10) tons of any single HAP, and less than twenty-five (25) tons of any combination of HAPs, per twelve (12) consecutive month period, and renders the requirements of 40 CFR 63, Subparts MMMM, PPPP, and PPPPP, and 326 IAC 2-4.1 not applicable.

D.2.5 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaner degreaser 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.2.6 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 owner or operator of the cold cleaner degreaser 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 nine-tenths 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 owner or operator of the cold cleaning degreaser 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.

D.2.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the one (1) paint spray booth, identified as EU-P01, and its control device.

Compliance Determination Requirements

D.2.8 Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-4] [326 IAC 8-1-2(a)]

Compliance with the VOC content and HAP usage limitations contained in Conditions D.2.2 and D.2.4, respectively, shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

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

D.2.9 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the paint spray booth stack (S01) while the booth is in operation. If a condition exists which should result in a response step, 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.

(b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.2.10 Record Keeping Requirements

(a) To document compliance with Condition D.2.2, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.2.2. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The VOC content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(b) To document compliance with Condition D.2.4, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the HAP usage limits established in Condition D.2.4. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) The HAP content of each coating material and solvent used.

(2) The amount of coating material and solvent less water used on monthly basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) The cleanup solvent usage for each month;

(4) The total individual HAP and total HAPs usage for each month; and

(5) The weight of each individual HAP and total HAPs emitted for each compliance period.

(c) To document compliance with Condition D.2.9, the Permittee shall maintain a log of weekly overspray observations; and daily and monthly inspections.

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

D.2.11 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.4 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 their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.3 FACILITY OPERATION CONDITIONS

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

(c) Five (5) diesel or biodiesel (B1-B20) -powered engine test cells, collectively identified as EU-P02, located in the main facility, exhausted to stack S02, four (4) installed in October 1991, and one (1) installed in 2005, capacity: 655,949 gallons of diesel fuel per year, total.

(d) Five (5) diesel or biodiesel (B1-B20) -powered engine attribute cells, collectively identified as EU-P03, located in the main facility, three (3) installed in October 1991, and two (2) installed in 2001, exhausted to stack S03, capacity: 442,380 gallons of diesel fuel per year, total.

(e) Two (2) diesel-powered engine test cells, collectively identified as EU-P04, located in the noise lab, installed in 1973 and 1979, exhausted to stack S04, capacity: 35,040 gallons of diesel fuel per year, total.

(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 PSD Minor Limit [326 IAC 2-2]

The Permittee shall comply with the following:

(a) The total use of diesel fuel at the five (5) engine test cells, collectively identified as EU-P02, five (5) engine attribute test cells, collectively identified as EU-P03, and two (2) engine attribute test cells, collectively identified as EU-P04, shall be less than 749,000 gallons of diesel fuel per twelve (12) consecutive month period, with compliance determined at the end of each month. Each gallon of biodiesel fuel used shall be considered equal to 1.012 gallons of diesel fuel used.

(b) The NO_X emissions from the five (5) diesel-powered engine test cells, collectively identified as EU-P02, and the five (5) diesel-powered engine attribute test cells, collectively identified as EU-P03, shall not exceed 4.46 pounds per million British thermal units of heat input when burning biodiesel fuel.

(c) The NO_X emissions from the five (5) diesel-powered engine test cells, collectively identified as EU-P02, and the five (5) diesel-powered engine attribute test cells, collectively identified as EU-P03, and two (2) engine attribute test cells, collectively identified as EU-P04, shall not exceed 4.41 pounds per million British thermal units of heat input when burning diesel fuel.

(d) The SO_2 emissions from the five (5) diesel-powered engine test cells, collectively identified as EU-P02, the five (5) diesel-powered engine attribute test cells, collectively identified as EU-P03, and two (2) engine attribute test cells, collectively identified as EU-P04, shall not exceed 0.29 pound per million British thermal units of heat input when burning diesel or biodiesel fuel.

Compliance with these limits, in combination with Condition D.1.3 and uncontrolled SO_2 and NO_X emissions from insignificant activities, shall limit the source-wide SO_2 and NO_X emissions to less than 250 tons per year, each, and render 326 IAC 2-2 not applicable to this source.

Compliance Determination Requirements

D.3.2 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

By May 17, 2007, which is 180 days after issuance of Significant Permit Modification 005-22853-00047, in order to demonstrate compliance with Condition D.3.1(b), the Permittee shall perform NO_X testing for at least one (1) of the five (5) engine test cells, identified as EU-P02, or one (1) of the five (5) engine attribute cells, identified as EU-P03, utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C - Performance Testing. Testing shall be repeated at least every five (5) years.

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

D.3.3 Visible Emissions Notations

(a) Visible emission notations of the engine test cells and engine attribute cells stacks (S02, S03 and S04) exhausts 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.3.4 Record Keeping Requirements

(a) To document compliance with Condition D.3.1, the Permittee shall maintain records for the engine test cells and engine attribute cells in accordance with (1) through (3) below.

(1) Calendar dates covered in the compliance determination period;

(2) Actual diesel and biodiesel fuel usage since last compliance determination period; and

(3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period.

(b) To document compliance with Condition D.3.4 the Permittee shall maintain daily records of visible emission notations of the engine test cell stack exhausts during normal daylight operations.

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

D.3.5 Reporting Requirements

Quarterly summaries of the information to document compliance with Condition D.3.1(a) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Insignificant boiler and gasoline dispensing

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:

(1) One (1) space heater with a heat input capacity of 2.5 million British thermal units per hour;

(2) One (1) cure oven with a heat input capacity of 4.2 million British thermal units per hour; and

(3) One (1) boiler, constructed in 1993, with a heat input capacity of 6.8 million British thermal units per hour. [326 IAC 6-2-4]

(e) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotive, automobiles, having a storage capacity less than or equal to 10,500 gallons, including one (1) three hundred (300) gallon gasoline tank, installed in June 2005, with a maximum throughput of fifteen (15) gallons per minute. [40 CFR 63] [326 IAC 2-2]

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

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

D.4.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating constructed after September 21, 1983), the particulate emissions from the one (1) 6.8 million British thermal unit per hour natural gas-fired boiler, with Q equal to 129.8 million British thermal units, shall be limited to 0.308 pounds per million British thermal unit.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu 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.

D.4.2 Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs) [326 IAC 8-1-6] [40 CFR 63]

Pursuant to Significant Permit Modification No.: 005-22853-00047, issued on November 17, 2006, the gasoline throughput at the one (1) insignificant gasoline dispensing operation shall not exceed 1,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. Due to this limitation, and the limitation in Condition D.2.4, the requirements of 40 CFR 63, Subpart MMMM, and 40 CFR 63, Subpart PPPP, are not included in this permit. This also renders the requirements of 326 IAC 8-1-6 not applicable.

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

D.4.3 Record Keeping Requirements

(a) To document Compliance with Condition D.4.2, the Permittee shall maintain monthly records of the gasoline throughput at the one (1) insignificant gasoline dispensing operation.

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

D.4.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.4.2 shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Cummins Engine Company - Midrange Engine Plant
Source Address: I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address: Box 3005, Mail Code 71327, Columbus, Indiana 47202 - 3005
Part 70 Permit No.: T 005-19461-00047

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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Cummins Engine Company - Midrange Engine Plant
Source Address: I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address: Box 3005, Mail Code 71327, Columbus, Indiana 47202 - 3005
Part 70 Permit No.: T 005-19461-00047

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 Engine Company - Midrange Engine Plant
Source Address: I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address: Box 3005, Mail Code 71327, Columbus, Indiana 47202 - 3005
Part 70 Permit No.: T 005-19461-00047

☐ 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 Quarterly Report

Source Name: Cummins Engine Company - Midrange Engine Plant
Source Address: I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address: Box 3005, Mail Code 71327, Columbus, Indiana 47202 - 3005
Part 70 Permit No.: T 005-19461-00047
Facilities: Two (2) 61.5 million British thermal units per hour boilers (EU-B01)
Parameter: Equivalent No. 2 Fuel Oil Usage
Limit: Less than 800,000 gallons per twelve (12) consecutive month period total
Each million cubic feet of natural gas is equivalent to 5.00 gallons of No. 2 fuel oil

Equivalent No. 2 Fuel Oil Usage (gallons) =
No. 2 Fuel Oil Usage (gallons) + (Natural Gas Usage (mmcf) x 5.00)

YEAR: _____

Month	Equivalent No. 2 Fuel Oil Usage (gallons)	Equivalent No. 2 Fuel Oil Usage (gallons)	Equivalent No. 2 Fuel Oil Usage (gallons)
	This Month	Previous 11 Months	12 Month Total

No deviation occurred in this quarter.
Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Cummins Engine Company - Midrange Engine Plant
Source Address: I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address: Box 3005, Mail Code 71327, Columbus, Indiana 47202 - 3005
Part 70 Permit No.: T 005-19461-00047
Facilities: One (1) paint spray booth, identified as EU-P01, and degreasing operations, including material storage
Parameter: Individual Hazardous Air Pollutants (HAP) Usage
Limits: 8.91 tons of hexane per consecutive twelve (12) month period
9.85 tons of each individual HAP, other than hexane, per consecutive twelve (12) month period

YEAR: _____

Month	Hexane Usage (tons)	Hexane Usage (tons)	Hexane Usage (tons)
	This Month	Previous 11 Months	12 Month Total

Month	Individual HAP Usage (other than hexane) (tons)	Individual HAP Usage (other than hexane) (tons)	Individual HAP Usage (other than hexane) (tons)
	This Month	Previous 11 Months	12 Month Total

No deviation occurred in this quarter.
Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Cummins Engine Company - Midrange Engine Plant
Source Address: I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address: Box 3005, Mail Code 71327, Columbus, Indiana 47202 - 3005
Part 70 Permit No.: T 005-7672-00047
Facilities: One (1) paint spray booth, identified as EU-P01, and degreasing operations, including material storage
Parameter: Total Hazardous Air Pollutants (HAPs) Usage
Limit: 23.4 tons per consecutive twelve (12) month period

YEAR: _____

Month	Total HAPs Usage (tons)	Total HAPs Usage (tons)	Total HAPs Usage (tons)
	This Month	Previous 11 Months	12 Month Total

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Cummins Engine Company - Midrange Engine Plant
Source Address: I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address: Box 3005, Mail Code 71327, Columbus, Indiana 47202 - 3005
Part 70 Permit No.: T 005-7672-00047
Facilities: Five (5) diesel-powered engine test cells (EU-P02), five (5) diesel-powered engine attribute test cells (EU-P03), and two (2) engine attribute test cells (EU-P04)
Parameter: Equivalent Diesel Fuel Usage
Limit: 749,000 gallons per twelve (12) consecutive month period, total
Each gallon of biodiesel used shall be considered equal to using 1.012 gallons of diesel fuel

Equivalent Diesel Fuel Usage (gallons) =
Diesel Fuel Usage (gallons) + (Biodiesel Fuel Usage (gallons) x 1.012)

YEAR: _____

Month	Equivalent Diesel Fuel Usage (gallons)	Equivalent Diesel Fuel Usage (gallons)	Equivalent Diesel Fuel Usage (gallons)
	This Month	Previous 11 Months	12 Month Total

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Quarterly Report

Source Name: Cummins Engine Company - Midrange Engine Plant
Source Address: I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address: Box 3005, Mail Code 71327, Columbus, Indiana 47202 - 3005
Part 70 Permit No.: T 005-7672-00047
Facility: One (1) insignificant gasoline dispensing operation
Parameter: Gasoline Throughput
Limit: 1,000 gallons per twelve (12) consecutive month period

YEAR: _____

Month	Gasoline Throughput (gallons)	Gasoline Throughput (gallons)	Gasoline Throughput (gallons)
	This Month	Previous 11 Months	12 Month Total

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete 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 Engine Company - Midrange Engine Plant
Source Address: I-65 at Highway 58, Columbus, Indiana 47201
Mailing Address: Box 3005, Mail Code 71327, Columbus, Indiana 47202 - 3005
Part 70 Permit No.: T 005-19461-00047

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 Renewal

Source Name:	**Cummins Engine Company - Midrange Engine Plant**
Source Location:	**I-65 at Highway 58, Columbus, Indiana 47201**
County:	**Bartholomew**
SIC Code:	**3519**
Permit Renewal No.:	**T 005-19461-00047**
Permit Reviewer:	**CarrieAnn Paukowits**

On April 5, 2007, the Office of Air Quality (OAQ) had a notice published in The Republic, Columbus, Indiana, stating that Cummins Engine Company - Midrange Engine Plant had applied for a Part 70 Operating Permit Renewal to operate an internal combustion engine manufacturing source with dry filters for overspray control. 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 25, 2007, Elizabeth J. Hill of Bruce Carter Associates, L.L.C., on behalf of Cummins Engine Company - Midrange Engine Plant submitted comments on the proposed Part 70 Operating Permit Renewal. The comments are as follows (The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.):

Comment 1:

The source is requesting that the descriptive information for the one (1) paint booth, identified as EU-P01, be revised. The source is operating five (5) electrostatic air atomized applicators, not three (3) as currently listed. The capacities for the booth are accurate. Please update this descriptive information in A.2 and the related D section.

Response 1:

The description in Section A.2 and the facility description box in Section D.2 are revised as follows:

(b) One (1) paint spray booth, identified as EU-P01, installed in October 1991, equipped with ~~three (3)~~ **five (5)** electrostatic air atomization applicators, and dry filters for overspray control, exhausted to stack S01, maximum capacity: 37.5 engines per hour.

There are no other changes resulting from this descriptive change.

Comment 2:

Condition D.3.1(e) appears to be incorrectly numbered. Please rename it to read D.3.1(d).

Response 2:

The lettering in Condition D.3.1 has been corrected as follows:

~~(e)~~**(d)** The SO_2 emissions from the five (5) diesel-powered engine test cells, collectively identified as EU-P02, the five (5) diesel-powered engine attribute test cells, collectively identified as EU-P03, and two (2) engine attribute test cells, collectively identified as EU-P04, shall not exceed 0.29 pound per million British thermal units of heat input when burning diesel or biodiesel fuel.

Comment 3:

Please add a fourth row to the Part 70 Quarterly Report for the Equivalent No. 2 Fuel Oil Usage.

Response 3:

In the draft permit, the Quarterly Report Form only included room for two (2) months of data. The table has been revised to include a row for each of the three (3) months in a quarter.

Comment 4:

The source is no longer using the Xylene Solvent or the H/S Black Topcoat as indicated in Appendix A: Emission Calculations from Surface Coating Operations. The source is using acetone for solvent and the topcoat has been removed from the process.

Response 4:

OAQ prefers that the Technical Support Document (TSD) reflect the permit as was during Public Notice. All changes are reflected in this addendum to the TSD. The change in solvent will help the Permittee comply with the limitations of the permit. However, the HAP emission limitations are still required in order to make this source an area source of HAPs. The revised calculations are shown in Appendix A of this Addendum. Only pages 3, 7 and 8 have changed. Pages 7 and 8 show the revised potential to emit of the source.

Upon further review, the OAQ has decided to make the following changes to the Part 70 Operating Permit:

IDEM, OAQ has added mail codes to the addresses listed in the permit for the following: Permit Branch; Compliance Branch; Compliance Data Section; Technical Support and Modeling; and Asbestos Section.

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

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

	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

*PM emission factor is filterable PM only. PM-10 emission factor is filterable and condensable PM-10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission in tons/yr					
			PM*	PM10*	SO2	NOx	VOC	CO
Two (2) Boilers (EU-B01)	123.00	1077.48	1.024	4.094	0.323	53.874	2.963	45.254
One (1) insignificant boiler	6.80	59.568	0.057	0.226	0.018	2.978	0.164	2.502
One (1) space heater	2.50	21.9	0.021	0.083	0.007	1.095	0.060	0.920
One (1) cure oven	4.20	36.792	0.035	0.140	0.011	1.840	0.101	1.545
Total	**136.50**	**1196**	**1.136**	**4.54**	**0.359**	**59.8**	**3.29**	**50.2**

	HAPs - Organics					HAPs - Metals				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	0.0021	0.0012	0.0750	1.8000	0.0034	0.0005	0.0011	0.0014	0.0004	0.0021

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission in tons/yr										
			Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Two (2) Boilers (EU-B01)	123.00	1077.48	1.13E-03	6.46E-04	4.04E-02	9.70E-01	1.83E-03	2.69E-04	5.93E-04	7.54E-04	2.05E-04	1.13E-03	1.02
One (1) insignificant boiler	6.80	59.568	6.25E-05	3.57E-05	2.23E-03	5.36E-02	1.01E-04	1.49E-05	3.28E-05	4.17E-05	1.13E-05	6.25E-05	0.056
One (1) space heater	2.50	21.9	2.30E-05	1.31E-05	8.21E-04	1.97E-02	3.72E-05	5.48E-06	1.20E-05	1.53E-05	4.16E-06	2.30E-05	0.021
One (1) cure oven	4.20	36.792	3.86E-05	2.21E-05	1.38E-03	3.31E-02	6.25E-05	9.20E-06	2.02E-05	2.58E-05	6.99E-06	3.86E-05	0.035
Total	**136.50**	**1196**	**0.001**	**0.0007**	**0.045**	**1.08**	**0.002**	**0.0003**	**0.0007**	**0.0008**	**0.0002**	**0.001**	**1.13**

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission in tons/yr					
			PM*	PM10*	SO2	NOx	VOC	CO
Two (2) Boilers (EU-B01)		160	0.152	0.608	0.048	8.000	0.440	6.720

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

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

S = Weight % Sulfur

0.500

	Pollutant				
	PM*	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.00	71.0 *(142.0S)*	20.0	0.340	5.00

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput kgals/yr	Potential Emission in tons/yr				
			PM*	SO2	NOx	VOC	CO
Two (2) Boilers (backup fuel)	123.00	7696	7.70	273.2	77.0	1.31	19.2
Total	**123.00**	**7696**	**7.70**	**273.2**	**77.0**	**1.31**	**19.2**

SO2 limit

Equipment	Heat Input Capacity MMBtu/hr	Limited Throughput kgals/yr	Potential Emission in tons/yr				
			PM*	SO2	NOx	VOC	CO
Two (2) Boilers (backup fuel)	123.00	800	0.800	28.4	8.00	0.136	2.00
Total	**123.00**	**800**	**0.800**	**28.4**	**8.00**	**0.136**	**2.00**

Limited Potential to Emit SO2 = 28.4

	Arsenic	Beryllium	Cadmium	Chromium	Lead	Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/mmBtu	0.000004	0.000003	0.000003	0.000003	0.000009	0.000003	0.000006	0.000003	0.00002

Equipment	Heat Input Capacity MMBtu/hr		Potential Emission in tons/yr									
			Arsenic	Beryllium	Cadmium	Chromium	Lead	Mercury	Manganese	Nickel	Selenium	Total
Two (2) Boilers (backup fuel)	123.00		2.15E-03	1.62E-03	1.62E-03	1.62E-03	4.85E-03	1.62E-03	3.23E-03	1.62E-03	8.08E-03	0.026
Total	**123.00**		**0.002**	**0.002**	**0.002**	**0.002**	**0.005**	**0.002**	**0.003**	**0.002**	**0.008**	**0.026**

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 file)

*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

No data was available in AP-42 for organic HAPs.

HAP Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

Appendix A: Emissions Calculations
HAPs
From Surface Coating Operation and Insignificant Degreasing

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: April 25, 2007

Coatings

Material	Density (lbs/gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
EU-P01																
MS Clear Coat	7.97	54.0%	0.0%	54.0%	0.0%	48.3%	0.085	37.5	4.30	4.30	13.7	329	60.0	12.8	8.90	75%
Acid Catalyst Solution	9.83	25.0%	0.0%	25.0%	0.0%	63.6%	0.003	37.5	2.46	2.46	0.28	6.64	1.21	0.9	3.86	75%
State Potential Emissions			**Add worst case coating to all solvents**							**Potential Totals:**	**14.0**	**336**	**61**	**13.7**		
													PM Control Efficiency:	**99.0%**		
													Controlled Particulate Potential (tons/yr):	**0.137**		

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Ethyl Benzene	Xylene Emissions (tons/yr)	Ethyl Benzene Emissions (tons/yr)
EU-P01							
91-Cummins Semi-Gloss	9.76	0.106	37.5	4.77%	1.07%	8.10	1.81
					Potential Totals:	**8.10**	**1.81**

Degreasing

	Usage (gallons/yr)	Density (lbs/gallon)	Emissions (tons/yr)
Solvent	120	12.11	**0.727**

METHODOLOGY
Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lbs/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used
HAPS emission rate (tons/yr) = Density (lbs/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs
Degreasing Emissions (tons/yr) = Usage (gallons/yr) x Density (lbs/gallon) / 2,000 lbs/ton

Appendix A: Emissions Calculations
Diesel and Biodiesel
Engine Test Cells

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

Diesel

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.29	4.41	0.36	0.95

*PM emission factor is filterable PM only. PM-10 emission factor is filterable and condensable PM-10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Biodiesel

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.29	4.46	0.36	0.95

Unrestricted Potential

Equipment	Capacity gallons/yr	Heat Input Capacity MMBtu/yr	Potential Emission in tons/yr					
			PM	PM10	SO2	NOx	VOC	CO
EU-P02 (total of 5 test cells)	655949	89865.013	13.9	13.9	13.0	201	16.2	42.7
EU-P03 (total of 5 test cells)	442380	60606.06	9.39	9.39	8.79	135	10.91	28.79
EU-P04 (total of 2 test cells)	35040	4800.48	0.74	0.74	0.70	10.59	0.86	2.28
EU-P05	486	66.582	0.01	0.01	0.01	0.15	0.01	0.03
Total		**155338**	**24.1**	**24.1**	**22.5**	**347**	**28.0**	**73.8**

HAPs - Organics

	Benzene	Toluene	Xylenes	1,3-Butadiene	Formaldehyde
Emission Factor in lb/MMBtu	0.0009	0.0004	0.0003	0.0000	0.0012
Potential Emission in tons/yr	0.049	0.021	0.015	0.002	0.062

HAPs - Metals

	Acetylaldehyde	Acrolein	Naphthalene	Total
Emission Factor in lb/MMcf	0.0008	0.0009	0.0001	HAPs
Potential Emission in tons/yr	0.040	0.049	0.004	**0.243**

Limited Potential to Emit

Equipment	Capacity gallons/yr	Heat Input Capacity MMBtu/yr	Potential Emission in tons/yr					
			PM	PM10	SO2	NOx	VOC	CO
EU-P02 - EU-P04	749000	102613	15.9	15.9	14.9	226	18.5	48.7
EU-P05	486	66.582	0.010	0.010	0.010	0.147	0.012	0.032
Total	**749486**	104928	**15.9**	**15.9**	**14.9**	**226**	**18.5**	**48.8**

Each gallon of biodiesel fuel used shall be considered equal to 1.012 gallons of diesel fuel used.
The NOX emissions when burning biodiesel fuel shall not exceed 4.463 pounds per million British thermal units of heat input.

HAPs - Organics

	Benzene	Toluene	Xylenes	1,3-Butadiene	Formaldehyde
Emission Factor in lb/MMBtu	0.0009	0.0004	0.0003	0.0000	0.0012
Potential Emission in tons/yr	0.049	0.021	0.015	0.002	0.062

HAPs - Metals

	Acetylaldehyde	Acrolein	Naphthalene	Total
Emission Factor in lb/MMcf	0.0008	0.0009	0.0001	HAPs
Potential Emission in tons/yr	0.040	0.049	0.004	**0.243**

Methodology
MMBtu = 1,000,000 Btu
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 3.3, Tables 3.3-1 and 3.3-2, SCC #2-02-001-02, 2-03-001-01, Diesel engines
Pursuant to Significant Permit Modification 005-22853-00047, the source is permitted to use biodiesel fuel, as well as diesel fuel in EU-P02, EU-P03 and EU-P05.
Emission Factors are higher for diesel than biodiesel based on "Biodiesel Handling and Use Guidelines" NREL/TP-580-30004 for all pollutants other than Nox
B20 increases Nox emissions by 1.2%. Therefore, biodiesel will result in less of an increase in Nox. A 1.2% increase has been used.
The higher of the diesel and biodiesel emission factors are used to calculate the worst case emissions.
EU-P04 will only operate on diesel fuel. Therefore, the worst case potential emissions are based on the diesel fuel emission factors for that unit.
Heat Input Capacity (MMBtu/yr) = Capacity (gallons/yr) x 0.137MMBtu/gallon
Emission (tons/yr) = Capacity (MMBtu/yr) x Emission Factor (lb/MMBtu)/2,000 lb/ton

Appendix A: Emissions Calculations
Gasoline Dispensing

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

Unrestricted

	Standing Losses				Working Losses			
Source		Tank Size (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)		Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)
Gasoline Storage		300	69.06	0.035		7884000	11425	5.71

Methodology
VOC emissions from Tanks 4.09

	Vehicle Refueling				Displacement							
Source	Emission Factor (lbs/1000gal)	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)	Emission Factor (lbs/1000gal)	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)	Emission Factor (lbs/1000gal	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)
Gasoline Dispensing	11.0	7884000	86724	43.4	0.7	7884000	5519	2.76	1.1	7884000	8672	4.34

Methodology
VOC emission factors from AP-42, Chapter 5

Total VOC Emissions (tons/yr) **56.2**

Limited Potential to Emit

	Standing Losses				Working Losses			
Source		Tank Size (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)		Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)
Gasoline Storage		300	69.06	0.035		1000	8.64	0.004

Methodology
VOC emissions from Tanks 4.09

	Vehicle Refueling				Displacement							
Source	Emission Factor (lbs/1000gal)	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)	Emission Factor (lbs/1000gal)	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)	Emission Factor (lbs/1000gal	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)
Gasoline Dispensing	11.0	1000	11.0	0.006	0.7	1000	0.700	0.0004	1.1	1000	1.10	0.001

Methodology
VOC emission factors from AP-42, Chapter 5

Total VOC Emissions (tons/yr) **0.045**

HAPs Emissions

HAP	Weight %	Unrestricted PTE (tons/yr)	Limited PTE (tons/yr)
Benzene	3.00%	1.69	0.001
Ethylbenzene	3.00%	1.69	0.001
Hexane	5.00%	2.81	0.002
Napthalene	3.00%	1.69	0.001
Toluene	12.00%	6.74	0.005
Xylenes	12.00%	6.74	0.005
Total		**21.4**	**0.017**

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Turbine (>250 and <600 HP)
Reciprocating

Company Name: **Cummins Engine Company - Midrange Engine Plant**
Address City IN Zip: **I-65 at Highway 58, Columbus, IN 47201**
Approval No.: **T 005-19461-00047**
Reviewer: **CarrieAnn Paukowits/MES**
Date: **March 21, 2007**

One (1) Emergency Generator

Output Rating Horsepower (hp)	Potential Throughput hp-hr/yr
310	155000

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.171	0.171	0.159	2.40	0.195	0.518

Methodology

Potential Througput (hp-hr/yr) = hp * 500 hr/yr for an emergency ge
Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-1
Emission (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

*PM emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Appendix A: Emission Calculations
Total HAP Emissions

Company Name: **Cummins Engine Company - Midrange Engine Plant**
Address City IN Zip: **I-65 at Highway 58, Columbus, IN 47201**
Approval No.: **T 005-19461-00047**
Reviewer: **CarrieAnn Paukowits/MES**
Date: **March 21, 2007**

Unrestricted Potential Emissions

	Benzene	Dichloro-benzene	Form-aldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Man-ganese	Nickel	Arsenic	Beryllium	Mercury	Selenium	Xylenes	Ethyl-benzene	1,3-Butadiene	Acetyl-aldehyde	Acrolein	Naph-thalene	Total HAPs
Two (2) boilers (EU-B01)	0.001	0.001	0.040	0.970	0.002	0.005	0.002	0.002	0.003	0.002	0.002	0.002	0.002	0.008	0.00	0.00	0.00	0.00	0.00	0.00	1.02
One (1) paint spray booth (EU-P01), degreasing and storage	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.10	1.815	0.000	0.000	0.000	0.000	9.9
Five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03), Two (2) engine test cells (EU-P04), and Four (4) electric motor-powered engine test cells (EU-P05)	0.049	0.000	0.062	0.000	0.021	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.002	0.040	0.049	0.004	0.243
Emergency generator	0.001	0.000	0.001	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.003
Insignificant natural gas combustion	0.000	0.000	0.004	0.106	0.000	0.00003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112
Gasoline Fuel Transfer and Dispensing	1.69	0.000	0.000	2.81	6.74	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.74	1.69	0.000	0.000	0.000	1.69	21.4
Total	**1.74**	**0.001**	**0.107**	**3.89**	**6.77**	**0.005**	**0.002**	**0.002**	**0.003**	**0.002**	**0.002**	**0.002**	**0.002**	**0.008**	**14.9**	**3.50**	**0.002**	**0.041**	**0.049**	**1.69**	**32.6**

Current Potential to Emit

	Benzene	Dichloro-benzene	Form-aldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Man-ganese	Nickel	Arsenic	Beryllium	Mercury	Selenium	Xylenes	Ethyl-benzene	1,3-Butadiene	Acetyl-aldehyde	Acrolein	Naph-thalene	Total HAPs
Two (2) boilers (EU-B01)	0.001	0.001	0.040	0.970	0.002	0.005	0.002	0.002	0.003	0.002	0.002	0.002	0.002	0.008	0.00	0.00	0.00	0.00	0.00	0.00	1.02
One (1) paint spray booth (EU-P01), degreasing and storage	0.000	0.000	9.850	8.910	9.850	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.85	9.85	0.000	0.000	0.000	0.000	23.4
Five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03), Two (2) engine test cells (EU-P04), and Four (4) electric motor-powered engine test cells (EU-P05)	0.049	0.000	0.062	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.002	0.040	0.049	0.004	0.243
Emergency generator	0.001	0.000	0.001	0.000	0.0002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0002	0.000	0.00002	0.0004	0.0005	0.00005	0.003
Insignificant natural gas combustion	0.0001	0.00007	0.004	0.106	0.0002	0.00003	0.00007	0.00008	0.00002	0.0001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112
Gasoline Fuel Transfer and Dispensing	0.001	0.000	0.000	0.00	0.01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.01	0.00	0.000	0.000	0.000	0.001	0.017
Total	**0.052**	**0.001**	**9.96**	**9.99**	**9.88**	**0.005**	**0.002**	**0.002**	**0.003**	**0.002**	**0.002**	**0.002**	**0.002**	**0.008**	**9.87**	**9.85**	**0.002**	**0.041**	**0.049**	**0.006**	**24.8**

Because the HAP emissions from the emergency generator are very small and the emission factors are in terms of lbs per MMBtu (heat input) rather than lbs per hp (output rating), the HAP emissions from the generator are estimated by taking a ratio of the HAP emissions from the test cells and multiplying by a ratio of the emergency generator VOC emissions over the test cell VOC emissions

Appendix A: Emission Calculations
Summary of Total Emissions

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

Unrestricted Potential Emissions

	PM	PM10	SO2	NOx	VOC	CO
Two (2) boilers (EU-B01)	7.70	7.70	273	77.0	2.96	45.3
One (1) Paint Spray Booth (EU-P01), degreasing and storage	13.7	13.7	0.00	0.00	62.0	0.00
Five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03), Two (2) engine test cells (EU-P04), and Four (4) electric motor-powered engine test cells (EU-P05)	24.1	24.1	22.5	346.5	28.0	73.8
Emergency generator	0.171	0.171	0.159	2.403	0.195	0.518
Insignificant natural gas combustion	0.112	0.449	0.035	5.913	0.325	4.967
Gasoline Fuel Transfer and Dispensing	0.00	0.00	0.00	0.00	56.2	0.00
Total	**45.8**	**46.1**	**296**	**432**	**150**	**125**

Limited Potential to Emit

	PM	PM10	SO2	NOx	VOC	CO
Two (2) boilers (EU-B01)	0.800	0.800	28.40	8.00	0.440	6.72
One (1) paint spray booth (EU-P01), degreasing and storage	0.137	0.137	0.000	0.000	62	0.000
Five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03), and Two (2) engine test cells (EU-P04)	15.9	15.9	14.9	226.3	18.5	48.7
Four (4) electric motor-powered engine test cells (EU-P05)	0.010	0.010	0.010	0.147	0.012	0.032
Emergency generator	0.171	0.171	0.159	2.403	0.195	0.518
Insignificant natural gas combustion	0.112	0.449	0.035	5.913	0.325	4.967
Gasoline Fuel Transfer and Dispensing	0.000	0.000	0.000	0.000	0.045	0.000
Total	**17.1**	**17.5**	**43.5**	**243**	**81.5**	**61.0**

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 - Midrange Engine Plant**
Source Location:	**I-65 at Highway 58, Columbus, Indiana 47201**
County:	**Bartholomew**
SIC Code:	**3519**
Operation Permit No.:	**T 005-7672-00047**
Operation Permit Issuance Date:	**May 5, 2000**
Permit Renewal No.:	**T 005-19461-00047**
Permit Reviewer:	**CarrieAnn Paukowits**

The Office of Air Quality (OAQ) has reviewed a Part 70 Operating Permit Renewal application from Cummins Engine Company - Midrange Engine Plant relating to the operation of an internal combustion engine manufacturing source.

Source Definition

This internal combustion engine manufacturing source is located approximately a quarter of a mile (0.25 mile) from the Cummins Engine Company, Inc., Plant ID 005-00063 (Oly facility):

(a) Cummins Engine Company - Midrange Engine Plant is located at I-65 at Highway 58, Columbus, IN 47201; and

(b) Cummins Engine Company, Inc. - Oly facility is located at 3540 W. 450 S., Columbus, IN 47201.

The term “major source” is defined at 326 IAC 2-7-1(22). In order for these two plants to be considered one major source, they must meet all three of the following criteria:

(1) the plants must be under common ownership or common control;

(2) the plants must have the same Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other; and

(3) the plants must be located on contiguous or adjacent properties.

The two (2) plants are both under the control of Cummins Engine Company. However, the two (2) plants do not have the same SIC codes. The Midrange source operates under the SIC Code 3519 because it manufactures engines for sale, including testing and coating facilities. The Oly facility operates under the SIC Code 8734 for an engine testing source because it is primarily a research and development source for engines. No engines tested at the Oly facility are sold to customers. The two (2) plants do not share employees, operate separately, and product from one facility does not go to the other for further processing or testing. Therefore, pursuant to 326 IAC 2-7-1(22), IDEM has determined that they are two (2) separate sources.

Permitted Emission Units and Pollution Control Equipment

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

(a) Two (2) natural gas-fired boilers with No. 2 fuel oil backup, collectively identified as EU-B01, installed in 1972, exhausted through stack S10, rated at 61.5 million British thermal units per hour, each.

(b) One (1) paint spray booth, identified as EU-P01, installed in October 1991, equipped with three (3) electrostatic air atomization applicators, and dry filters for overspray control, exhausted to stack S01, maximum capacity: 37.5 engines per hour.

(c) Five (5) diesel or biodiesel (B1-B20) -powered engine test cells, collectively identified as EU-P02, located in the main facility, exhausted to stack S02, four (4) installed in October 1991, and one (1) installed in 2005, capacity: 655,949 gallons of diesel fuel per year, total.

(d) Five (5) diesel or biodiesel (B1-B20) -powered engine attribute cells, collectively identified as EU-P03, located in the main facility, three (3) installed in October 1991, and two (2) installed in 2001, exhausted to stack S03, capacity: 442,380 gallons of diesel fuel per year, total.

(e) Two (2) diesel-powered engine test cells, collectively identified as EU-P04, located in the noise lab, installed in 1973 and 1979, exhausted to stack S04, capacity: 35,040 gallons of diesel fuel per year, total.

According to the applicant, the test cells at this source are capable of testing any size engine. Therefore, the horsepower capacities listed in previous permits are not true representations of the physical properties of the test cells, and have been removed from the units descriptions. The fuel usage capacities listed, are estimated maximum capacities, which the applicant has not exceeded in the past, based on the types of engines tested. The fuel usage is limited in the proposed permit (see "326 IAC 2-2" under the State Rule Applicability - Entire Source section of this document).

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) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, including:

(1) One (1) space heater with a heat input capacity of 2.5 million British thermal units per hour;

(2) One (1) cure oven with a heat input capacity of 4.2 million British thermal units per hour; and

(3) One (1) boiler, constructed in 1993, with a heat input capacity of 6.8 million British thermal units per hour. [326 IAC 6-2-4]

(b) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 (One (1) degreaser, D-1, constructed after 1990, with a maximum throughput to 120 gallons per 12 months). [326 IAC 8-3-2 and 326 IAC 8-3-5(a)]

(c) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotive, automobiles, having a storage capacity less than or equal to 10,500 gallons, including one (1) three hundred (300) gallon gasoline tank, installed in June 2005, with a maximum throughput of fifteen (15) gallons per minute. [40 CFR 63] [326 IAC 8-1-6]

(d) Four (4) electric motor-powered engine test cells, collectively identified as EU-P05, installed in 2006, located in the main facility, exhausted to stack S03, powering diesel or biodiesel (B1-B20) engines, capacity: 486.0 gallons of diesel fuel per year, total.

(e) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(f) The following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons, including one (1) catalyst storage container with a throughput of 100 gallons per day and one (1) 500-gallon kerosene storage tank.

(2) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

(g) Machining where an aqueous cutting coolant continuously floods the machining interface. The cutting coolant does not contain HAPs.

(h) Closed loop heating and cooling systems.

(i) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1 percent by volume, and no HAPs.

(j) Any operation using aqueous solutions containing less than 1 percent by weight of VOCs excluding HAPs.

(k) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(l) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal.

(m) Paved and unpaved roads and parking lots with public access.

(n) Asbestos abatement projects regulated by 326 IAC 14-10.

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

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

(q) Emergency generators as follows:

One (1) 310-horsepower emergency diesel generator, constructed in 1997.

(r) Other emergency equipment as follows: Stationary fire pumps.

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

Existing Approvals

The source has been operating under the previous Part 70 Operating Permit T 005-7672-00047, on May 5, 2000, and the following amendments and modifications:

(a) First Significant Source Modification No.: 005-11808-00047, issued August 25, 2000;

(b) First Minor Source Modification No.: 005-12747-00047, issued November 11, 2000;

(c) First Administrative Amendment No.: 005-13833-00047, issued April 23, 2001;

(d) First Re-opening No.: 005-13150-00047, issued on October 18, 2001;

(e) Second Administrative Amendment No.: 005-19209-00047, issued June 25, 2004;

(f) Third Administrative Amendment No.: 005-19325-00047, issued August 2, 2004;

(g) Fourth Administrative Amendment No.: 005-20005-00047, issued February 22, 2005;

(h) Fifth Administrative Amendment No.: 005-21787-00047, issued on February 7, 2006; and

(i) Significant Permit Modification No.: 005-22853-00047, issued on November 17, 2006.

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.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this proposed Part 70 Operating Permit:

(a) D.1.3(a): The total input of equivalent No. 2 fuel oil to the two (2) boilers, shall be limited to less than 6,704,225 gallons per twelve (12) consecutive month period rolled on a monthly basis. This fuel limit is equivalent to 238 tons per year of SO_2 and makes the requirements of 326 IAC 2-2 and 40 CFR 52.21 not applicable.

and

Condition D.3.1:

(1) The use of diesel fuel at the five (5) engine test cells, collectively identified as EU-P02, shall be limited to 655,949 gallons of diesel fuel per twelve (12) consecutive month period, total, with compliance determined at the end of each month. Each gallon of biodiesel fuel used shall be considered equal to 1.012 gallons of diesel fuel used.

(1) The use of diesel fuel at the five (5) engine attribute test cells, collectively identified as EU-P03, shall be limited to 88,476 gallons of diesel fuel per twelve (12) consecutive month period, each, with compliance determined at the end of each month. Each gallon of biodiesel fuel used shall be considered equal to 1.012 gallons of diesel fuel used.

(3) The potential to emit NO_X from the five (5) diesel-powered engine test cells, collectively identified as EU-P02, and the five (5) diesel-powered engine attribute test cells, collectively identified as EU-P03, shall not exceed 4.463 pounds per million British thermal units of heat input when burning biodiesel fuel.

Reason not incorporated: These limitations are replaced with more stringent limitations to make the entire source minor pursuant to 326 IAC 2-2 (See "326 IAC 2-2" under the State Rule Applicability - Entire Source section of this document).

(b) Condition D.4.1(b): The one (1) 0.738 million British thermal unit per hour No. 2 fuel oil-fired boiler, with Q equal to 130.5 million British thermal units, shall be limited to 0.307 pounds per million British thermal unit.

Reason not incorporated: The one (1) 0.738 million British thermal unit per hour No. 2 fuel oil-fired boiler is no longer located at this source.

(c) Condition D.4.2: Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the machining where an aqueous cutting coolant continuously floods the machining interface, brazing equipment, cutting torches, soldering equipment, and the welding equipment, each, shall not exceed the particulate emission rate based on the following equation:

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

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

Reason not incorporated: The 326 IAC 6-3 revisions that became effective on June 12, 2002, were approved into the State Implementation Plan on September 23, 2005. This rule replaces the previous version of 326 IAC 6-3 (Process Operations) that had been part of the SIP; therefore, the requirements of the previous version of 326 IAC 6-3-2 are no longer applicable to this source. The insignificant welding at this source does not use more than 625 pounds of weld wire or rod per day. Therefore, pursuant to 326 IAC 6-3-1(b)(9), the welding is exempt from the requirements of 326 IAC 6-3. The insignificant torch cutting at this source does not use more than 3,400 inches of stock one inch thick or less. Therefore, pursuant to 326 IAC 6-3-1(b)(10), the torch cutting is exempt from the requirements of 326 IAC 6-3. All other facilties, with the exception of the surface coating, has potential particualte emissions less than 0.551 pounds per hour. Therefore, pursuant to 326 IAC 6-3-1 (b)(14), those processes are exempt from the requirements of 326 IAC 6-3. See “326 IAC 6-3-2” under the State Rule Applicability - Individual Facilities section of this document.

(d) All construction conditions from all previously issued permits.

Reason not incorporated: All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction.

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 August 5, 2004. Additional information was received on October 20 and 23, 2006, and March 6 and 21, 2007.

Emission Calculations

See Appendix A of this document for detailed emission calculations (8 pages).

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 or emissions unit 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, inclulding 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, the department, or the appropriate local air pollution control agency."

Pollutant	Potential to Emit (tons/yr)
PM	60.7
PM_{10}	61.0
SO_2	296
VOC	194
CO	125
NO_X	432

HAPs	Potential to Emit (tons/yr)
Benzene	1.74
Dichlorobenzene	0.001
Formaldehyde	0.107
Hexane	3.89
Toluene	6.77
Lead	0.005
Cadmium	0.002
Chromium	0.002
Manganese	0.003
Nickel	0.002
Arsenic	0.002
Beryllium	0.002
Mercury	0.002
Xylenes	20.8
Ethylbenzene	4.72
1,3-Butadiene	0.002
Acetylaldehyde	0.041
Acrolein	0.049
Naphthalene	1.69
Total	39.8

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of SO_2, VOC, CO and NO_X are 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 values in this table represents the unrestricted potential to emit of the source.

Limited Potential to Emit of the Source

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."

The source was issued a Part 70 Operating Permit on May 5, 2000. 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
Two (2) boilers (EU-B01)	0.800	0.800	28.40	0.440	6.72	8.00	0.970 hexane; 0.040 other individual; 1.02 total
One (1) paint spray booth (EU-P01), degreasing and storage	0.286	0.286	0.000	106	0.000	0.000	8.91 hexane; 9.85 other individual; 23.4 total
Five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03), & two (2) engine test cells (EU-P04)	15.9	15.9	14.9	18.5	48.7	226.3	0.00 hexane; 0.094 other individual; 0.367 total
Gasoline fuel transfer and dispensing	-	-	-	0.045	-	-	0.002 hexane; 0.005 other individual; 0.017 total
Other insignificant activities (four (4) electric motored-powered engine test cells, natural gas combustion and emergency generator)	0.293	0.630	0.204	0.532	5.52	8.46	0.106 hexane; 0.005 other individual; 0.115 total
Total Emissions	17.3	17.6	43.5	126	61.0	243	< 10 individual; < 25 total

(a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than two hundred fifty (<250) tons per year, and it is not one of the twenty-eight (28) listed source categories.

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2002 OAQ and 2003 Toxic Release Inventory (TRI) emission data.

Pollutant	Actual Emissions (tons/year)
PM	Not reported
PM_{10}	2.0
SO_2	2.0
VOC	22.0
CO	9.0
NO_X	31.0
HAP (Xylenes)	5.45

County Attainment Status

The source is located in Bartholomew County.

Pollutant	Status
PM_{10}	attainment
$PM_{2.5}$	attainment
SO_2	attainment
NO_2	attainment
8-hour Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and nitrogen oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Bartholomew County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) Bartholomew County has been classified as 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.

(c) Bartholomew County has been classified as attainment or unclassifiable in Indiana for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

(b) The requirements of the Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971, 40 CFR 60.40, Subpart D, are not included in the permit because the capacity of the three (3) boilers, all constructed after August 17, 1971, is less than 250 million British thermal units per hour, each.

(c) The requirements of the Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978, 40 CFR 60.40a, Subpart Da, are not included in the permit because the two (2) boilers, identified as EU-B01, were constructed prior to September 18, 1978, and the capacity of the one (1) insignificant boiler, which was constructed after September 18, 1978, is less than 250 million British thermal units per hour.

(d) The requirements of the Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40b, Subpart Db, are not included in the permit because the two (2) boilers, identified as EU-B01, were constructed prior to June 19, 1984, and the capacity of the one (1) insignificant boiler which was constructed after June 19, 1984, is less than 100 million British thermal units per hour.

(e) The requirements of the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40c, Subpart Dc, are not included in the permit because the two (2) boilers, identified as EU-B01, were constructed prior to June 9, 1989, and the capacity of the one (1) insignificant boiler, which was constructed after June 9, 1989, is less than 10 million British thermal units per hour.

(f) All storage tanks at this source have capacities less than seventy-five (75) cubic meters. Therefore, the requirements of 40 CFR 60, Subpart Kb are not included in the permit.

(g) All storage tanks at this source have capacities less than 40,000 gallons. Therefore, the requirements of 40 CFR 60, Subparts K and Ka are not included in the permit.

(h) Pursuant to SPM 005-22853-00047, the potential to emit of each individual HAP is limited to less than ten (10) tons per year, and the potential to emit total HAPs is limited to less than twenty-five (25) tons per year. As a result of the limits, this source is an area source of HAPs prior to the January 2, 2007, compliance date for 40 CFR 63, Subpart MMMM, National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products. Therefore, the requirements of that rule are not included in the permit. The following limits result in this source being an area source of HAPs:

(1) The usage of hexane at the one (1) spray paint booth, identified as EU-P01, and the insignificant degreaser, including material storage, shall not exceed 8.91 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This will limit the potential to emit of hexane to 8.91 tons per year from the coating and degreasing operations, including material storage.

(2) The usage of each individual HAP, other than hexane, at the one (1) spray paint booth, identified as EU-P01, and the insignificant degreaser, including material storage, shall not exceed 9.85 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This will limit the potential to emit of each individual HAP, other than hexane, to 9.85 tons per year from the coating and degreasing operations, including material storage.

(3) The usage of total HAPs at the one (1) spray paint booth, identified as EU-P01, and the insignificant degreaser, including material storage, shall not exceed 23.4 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This will limit the potential to emit of total HAPs to 23.4 tons per year from the coating and degreasing operations, including material storage.

(4) The gasoline throughput at the one (1) insignificant gasoline dispensing operation shall not exceed 1,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. This will limit the potential to emit of each individual HAP to 0.005 tons per year and total HAPs to 0.017 tons per year from gasoline storage and dispensing.

As a result of the limitations in (1) through (4), above, in combination with HAPs limits from the test cells, boilers, combustion sources, emergency generator, gasoline fuel transfer and dispensing and insignificant activities, the potential to emit of each individual HAP is limited to less than ten (10) tons per year from the entire source, and the potential to emit of total HAPs is limited to less than twenty-five (25) tons per year from the entire source. See page 7 of 8 of Appendix A of this document for detailed calculations.

(i) Some of the engines coated have plastic caps/plugs that are sprayed during the surface coating process. The aforementioned HAP limitations also make the source an area source of HAPs prior to the April 19, 2007, compliance date for 40 CFR 63, Subpart PPPP, National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products. Therefore, the requirements of 40 CFR 63, Subpart PPPP, are not included in the permit.

(j) The two (2) boilers, identified as EU-B01, and the one (1) insignificant boiler at this source were all constructed prior to January 13, 2003. The aforementioned HAP limitations also make the source an area source of HAPs prior to the September 13, 2007, compliance date for 40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial/Commercial/Institutional Boilers and Process Heaters. Therefore, the requirements of 40 CFR 63, Subpart DDDDD, are not included in the permit.

(k) The one (1) insignificant degreaser does not use any halogenated solvents. Therefore, the requirements of 40 CFR 63, Subpart T, National Emission Standards for Halogenated Solvent Cleaning, are not included in the permit.

(l) The one (1) insignificant emergency generator was constructed prior to December 19, 2002. Therefore, it is an existing emergency reciprocating internal combustion engine (RICE). Pursuant to 40 CFR 63.6590(b)(3), an existing emergency stationary RICE does not have to meet the requirements of Subpart ZZZZ or Subpart A of Part 63. Therefore, the requirements of 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, are not included in the permit.

(m) Pursuant to 40 CFR 63.9290(a), an affected source is the collection of all equipment and activities associated with engine test cells/stands used for testing uninstalled stationary or uninstalled mobile (motive) engines located at a major source of HAP emissions. The aforementioned HAP limitations also make the source an area source of HAPs. Therefore, the requirements of 40 CFR 63, Subpart PPPPP, are not applicable.

(n) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in the permit for this source.

(o) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before or after controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

Only the one (1) paint spray booth, identified as EU-P01, uses a control device (dry filters for PM and PM_{10}). The uncontrolled potential PM and PM_{10} emissions from the booth are less than one hundred (100) tons per year. Therefore, 40 CFR 64, CAM, is not included in the permit.

State Rule Applicability – Entire Source

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 triennially by July 1, beginning July 1, 2006. 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.

326 IAC 2-4.1-1 (New Source Toxics Control)

(a) Pursuant to Minor Source Modification No.: 005-12747-00047, issued November 11, 2000, and Administrative Amendment 005-13563-00047, issued on April 23, 2001, which incorporated that modification into the operating permit, the HAP usage from clear coatings in the paint spray booth, identified as EU-P01, were limited to less than ten (10) tons of any single HAP and less than twenty-five (25) tons of any combination of HAPs, per twelve (12) consecutive month period. Therefore, pursuant to 326 IAC 2-7-10.5(d)(5), source modification 005-12747-00047 was a minor source modification. This limited the potential to emit of HAPs from the one (1) paint spray booth, initially constructed in 1991, which was the only unit modified at that time, including all coatings, to less than major source levels. Therefore, the requirements of 326 IAC 2-4.1 were not applicable.

(b) Pursuant to Significant Permit Modification 005-22853-00047, issued on November 17, 2006, the potential to emit each individual HAP from the entire source is limited to less than ten (10) tons per year and the potential to emit total HAPs from the entire source is limited to less than twenty-five (25) tons per year. Therefore, the limits in this permit will also ensure that the requirements if 326 IAC 2-4.1-1 are not applicable to the facilities at this source and the clear coating operations permitted in Minor Source Modification 005-12747-00047 would still be considered a minor source modification pursuant to 326 IAC 2-7-10.5.

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

(a) All modifications to this source are given in the table below:

Year and Permit Number	Facility(ies)	Emission Factor(s)	Emission Limit or Increase Incurred	Throughput Limitation per Twelve (12) Consecutive Month Period	Explanation
1972	Two (2) boilers (EU-B01)	71 lbs SO_2/1,000 gallons fuel oil (0.5% sulfur)	> 250 tons/yr SO_2 77.0 tons/yr NOx	No Limit	Total source-wide SO_2 > 250 tons/yr NOx = 77.0 tons/yr
1973 & 1979	Two (2) engine test cells (EU-P04)	4.41 lbs NO_X/MMBtu heat input for diesel fuel 0.29 lbs SO_2/MMBtu heat input	10.6 tons NO_X 0.696 tons SO_2	No Limit	Total source-wide SO_2 > 250 tons/yr NOx = 87.6 tons/yr

Year and Permit Number	Facility(ies)	Emission Factor(s)	Emission Limit or Increase Incurred	Throughput Limitation per Twelve (12) Consecutive Month Period	Explanation
10/16/1991 CP 005-2150-00047	Construction of four (4) engine test cells (EU-P02) & three (3) engine attribute cells (EU-P03)	4.41 lbs NO_X/MMBtu heat input 0.29 lbs SO_2/MMBtu heat input	142 tons NO_X 9.35 tons SO_2	No Limit	Total source-wide SO_2 > 250 tons/yr NOx = 229.6 tons/yr
5/5/2000 T 005-7672-00047	Two (2) boilers (EU-B01), constructed in 1972	71 lbs SO_2/1,000 gallons fuel oil (0.5% sulfur)	From boilers: 238 tons/yr SO_2 67 tons/yr NO_X	6,704,225 gallons No. 2 fuel oil, total	Source-wide: SO_2 = 248 tons/yr NO_X = 219.6 tons/yr [PSD Minor Limit established in this permit]
11/11/00 MSM 005-12747-00047	Modification of four (4) engine test cells (EU-P02), constructed in 1991, & three (3) engine attribute cells (EU-P03), constructed in 1991, & the addition of two (2) engine test cells (part of EU-P03) in 2001	4.41 lbs NO_X/MMBtu heat input 0.29 lbs SO_2/MMBtu heat input	Increase of 190 tons NO_X and 12.5 tons SO_2 (total of 198 tons NO_X and 13.0 tons SO_2 from EU-P02 and 134 tons NO_X and 8.80 tons SO_2 from EU-P03)	655,949 gallons of diesel fuel, total for EU-P02; and 442,380 gallons of diesel fuel, total, for EU-P03	This should have been reviewed as a PSD modification because this source may not increase emissions from equipment which has taken a limit to avoid PSD review
2/22/2005 AA 005-20005-00047	Addition of one (1) engine test cell (part of EU-P02)	4.41 lbs NO_X/MMBtu heat input for diesel fuel 0.29 lbs SO_2/MMBtu heat input			
2005 SPM 005-22853-00047	One (1) insignificant gasoline dispensing operation	11 lbs VOC/1,000 gallons during refueling	0.045 tons VOC	1,000 gallons gasoline	This ensures that the 2005 addition of this unit was a minor modification
2006 AA 005-21787-00047	Four (4) insignificant electric motor-powered engine test cells (EU-P05)	4.41 lbs NO_X/MMBtu heat input 0.29 lbs SO_2/MMBtu heat input	0.147 tons NO_X 0.010 tons SO_2	No Limit	This was a minor modification

Year and Permit Number	Facility(ies)	Emission Factor(s)	Emission Limit or Increase Incurred	Throughput Limitation per Twelve (12) Consecutive Month Period	Explanation
11/17/2006 SPM 005-22853-00047	Addition of biodiesel fuel at the five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03) & four (4) electric motor-powered engine test cells (EU-P05)	4.46 lbs NO_X/MMBtu heat input for biodiesel 0.29 lbs SO_2/MMBtu heat input	No increase	Each gallon of biodiesel fuel used is considered equal to 1.012 gallons of diesel fuel	

(b) Pursuant to T 005-7672-00047, on May 5, 2000, the No. 2 fuel oil usage at the two (2) natural gas-fired boilers, using No. 2 fuel oil as a backup fuel, identified as EU-B01, constructed in 1973, were limited to less than 6,704,225 gallons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. The sulfur content of the No. 2 fuel oil shall not exceed 0.5%, which is equal to an SO_2 emission rate of 71 pounds per 1,000 gallons of fuel oil used. For purposes of determining compliance based on SO_2 emissions each million cubic feet of natural gas was considered equivalent to 8.45 gallons of No. 2 fuel oil. This limited the potential to emit SO_2 from the boilers to 238 tons per year and the potential to emit SO_2 from the entire source, existing in 2000 to less than 250 tons per year. The unrestricted potential NO_X, PM, PM_{10}, VOC and CO emissions were less than 250 tons per year. Therefore, no additional limitations were required to make the existing source a minor source for PSD purposes.

(c) In 2000, the source added two (2) engine attribute cells, identified as part of EU-P03. In addition, the size of the engines tested at the four (4) existing engine test cells, identiifed as EU-P04, and three (3) existing engine test cells, identified as EU-P03, increased, causing an increase in the potential to emit from the source. The permit limited the use of diesel oil as follows:

(1) The diesel fuel usage at the four (4) engine test cells, identified as EU-P02, shall not exceed 655,949 gallons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.

(2) The diesel fuel usage at the five (5) engine attribuate cells, identified as EU-P03, shall not exceed 442,380 gallons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.

The above limit, established in SSM 005-11808-00047, is voided by this permit because the source cannot increase emissions from the equipment which has taken limits on emissions to avoid PSD review (limits established by T 005-7672-00047, issued on May 5, 2000).

The Permittee has not exceeded the PSD threshold limits from 2000 through the present.

(d) On March 6, 2007, Cummins Engine Company - Midrange Engine Plant, submitted

source-wide actual emission data for 2000 through 2006, to demonstrate that they did not violate 326 IAC 2-2, PSD:

SO_2 Emissions
Highest 12-month period: April 2001 - March 2002
2.89 tons

NO_X Emissions
Highest 12-month period: August 2004 - July 2005
47.0 tons

Therefore, this source did not violate 326 IAC 2-2, PSD. The applicant has agreed to limit the potential to emit NO_X and SO_2 to less than 250 tons per year from the entire source and to be a minor source for 326 IAC 2-2, PSD, purposes:

Facility(ies)	SO_2 Emission Factor	NO_X Emission Factor	Throughput Limitation per Twelve (12) Consecutive Month Period	SO_2 Emission Limit (tons/yr)	NO_X Emission Limit (tons/yr)
Two (2) boilers (EU-B01)	Fuel Oil 71 lbs SO_2/1,000 gallons (0.5% sulfur)	Fuel Oil 20 lbs NO_X /1,000 gallons	800,000 gallons No. 2 fuel oil, total	28.4	8.00
	Natural Gas 0.60 lbs SO_2/million cubic feet	Natural Gas 100 lbs NO_X /million cubic feet	1 million cubic feet of natural gas shall be considered equal to using 5 gallons of fuel oil		
Two (2) engine test cells (EU-P04), Five (5) engine test cells (EU-P02) & Five (5) engine attribute cells (EU-P03)	Diesel Fuel 0.29 lbs SO_2/MMBtu heat input	Diesel Fuel 4.41 lbs NO_X /MMBtu heat input;	749,000 gallons of diesel fuel, total	14.9	226
	Biodiesel (used @ EU-P02 & EU-P03) 0.29 lbs SO_2/MMBtu heat input	Biodiesel (used @ EU-P02 & EU-P03) 4.463 lbs NO_X /MMBtu heat input	Each gallon of biodiesel fuel used is considered equal to 1.012 gallons of diesel fuel		
Unrestricted Potential from other processes (see page 8 of appendix A)				0.204	8.46
Total				43.5	243

(e) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

By May 17, 2006, which is 180 days after issuance of Significant Permit Modification 005-22853-00047, in order to demonstrate compliance with the NO_X emission limitations when operating on

biodiesel fuel, the Permittee shall perform NO_X testing for at least one (1) of the five (5) engine test cells, identified as EU-P02, or the five (5) engine attribute cells, identified as EU-P03, utilizing methods as approved by the Commissioner. All other emission limitations are equivalent to AP-42 emission factors.

State Rule Applicability – Individual Facilities

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

The two (2) boilers, identified as EU-B01, constructed in 1972, with maximum capacities of 61.5 million British thermal units per hour, each, shall be limited to particulate emissions of 0.415 pound per million British thermal units of heat input. This limit is based upon the following calculation:

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

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.

Pursuant to 326 IAC 6-2-3(c), the emission limitations for those indirect heating facilities which began operation after June 8, 1972, and before September 21, 1983, shall be calculated using this equation where Q, N, and h shall include the parameters for the facility in question and for those facilities which were previously constructed or received prior permits to construct. The two (2) boilers were constructed at the same time. Therefore, the limit is calculated based on a single equation, and the limit for each boiler is the same.

$Pt = (50\ \mu g/m^3 \times 0.67 \times 35\ ft) / (76.5 \times 123^{0.75} \times 1^{0.25}) = 0.415$ lbs PM / MMBtu

Based upon the emission factors in AP-42, the potential PM emissions when operating on natural gas are 0.0019 lb/MMBtu (1.90 lb/MMCF x 1MMcf/1,000 MMBtu = 0.0019 lb/MMBtu) and the potential PM emissions when operating on No. 2 fuel oil are 0.014 lb/MMBtu (2.00 lb/1,000 gal x 1 gal/0.14 MMBtu = 0.014 lb/MMBtu). Therefore, the two (2) boilers can comply with this rule.

326 IAC 6-2-4 (Particulate emission limitations for sources of indirect heating)

The one (1) insignificant boiler with a capacity of 6.8 million British thermal units per hour was constructed in 1993 and the total heat input capacity of the source upon construction of the boiler was 129.8 million British thermal units per hour. Therefore, the one (1) boiler shall be limited to particulate emissions of 0.308 pound per million British thermal units of heat input. This limit is based upon the following calculation:

$$Pt = 1.09/Q^{0.26}$$

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 Btu 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.

$Pt = 1.09 / 129.8^{0.26} = 0.308$ lbs PM / MMBtu

Based upon the emission factors in AP-42, the potential PM emissions are 0.0019 lb/MMBtu (1.90 lb/MMCF x 1MMcf/1,000 MMBtu = 0.0019 lb/MMBtu). Therefore, the one (1) boiler can comply with this rule.

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

(a) The three (3) boilers perform combustion for indirect heating and are limited by 326 IAC 6-2. Therefore, pursuant to 326 IAC 6-3-1(b)(1), the boilers are exempt from the requirements of 326 IAC 6-3.

(b) Pursuant to 326 IAC 6-3-1.5(2), the definition of a manufacturing process is "any single or series of actions, operations, or treatments in which a mechanical, physical, or chemical transformation of material occurs that emits, or has the potential to emit, particulate in the production of the product. The term includes transference, conveyance, or repair of a product." The insignificant emergency generator does not manufacture a product and operation of the test cells does not result in a mechanical, physical or chemical transformation of the product. Therefore, the requirements of 326 IAC 6-3 are not applicable to those units.

(c) The insignificant welding at this source does not use more than 625 pounds of weld wire or rod per day. Therefore, pursuant to 326 IAC 6-3-1(b)(9), the welding is exempt from the requirements of 326 IAC 6-3.

(d) The insignificant torch cutting at this source does not use more than 3,400 inches of stock one inch thick or less. Therefore, pursuant to 326 IAC 6-3-1(b)(10), the torch cutting is exempt from the requirements of 326 IAC 6-3.

(e) All other facilities, with the exception of the surface coating, at this source have potential particulate emissions less than 0.551 pounds per hour. Therefore, pursuant to 326 IAC 6-3-1(b)(14), those activities are exempt from the requirements of 326 IAC 6-3.

(f) Pursuant to 326 IAC 6-3-2(d), the dry filters for particulate control shall be operation in accordance with manufacturer's specifications and control emissions from the one (1) paint spray booth, identified as EU-P01, at all times when the paint booth is in operation.

326 IAC 7-1.1 (Sulfur dioxide emission limitations)

(a) The potential to emit SO_2 from each of the two (2) boilers, identified collectively as EU-B01, is greater than ten (10) pounds per hour when operating on No. 2 fuel oil. Therefore, the requirements of 326 IAC 7-1.1 are applicable. Pursuant to 326 IAC 7-1.1-2, the SO_2 emissions from each of the two (2) boilers shall not exceed five-tenths (0.5) pound per million British thermal units when operating on No. 2 fuel oil.

(b) The potential to emit SO_2 from each of the engine test cells and engine attribute cells, identified as EU-P02 through EU-P05, is less than ten (10) pounds per hour and twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 7-1.1 are not applicable to those units.

(c) The potential to emit SO_2 from the one (1) insignificant boiler and the one (1) emergency generator is less than ten (10) pounds per hour and twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 7-1.1 are not applicable to those units.

326 IAC 7-3 (Ambient Monitoring)

This source has total actual emissions of SO_2 less than ten thousand (10,000) tons per year. Therefore, the requirements of 326 IAC 7-3 are not applicable.

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

(a) The gasoline throughput at the one (1) insignificant gasoline dispensing operation, constructed in 2005, shall not exceed 1,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. This will limit the potential to emit VOC to 0.045 tons per year from gasoline storage and dispensing. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

(b) The one (1) paint spray booth, identified as EU-P01, is regulated by 326 IAC 8-2-9. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

(c) The potential VOC emissions at each other facility at this source are less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 8-4 (Petroleum Sources)

Pursuant to 326 IAC 8-4-6(a)(8), "Gasoline dispensing facility" means any facility where gasoline is dispensed into motor vehicle fuel tanks or portable containers from a storage tank with a capacity of two thousand one hundred seventy-six (2,176) liters (five hundred seventy-five (575) gallons) or more. Diesel fuel and kerosene are not considered to be motor vehicle fuels. The insignificant gasoline dispensing facility at this source has a tank with a capacity less than 575 gallons. Therefore, it is not considered a gasoline dispensing facility for the purposes of this rule.

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

The one (1) paint spray booth, identified as EU-P01, constructed in 1991 in Bartholomew County has potential VOC emissions greater than twenty-five (25) tons per year, and may have actual VOC emissions greater than fifteen (15) pounds per day. Therefore, the requirement of 326 IAC 8-2-9 are applicable.

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the Permittee shall not allow the discharge into the atmosphere VOC in excess of four and three-tenths (4.3) pounds of VOCs per gallon of coating less water, as delivered to the applicators at the one (1) paint spray booth, identified as EU-P01, for clear coatings, and three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicators for air dried, forced warm air dried and extreme performance coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the spray booth can comply with this requirement.

326 IAC 8-3 (Organic Solvent Degreasing Operations)

The one (1) insignificant degreaser, identified as D-1, was constructed after 1980 in Bartholomew County. Therefore, it is subject to the requirements of 326 IAC 8-3-2. The one (1) insignificant degreaser was also constructed after 1990 and does not have a remote solvent reservoir. Therefore, it is also subject to the requirements of 326 IAC 8-3-5.

(a) Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the owner or operator of the cold cleaner degreaser shall:

(1) Equip the cleaner with a cover;

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

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

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

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

(6) 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.

(b) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the cold cleaner degreaser 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 nine-tenths 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.

(c) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of the cold cleaning degreaser 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.

326 IAC 8-6 (Organic Solvent Emission Limitations)

The only facility constructed between October 7, 1974, and January 1, 1980, is one (1) of the two (2) diesel-powered engine test cells, collectively identified as EU-P04, which has potential VOC emissions less than 90.7 megagrams (100 tons) per year of VOC. Therefore, the requirements of 326 IAC 8-6 are not applicable.

326 IAC 9 (Carbon Monoxide Emission Limitations)

There is no emission limitation established in 326 IAC 9-2 for the types of facilities at this source. Therefore, the requirements of 326 IAC 9 are not applicable.

326 IAC 10-4 (Nitrogen Oxides Budget Trading Program)

There are no large affected units or electricity generating units, with electricity for sale, at this source. Therefore, the requirements of 326 IAC 10-4 are not applicable.

Testing Requirements

Pursuant to Significant Permit Modification 005-22853-00047, May 17, 2007, which is 180 days after issuance of Significant Permit Modification 005-22853-00047, in order to demonstrate compliance with the NO_X limitation in the permit, the Permittee shall perform NO_X testing for at least one (1) of the five (5) engine test cells, identified as EU-P02, or the five (5) engine attribute cells, identified as EU-P03, utilizing methods as approved by the Commissioner. All other emission limitations are equivalent to AP-42 emission factors. Therefore, no additional testing is required at this time.

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:

(a) The two (2) boilers, identified as EU-B01, have applicable compliance monitoring conditions as specified below:

Visible emission notations of the two (2) boilers stack (S10) exhaust shall be performed once per day during normal daylight operations when operating on fuel oil. A trained employee shall record whether emissions are normal or abnormal. For processes oper-

ated 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 because the boilers must operate properly to ensure compliance with 326 IAC 6-2 and 326 IAC 2-7 (Part 70).

(b) The one (1) paint spray booth, identified as EU-P01, has applicable compliance monitoring conditions as specified below:

(1) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the paint spray booth stack (S01) while the booth is in operation. If a condition exists which should result in a response step, 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.

(2) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. When there is a noticeable change in overspray emissions, or when evidence of overspray emissions is 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 because the one (1) paint spray booth must operate properly to ensure compliance with 326 IAC 6-3-2 and 326 IAC 2-7 (Part 70).

(c) The five (5) diesel-powered engine test cells, collectively identified as EU-P02, the five (5) diesel-powered engine attribute test cells, collectively identified as EU-P03, and the four (4) electric motor-powered engine test cells, collectively identified as EU-P05, have applicable compliance monitoring conditions as specified below:

Visible emission notations of the engine test cells and engine attribute cells stacks (S02, S03 and S04) exhausts shall be performed once per day during normal daylight operations. 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 because the boilers must operate properly to ensure compliance with 326 IAC 2-7 (Part 70) and the requirements that render 326 IAC 2-2 (PSD) not applicable.

Conclusion

The operation of this an internal combustion engine manufacturing source shall be subject to the conditions of this Part 70 Operating Permit T 005-19461-00047.

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

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

	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

*PM emission factor is filterable PM only. PM-10 emission factor is filterable and condensable PM-10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission in tons/yr					
			PM*	PM10*	SO2	NOx	VOC	CO
Two (2) Boilers (EU-B01)	123.00	1077.48	1.024	4.094	0.323	53.874	2.963	45.254
One (1) insignificant boiler	6.80	59.568	0.057	0.226	0.018	2.978	0.164	2.502
One (1) space heater	2.50	21.9	0.021	0.083	0.007	1.095	0.060	0.920
One (1) cure oven	4.20	36.792	0.035	0.140	0.011	1.840	0.101	1.545
Total	**136.50**	**1196**	**1.136**	**4.54**	**0.359**	**59.8**	**3.29**	**50.2**

	HAPs - Organics					HAPs - Metals				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	0.0021	0.0012	0.0750	1.8000	0.0034	0.0005	0.0011	0.0014	0.0004	0.0021

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission in tons/yr										
			Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel	Total
Two (2) Boilers (EU-B01)	123.00	1077.48	1.13E-03	6.46E-04	4.04E-02	9.70E-01	1.83E-03	2.69E-04	5.93E-04	7.54E-04	2.05E-04	1.13E-03	1.02
One (1) insignificant boiler	6.80	59.568	6.25E-05	3.57E-05	2.23E-03	5.36E-02	1.01E-04	1.49E-05	3.28E-05	4.17E-05	1.13E-05	6.25E-05	0.056
One (1) space heater	2.50	21.9	2.30E-05	1.31E-05	8.21E-04	1.97E-02	3.72E-05	5.48E-06	1.20E-05	1.53E-05	4.16E-06	2.30E-05	0.021
One (1) cure oven	4.20	36.792	3.86E-05	2.21E-05	1.38E-03	3.31E-02	6.25E-05	9.20E-06	2.02E-05	2.58E-05	6.99E-06	3.86E-05	0.035
Total	**136.50**	**1196**	**0.001**	**0.0007**	**0.045**	**1.08**	**0.002**	**0.0003**	**0.0007**	**0.0008**	**0.0002**	**0.001**	**1.13**

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission in tons/yr					
			PM*	PM10*	SO2	NOx	VOC	CO
Two (2) Boilers (EU-B01)		160	0.152	0.608	0.048	8.000	0.440	6.720

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

Company Name: **Cummins Engine Company - Midrange Engine Plant**
Address City IN Zip: **I-65 at Highway 58, Columbus, IN 47201**
Approval No.: **T 005-19461-00047**
Reviewer: **CarrieAnn Paukowits/MES**
Date: **March 21, 2007**

S = Weight % Sulfur

0.500

	Pollutant				
	PM*	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.00	71.0 *(142.0S)*	20.0	0.340	5.00

Equipment	Heat Input Capacity MMBtu/hr	Potential Throughput kgals/yr	Potential Emission in tons/yr				
			PM*	SO2	NOx	VOC	CO
Two (2) Boilers (backup fuel)	123.00	7696	7.70	273.2	77.0	1.31	19.2
Total	**123.00**	**7696**	**7.70**	**273.2**	**77.0**	**1.31**	**19.2**

SO2 limit

Equipment	Heat Input Capacity MMBtu/hr	Limited Throughput kgals/yr	Potential Emission in tons/yr				
			PM*	SO2	NOx	VOC	CO
Two (2) Boilers (backup fuel)	123.00	800	0.800	28.4	8.00	0.136	2.00
Total	**123.00**	**800**	**0.800**	**28.4**	**8.00**	**0.136**	**2.00**

Limited Potential to Emit SO2 = **28.4**

	Arsenic	Beryllium	Cadmium	Chromium	Lead	Mercury
Emission Factor in lb/mmBtu	0.000004	0.000003	0.000003	0.000003	0.000009	0.000003

Equipment	Heat Input Capacity MMBtu/hr		Potential Emission in tons/yr					
			Arsenic	Beryllium	Cadmium	Chromium	Lead	Mercury
Two (2) Boilers (backup fuel)	123.00		2.15E-03	1.62E-03	1.62E-03	1.62E-03	4.85E-03	1.62E-03
Total	**123.00**		**0.002**	**0.002**	**0.002**	**0.002**	**0.005**	**0.002**

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 file)

*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

No data was available in AP-42 for organic HAPs.

HAP Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

Appendix A: Emissions Calculations
HAPs
From Surface Coating Operation and Insignificant Degreasing

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

Coatings

Material	Density (lbs/gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (units/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC (pounds per hour)	Potential VOC (pounds per day)	Potential VOC (tons per year)	Particulate Potential (tons/yr)	lbs VOC/gal solids	Transfer Efficiency
EU-P01																
MS Clear Coat	7.97	54.0%	0.0%	54.0%	0.0%	48.3%	0.085	37.5	4.30	4.30	13.7	329	60.0	12.8	8.90	75%
Acid Catalyst Solution	9.83	25.0%	0.0%	25.0%	0.0%	63.6%	0.003	37.5	2.46	2.46	0.28	6.64	1.21	0.9	3.86	75%
H/S Black Topcoat	9.98	35.1%	0.0%	35.1%	0.0%	52.9%	0.056	37.5	3.50	3.50	7.3	176	32.2	14.9	6.62	75%
Xylene Solvent	7.26	100.0%	0.0%	100.0%	0.0%	0.00%	0.010	37.5	7.26	7.26	2.72	65.3	11.92	0.00	N/A	100%
State Potential Emissions			**Add worst case coating to all solvents**							**Potential Totals:**	**24.1**	**577**	**105**	**28.6**		
													PM Control Efficiency:	**99.0%**		
													Controlled Particulate Potential (tons/yr):	**0.286**		

Material	Density (lbs/gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Ethyl Benzene	Xylene Emissions (tons/yr)	Ethyl Benzene Emissions (tons/yr)
EU-P01							
91-Cummins Semi-Gloss	9.76	0.106	37.5	4.77%	1.07%	8.10	1.81
Xylene Solvent	7.26	0.006	37.5	83.0%	17.0%	5.94	1.22
					Potential Totals:	**14.0**	**3.03**

Degreasing

	Usage (gallons/yr)	Density (lbs/gallon)	Emissions (tons/yr)
Solvent	120	12.11	**0.727**

METHODOLOGY
Pounds of VOC per Gallon Coating less Water = (Density (lbs/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lbs/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lbs/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used
HAPS emission rate (tons/yr) = Density (lbs/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs
Degreasing Emissions (tons/yr) = Usage (gallons/yr) x Density (lbs/gallon) / 2,000 lbs/ton

Appendix A: Emissions Calculations
Diesel and Biodiesel
Engine Test Cells

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

Diesel

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.29	4.41	0.36	0.95

*PM emission factor is filterable PM only. PM-10 emission factor is filterable and condensable PM-10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Biodiesel

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.29	4.46	0.36	0.95

Unrestricted Potential

Equipment	Capacity gallons/yr	Heat Input Capacity MMBtu/yr	Potential Emission in tons/yr					
			PM	PM10	SO2	NOx	VOC	CO
EU-P02 (total of 5 test cells)	655949	89865.013	13.9	13.9	13.0	201	16.2	42.7
EU-P03 (total of 5 test cells)	442380	60606.06	9.39	9.39	8.79	135	10.91	28.79
EU-P04 (total of 2 test cells)	35040	4800.48	0.74	0.74	0.70	10.59	0.86	2.28
EU-P05	486	66.582	0.01	0.01	0.01	0.15	0.01	0.03
Total		**155338**	**24.1**	**24.1**	**22.5**	**347**	**28.0**	**73.8**

HAPs - Organics

	Benzene	Toluene	Xylenes	1,3-Butadiene	Formaldehyde
Emission Factor in lb/MMBtu	0.0009	0.0004	0.0003	0.0000	0.0012
Potential Emission in tons/yr	0.049	0.021	0.015	0.002	0.062

HAPs - Metals

	Acetylaldehyde	Acrolein	Naphthalene	Total
Emission Factor in lb/MMcf	0.0008	0.0009	0.0001	HAPs
Potential Emission in tons/yr	0.040	0.049	0.004	**0.243**

Limited Potential to Emit

Equipment	Capacity gallons/yr	Heat Input Capacity MMBtu/yr	Potential Emission in tons/yr					
			PM	PM10	SO2	NOx	VOC	CO
EU-P02 - EU-P04	749000	102613	15.9	15.9	14.9	226	18.5	48.7
EU-P05	486	66.582	0.010	0.010	0.010	0.147	0.012	0.032
Total	**749486**	104928	**15.9**	**15.9**	**14.9**	**226**	**18.5**	**48.8**

Each gallon of biodiesel fuel used shall be considered equal to 1.012 gallons of diesel fuel used.
The NOX emissions when burning biodiesel fuel shall not exceed 4.463 pounds per million British thermal units of heat input.

HAPs - Organics

	Benzene	Toluene	Xylenes	1,3-Butadiene	Formaldehyde
Emission Factor in lb/MMBtu	0.0009	0.0004	0.0003	0.0000	0.0012
Potential Emission in tons/yr	0.049	0.021	0.015	0.002	0.062

HAPs - Metals

	Acetylaldehyde	Acrolein	Naphthalene	Total
Emission Factor in lb/MMcf	0.0008	0.0009	0.0001	HAPs
Potential Emission in tons/yr	0.040	0.049	0.004	**0.243**

Methodology
MMBtu = 1,000,000 Btu
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 3.3, Tables 3.3-1 and 3.3-2, SCC #2-02-001-02, 2-03-001-01, Diesel engines
Pursuant to Significant Permit Modification 005-22853-00047, the source is permitted to use biodiesel fuel, as well as diesel fuel in EU-P02, EU-P03 and EU-P05.
Emission Factors are higher for diesel than biodiesel based on "Biodiesel Handling and Use Guidelines" NREL/TP-580-30004 for all pollutants other than Nox
B20 increases Nox emissions by 1.2%. Therefore, biodiesel will result in less of an increase in Nox. A 1.2% increase has been used.
The higher of the diesel and biodiesel emission factors are used to calculate the worst case emissions.
EU-P04 will only operate on diesel fuel. Therefore, the worst case potential emissions are based on the diesel fuel emission factors for that unit.
Heat Input Capacity (MMBtu/yr) = Capacity (gallons/yr) x 0.137MMBtu/gallon
Emission (tons/yr) = Capacity (MMBtu/yr) x Emission Factor (lb/MMBtu)/2,000 lb/ton

Appendix A: Emissions Calculations
Gasoline Dispensing

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

Unrestricted

	Standing Losses				Working Losses			
Source		Tank Size (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)		Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)
Gasoline Storage		300	69.06	0.035		7884000	11425	5.71

Methodology
VOC emissions from Tanks 4.09

	Vehicle Refueling				Displacement							
Source	Emission Factor (lbs/1000gal)	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)	Emission Factor (lbs/1000gal)	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)	Emission Factor (lbs/1000gal	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)
Gasoline Dispensing	11.0	7884000	86724	43.4	0.7	7884000	5519	2.76	1.1	7884000	8672	4.34

Methodology
VOC emission factors from AP-42, Chapter 5

Total VOC Emissions (tons/yr) **56.2**

Limited Potential to Emit

	Standing Losses				Working Losses			
Source		Tank Size (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)		Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)
Gasoline Storage		300	69.06	0.035		1000	8.64	0.004

Methodology
VOC emissions from Tanks 4.09

	Vehicle Refueling				Displacement							
Source	Emission Factor (lbs/1000gal)	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)	Emission Factor (lbs/1000gal)	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)	Emission Factor (lbs/1000gal	Annual Throughput (gallons)	VOC Emissions (lbs/yr)	VOC Emissions (tons/yr)
Gasoline Dispensing	11.0	1000	11.0	0.006	0.7	1000	0.700	0.0004	1.1	1000	1.10	0.001

Methodology
VOC emission factors from AP-42, Chapter 5

Total VOC Emissions (tons/yr) **0.045**

HAPs Emissions

HAP	Weight %	Unrestricted PTE (tons/yr)	Limited PTE (tons/yr)
Benzene	3.00%	1.69	0.001
Ethylbenzene	3.00%	1.69	0.001
Hexane	5.00%	2.81	0.002
Napthalene	3.00%	1.69	0.001
Toluene	12.00%	6.74	0.005
Xylenes	12.00%	6.74	0.005
Total		**21.4**	**0.017**

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Turbine (>250 and <600 HP)
Reciprocating

Company Name: **Cummins Engine Company - Midrange Engine Plant**
Address City IN Zip: **I-65 at Highway 58, Columbus, IN 47201**
Approval No.: **T 005-19461-00047**
Reviewer: **CarrieAnn Paukowits/MES**
Date: **March 21, 2007**

One (1) Emergency Generator

Output Rating Horsepower (hp)	Potential Throughput hp-hr/yr
310	155000

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.171	0.171	0.159	2.40	0.195	0.518

Methodology

Potential Througput (hp-hr/yr) = hp * 500 hr/yr for an emergency ge
Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-1
Emission (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

*PM emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Appendix A: Emission Calculations
Total HAP Emissions

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

Unrestricted Potential Emissions

	Benzene	Dichloro-benzene	Form-aldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Man-ganese	Nickel	Arsenic	Beryllium	Mercury	Selenium	Xylenes	Ethyl-benzene	1,3-Butadiene	Acetyl-aldehyde	Acrolein	Naph-thalene	Total HAPs
Two (2) boilers (EU-B01)	0.001	0.001	0.040	0.970	0.002	0.005	0.002	0.002	0.003	0.002	0.002	0.002	0.002	0.008	0.00	0.00	0.00	0.00	0.00	0.00	1.02
One (1) paint spray booth (EU-P01), degreasing and storage	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.04	3.031	0.000	0.000	0.000	0.000	17.1
Five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03), Two (2) engine test cells (EU-P04), and Four (4) electric motor-powered engine test cells (EU-P05)	0.049	0.000	0.062	0.000	0.021	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.002	0.040	0.049	0.004	0.243
Emergency generator	0.001	0.000	0.001	0.000	0.000	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.003
Insignificant natural gas combustion	0.000	0.000	0.004	0.106	0.000	0.00003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112
Gasoline Fuel Transfer and Dispensing	1.69	0.000	0.000	2.81	6.74	0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.74	1.69	0.000	0.000	0.000	1.69	21.4
Total	**1.74**	**0.001**	**0.107**	**3.89**	**6.77**	**0.005**	**0.002**	**0.002**	**0.003**	**0.002**	**0.002**	**0.002**	**0.002**	**0.008**	**20.8**	**4.72**	**0.002**	**0.041**	**0.049**	**1.69**	**39.8**

Current Potential to Emit

	Benzene	Dichloro-benzene	Form-aldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Man-ganese	Nickel	Arsenic	Beryllium	Mercury	Selenium	Xylenes	Ethyl-benzene	1,3-Butadiene	Acetyl-aldehyde	Acrolein	Naph-thalene	Total HAPs
Two (2) boilers (EU-B01)	0.001	0.001	0.040	0.970	0.002	0.005	0.002	0.002	0.003	0.002	0.002	0.002	0.002	0.008	0.00	0.00	0.00	0.00	0.00	0.00	1.02
One (1) paint spray booth (EU-P01), degreasing and storage	0.000	0.000	9.850	8.910	9.850	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.85	9.85	0.000	0.000	0.000	0.000	23.4
Five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03), Two (2) engine test cells (EU-P04), and Four (4) electric motor-powered engine test cells (EU-P05)	0.049	0.000	0.062	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.002	0.040	0.049	0.004	0.243
Emergency generator	0.001	0.000	0.001	0.000	0.0002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0002	0.000	0.00002	0.0004	0.0005	0.00005	0.003
Insignificant natural gas combustion	0.0001	0.00007	0.004	0.106	0.0002	0.00003	0.00007	0.00008	0.00002	0.0001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.112
Gasoline Fuel Transfer and Dispensing	0.001	0.000	0.000	0.00	0.01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.01	0.00	0.000	0.000	0.000	0.001	0.017
Total	**0.052**	**0.001**	**9.96**	**9.99**	**9.88**	**0.005**	**0.002**	**0.002**	**0.003**	**0.002**	**0.002**	**0.002**	**0.002**	**0.008**	**9.87**	**9.85**	**0.002**	**0.041**	**0.049**	**0.006**	**24.8**

Because the HAP emissions from the emergency generator are very small and the emission factors are in terms of lbs per MMBtu (heat input) rather than lbs per hp (output rating), the HAP emissions from the generator are estimated by taking a ratio of the HAP emissions from the test cells and multiplying by a ratio of the emergency generator VOC emissions over the test cell VOC emissions

Appendix A: Emission Calculations
Summary of Total Emissions

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

Unrestricted Potential Emissions

	PM	PM10	SO2	NOx	VOC	CO
Two (2) boilers (EU-B01)	7.70	7.70	273	77.0	2.96	45.3
One (1) Paint Spray Booth (EU-P01), degreasing and storage	28.6	28.6	0.00	0.00	106	0.00
Five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03), Two (2) engine test cells (EU-P04), and Four (4) electric motor-powered engine test cells (EU-P05)	24.1	24.1	22.5	346.5	28.0	73.8
Emergency generator	0.171	0.171	0.159	2.403	0.195	0.518
Insignificant natural gas combustion	0.112	0.449	0.035	5.913	0.325	4.967
Gasoline Fuel Transfer and Dispensing	0.00	0.00	0.00	0.00	56.2	0.00
Total	**60.7**	**61.0**	**296**	**432**	**194**	**125**

Limited Potential to Emit

	PM	PM10	SO2	NOx	VOC	CO
Two (2) boilers (EU-B01)	0.800	0.800	28.40	8.00	0.440	6.72
One (1) paint spray booth (EU-P01), degreasing and storage	0.286	0.286	0.000	0.000	106	0.000
Five (5) engine test cells (EU-P02), five (5) engine attribute cells (EU-P03), and Two (2) engine test cells (EU-P04)	15.9	15.9	14.9	226.3	18.5	48.7
Four (4) electric motor-powered engine test cells (EU-P05)	0.010	0.010	0.010	0.147	0.012	0.032
Emergency generator	0.171	0.171	0.159	2.403	0.195	0.518
Insignificant natural gas combustion	0.112	0.449	0.035	5.913	0.325	4.967
Gasoline Fuel Transfer and Dispensing	0.000	0.000	0.000	0.000	0.045	0.000
Total	**17.3**	**17.6**	**43.5**	**243**	**126**	**61.0**

Appendix A: Emission Calculations
Past Actual Emissions

Company Name: Cummins Engine Company - Midrange Engine Plant
Address City IN Zip: I-65 at Highway 58, Columbus, IN 47201
Approval No.: T 005-19461-00047
Reviewer: CarrieAnn Paukowits/MES
Date: March 21, 2007

Month	Amount of diesel fuel (gallons) in test cells	NOx tons per month test cells	NOx 12 month total test cells	Natural Gas Used Boilers (MMBTU)	NOx tons per month boilers	NOx 12 month total boilers	Total NOx 12 month	SO2 tons per month test cells	SO2 tons per month boilers	Total SO2 12 month total
Jan-00	14,400	4.35		14,323.00	0.72			0.28606	0.00430	
Feb-00	7,000	2.11		11,304.00	0.57			0.13906	0.00339	
Mar-00	14,000	4.23		9,870.00	0.49			0.27811	0.00296	
Apr-00	21,800	6.58		5,454.00	0.27			0.43306	0.00164	
May-00	7,000	2.11		1,216.00	0.06			0.13906	0.00036	
Jun-00	7,000	2.11		966.00	0.05			0.13906	0.00029	
Jul-00	14,600	4.41		877.00	0.04			0.29003	0.00026	
Aug-00	14,600	4.41		1,215.00	0.06			0.29003	0.00036	
Sep-00	14,600	4.41		1,085.00	0.05			0.29003	0.00033	
Oct-00	9,733	2.94		2,372.00	0.12			0.19335	0.00071	
Nov-00	9,733	2.94		8,507.00	0.43			0.19335	0.00255	
Dec-00	9,733	2.94	43.55	12,436.00	0.62	3.48	47.03	0.19335	0.00373	2.89
Feb-01	7,400	2.23	41.43	9,460.00	0.47	3.24	44.67	0.14700	0.00284	2.74
Mar-01	7,600	2.30	41.62	8,424.00	0.42	3.09	44.71	0.15097	0.00253	2.76
Apr-01	14,000	4.23	41.62	2,100.00	0.11	2.71	44.32	0.27811	0.00063	2.75
May-01	21,800	6.58	41.62	1,037.00	0.05	2.48	44.10	0.43306	0.00031	2.75
Jun-01	7,000	2.11	41.62	841.00	0.04	2.47	44.08	0.13906	0.00025	2.75
Jul-01	7,600	2.30	41.80	1,015.00	0.05	2.47	44.26	0.15097	0.00030	2.76
Aug-01	7,600	2.30	39.68	973.00	0.05	2.47	42.16	0.15097	0.00029	2.63
Sep-01	7,600	2.30	37.57	893.00	0.04	2.46	40.03	0.15097	0.00027	2.49
Oct-01	7,600	2.30	35.45	2,848.00	0.14	2.55	38.00	0.15097	0.00085	2.35
Nov-01	7,600	2.30	34.81	7,890.00	0.39	2.82	37.63	0.15097	0.00237	2.31
Dec-01	7,600	2.30	34.17	10,539.00	0.53	2.92	37.09	0.15097	0.00316	2.26
Jan-02	7,600	2.30	33.52	11,458.00	0.57	2.87	36.40	0.15097	0.00344	2.22
Feb-02	7,600	2.30	33.58	10,200.00	0.51	2.91	36.49	0.15097	0.00306	2.23
Mar-02	7,600	2.30	33.58	9,848.00	0.49	2.98	36.56	0.15097	0.00295	2.23
Apr-02	7,600	2.30	31.65	2,706.00	0.14	3.01	34.66	0.15097	0.00081	2.10
May-02	7,600	2.30	27.36	1,053.00	0.05	3.01	30.37	0.15097	0.00032	1.82
Jun-02	7,600	2.30	27.54	994.00	0.05	3.02	30.56	0.15097	0.00030	1.83
Jul-02	7,600	2.30	27.54	1,102.00	0.06	3.03	30.57	0.15097	0.00033	1.83
Aug-02	7,000	2.11	27.36	989.00	0.05	3.03	30.39	0.13906	0.00030	1.82
Sep-02	7,600	2.30	27.36	1,315.00	0.07	3.05	30.41	0.15097	0.00039	1.82
Oct-02	7,600	2.30	27.36	3,338.00	0.17	3.07	30.43	0.15097	0.00100	1.82
Nov-02	7,600	2.30	27.36	10,332.00	0.52	3.19	30.55	0.15097	0.00310	1.82
Dec-02	7,600	2.30	27.36	12,395.00	0.62	3.29	30.65	0.15097	0.00372	1.82
Jan-03	7,600	2.30	27.36	16,340.00	0.82	3.53	30.89	0.15097	0.00490	1.82
Feb-03	15,200	4.59	29.66	14,444.00	0.72	3.74	33.40	0.30195	0.00433	1.97
Mar-03	7,600	2.30	29.66	8,287.00	0.41	3.66	33.32	0.15097	0.00249	1.97
Apr-03	7,600	2.30	29.66	4,027.00	0.20	3.73	33.39	0.15097	0.00121	1.97
May-03	15,200	4.59	31.95	1,694.00	0.08	3.76	35.71	0.30195	0.00051	2.12
Jun-03	7,600	2.30	31.95	1,517.00	0.08	3.79	35.74	0.15097	0.00046	2.12
Jul-03	7,600	2.30	31.95	1,646.00	0.08	3.82	35.77	0.15097	0.00049	2.12
Aug-03	7,600	2.30	32.13	1,838.00	0.09	3.86	35.99	0.15097	0.00055	2.14
Sep-03	7,600	2.30	32.13	1,767.00	0.09	3.88	36.01	0.15097	0.00053	2.14
Oct-03	7,600	2.30	32.13	3,633.00	0.18	3.90	36.03	0.15097	0.00109	2.14
Nov-03	7,600	2.30	32.13	8,906.00	0.45	3.82	35.96	0.15097	0.00267	2.14
Dec-03	7,600	2.30	32.13	13,472.00	0.67	3.88	36.01	0.15097	0.00404	2.14
Jan-04	7,600	2.30	32.13	16,198.00	0.81	3.87	36.00	0.15097	0.00486	2.14
Feb-04	7,606	2.30	29.84	13,577.00	0.68	3.83	33.67	0.15109	0.00407	1.99
Mar-04	7,606	2.30	29.84	9,104.00	0.46	3.87	33.71	0.15109	0.00273	1.99
Apr-04	7,301	2.20	29.75	4,337.00	0.22	3.88	33.64	0.14503	0.00130	1.98
May-04	7,299	2.20	27.36	1,952.00	0.10	3.90	31.26	0.14499	0.00059	1.82
Jun-04	7,299	2.20	27.27	2,123.00	0.11	3.93	31.20	0.14499	0.00064	1.82
Jul-04	7,600	2.30	27.27	1,881.00	0.09	3.94	31.21	0.15097	0.00056	1.82
Aug-04	15,200	4.59	29.57	2,074.00	0.10	3.95	33.52	0.30195	0.00062	1.97
Sep-04	7,600	2.30	29.57	1,964.00	0.10	3.96	33.53	0.15097	0.00059	1.97
Oct-04	7,600	2.30	29.57	2,375.00	0.12	3.90	33.47	0.15097	0.00071	1.97
Nov-04	7,600	2.30	29.57	8,516.00	0.43	3.88	33.45	0.15097	0.00255	1.97
Dec-04	15,093	4.56	31.83	13,739.00	0.69	3.89	35.72	0.29982	0.00412	2.12
Jan-05	7,511	2.27	31.81	13,625.00	0.68	3.76	35.57	0.14921	0.00409	2.11
Feb-05	7,500	2.27	31.77	11,654.00	0.58	3.67	35.44	0.14899	0.00350	2.11
Mar-05	0	0.00	29.48	11,327.00	0.57	3.78	33.25	0.00000	0.00340	1.96
Apr-05	15,000	4.53	31.80	4,029.00	0.20	3.76	35.56	0.29798	0.00121	2.11
May-05	7,500	2.27	31.86	2,338.00	0.12	3.78	35.64	0.14899	0.00070	2.12
Jun-05	7,500	2.27	31.92	1,243.00	0.06	3.74	35.66	0.14899	0.00037	2.12
Jul-05	11,894	3.59	33.22	1,614.00	0.08	3.72	36.94	0.23627	0.00048	2.21
Aug-05	3,834	1.16	29.79	1,699.00	0.08	3.71	33.49	0.07616	0.00051	1.98
Sep-05	18,664	5.64	33.13	1,601.00	0.08	3.69	36.82	0.37076	0.00048	2.20
Oct-05	3,322	1.00	31.84	4,498.00	0.22	3.79	35.63	0.06599	0.00135	2.12
Nov-05	4,147	1.25	30.79	8,076.00	0.40	3.77	34.57	0.08238	0.00242	2.05
Dec-05	5,360	1.62	27.85	12,735.00	0.64	3.72	31.58	0.10648	0.00382	1.85
Jan-06	12,041	3.64	29.22	9,642.00	0.48	3.52	32.74	0.23919	0.00289	1.94
Feb-06	4,183	1.26	28.22	10,898.00	0.54	3.49	31.71	0.08310	0.00327	1.88
Mar-06	11,244	3.40	31.62	8,478.00	0.42	3.34	34.96	0.22336	0.00254	2.10
Apr-06	4,847	1.46	28.55	2,382.00	0.12	3.26	31.81	0.09629	0.00071	1.90
May-06	11,069	3.34	29.63	2,034.00	0.10	3.25	32.87	0.21989	0.00061	1.97
Jun-06	11,664	3.52	30.89	1,507.00	0.08	3.26	34.14	0.23171	0.00045	2.05
Jul-06	5,447	1.64	28.94	1,147.00	0.06	3.23	32.17	0.10820	0.00034	1.92
Aug-06	3,992	1.21	28.99	1,740.00	0.09	3.24	32.22	0.07930	0.00052	1.93
Sep-06	5,591	1.69	25.04	1,055.00	0.05	3.21	28.25	0.11107	0.00032	1.67
Oct-06	11,617	3.51	27.54	3,680.00	0.18	3.17	30.71	0.23077	0.00110	1.83
Nov-06	4,043	1.22	27.51	9,027.00	0.45	3.22	30.73	0.08031	0.00271	1.83
Dec-06	1,378	0.42	26.31	10,475.00	0.52	3.10	29.41	0.02737	0.00314	1.75
Jan-07	20,876	6.30	28.98							
						Worst case 12 months:	**47.03**			**2.89**

Midrange has not used any alternate fuel in boilers except for limited testing.