INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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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: January 23, 2008

RE: Cummins Inc.- Plant #1, / 005-25493-00015

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

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, 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 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. 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.

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
FNPER.dot12/03/07

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Mr. Mark Slaton
Cummins Inc. - Plant #1
P.O. Box 3005
Columbus, IN 47202-3005

January 23, 2008

Re: 005-25493-00015
First Significant Source Modification to:
Part 70 permit No.: T005-7433-00015

Dear Mr. Slaton:

Cummins Inc. - Plant #1 was issued Part 70 operating permit T005-7433-00015 on May 15, 2001 for a manufacturing, testing and painting internal combustion engines source. An application to modify the source was received on November 2, 2007. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

(a) One (1) diesel fuel endurance test cell, known as EU-07, approved for construction in 2008, with a rated capacity of 500 HP.

(b) Four (4) diesel containerized production cells, known as EU-08, approved for construction in 2008, each with a rated capacity of 450 HP.

(c) Four (4) electric motor-powered engine test cells, known as EU-09, approved for construction in 2008. The cells power four (4) diesel engines, each with a maximum heat input of 1.0 MMBtu/hr. The combined maximum capacity of diesel fuel usage by the test cells is 0.055 gallons per hour (485.8 gallons of diesel fuel per year).

(d) Make up air units, approved for construction in 2008, with at combined total heat input of less than 10 MMBtu/hr.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

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

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source=s Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Bryan Lange, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7854 to speak directly to Mr. Lange. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Original signed by,

Matthew Stuckey, Deputy Branch Chief
Permits Branch
Office of Air Quality

Attachments

ERG/BL

cc: File - Bartholomew County
Bartholomew County Health Department
Air Compliance Section Inspector
Compliance Data Section
Administrative and Development
Billing, Licensing and Training Section

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PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR QUALITY

Cummins Inc. - Plant #1
1000 5th Street
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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

First Significant Source Modification: SSM 005-25493-00015	Pages Effected: Entire Permit
Original signed by: Matthew Stuckey, Deputy Branch Chief Permits Branch Office of Air Quality	Issuance Date: January 23, 2008

SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary manufacturing, testing and painting internal combustion engines source.

Source Address:	1000 5th Street, Columbus, Indiana 47201
Mailing Address:	P.O. Box 3005, Columbus, Indiana 47202-3005
SIC Code:	3519
County Location:	Bartholomew
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major 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) One (1) diesel fuel endurance test cell, known as EU-04, approved for construction in 2008, with a rated capacity of 500 HP.

(b) Ten (10) diesel fuel endurance test cells, known as EU-02A, installed in 1974 or prior, exhausted to Stacks 101-103, 601-603, and 1-4, with a combined total heat input of 33.73 million British thermal units per hour.

(c) Twelve (12) diesel fuel production test cells, known as EU-02B, installed in 1974 or prior, exhausted to stacks 201-203, 301-303, 401-403, and 501-503, with a combined total heat input of 27.72 million British thermal units per hour.

(d) Two (2) diesel fuel reciprocating internal combustion engine test stands, known as EU-TS1 and EU-TS2, with a heat input rating of 0.008 million British thermal units per hour, capacity: 22 engines per hour.

(e) Four (4) diesel containerized production cells, known as EU-09, EU-10, EU-11, EU-12, approved for construction in 2008, each with a rated capacity of 450 HP.

(f) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03B, installed in 1961, exhausted to Stack B1, rated at 36 million British thermal units per hour.

(g) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03C, installed in 1951, exhausted to Stack B2, rated at 21 million British thermal units per hour.

(h) Four (4) electric motor-powered engine test cells, known as EU-13, EU-14, EU-15, EU-16, approved for construction in 2008. The cells power four (4) diesel engines, each with a maximum heat input of 1.0 MMBtu/hr. The combined maximum capacity of diesel fuel usage by the test cells is 0.055 gallons per hour (485.8 gallons of diesel fuel per year).

A.3 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 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.

(b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour.

(c) The following VOC and HAP storage containers:

Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

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

(e) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.

(f) Machining where an aqueous cutting coolant continuously floods the machining interface.

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

(h) Cleaners and solvents characterized as follows:

(1) having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF) or;

(2) having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

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

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

(k) Noncontact cooling tower systems with either of the following:

Forced and induced draft cooling tower system not regulated under a NESHAP.

(l) Replacement or repair of filters in air filtration equipment.

(m) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone.

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

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

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

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

(r) Emergency generators as follows:

Diesel generators not exceeding 1,600 horsepower. (none exceeding 500 horsepower)

(s) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2].

(t) Make up air units, approved for construction in 2008, with at combined total heat input of less than 10 MMBtu/hr.

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 D.1 FACILITY OPERATION CONDITIONS

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

(a) One (1) diesel fuel endurance test cell, known as EU-04, approved for construction in 2008, with a rated capacity of 500 HP.

(b) Ten (10) diesel fuel endurance test cells, known as EU-02A, installed in 1974 or prior, exhausted to Stacks 101-103, 601-603, and 1-4, with a combined total heat input of 33.73 million British thermal units per hour.

(c) Twelve (12) diesel fuel production test cells, known as EU-02B, installed in 1974 or prior, exhausted to stacks 201-203, 301-303, 401-403, and 501-503, with a combined total heat input of 27.72 million British thermal units per hour**.**

(d) Two (2) diesel fuel reciprocating internal combustion engine test stands, known as EU-TS1 and EU-TS2, with a heat input rating of 0.008 million British thermal units per hour, capacity: 22 engines per hour.

(e) Four (4) diesel containerized production cells, known as EU-09, EU-10, EU-11, EU-12, approved for construction in 2008, each with a rated capacity of 450 HP.

(h) Four (4) electric motor-powered engine test cells, known as EU-13, EU-14, EU-15, EU-16, approved for construction in 2008. The cells power four (4) diesel engines, each with a maximum heat input of 1.0 MMBtu/hr. The combined maximum capacity of diesel fuel usage by the test cells is 0.055 gallons per hour (485.8 gallons of diesel fuel per year).

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

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

D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The two (2) test stands, EU-TS1 and EU-TS2, shall not exceed 346.75 gallons of diesel fuel per twelve (12) consecutive month period, equivalent to 0.027 tons of VOC per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 40 CFR 52.21 not applicable.

(b) The total PM and PM_{10} from the two (2) test stands, EU-TS1 and EU-TS2 and EU-04, shall not exceed twenty five (25) and fifteen (15) tons per year, respectively. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 40 CFR 52.21 not applicable.

(c) The requirements of CP 005-5350-00015, issued on January 14, 1997, that stated that the total diesel fuel delivered to test stands, EU-TS1 and EU-TS2, shall not exceed 0.95 gallons per day, equivalent to 0.15 pounds per day has been changed to a twelve (12) consecutive month period.

D.1.2 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the modification completed pursuant to SSM 005-25493-00015:

(a) The endurance test cell (EU-04) and the containerized production cells (EU-09, EU-10, EU-11, EU-12) shall not exceed 675 kilo-gallons (kgal) of diesel fuel per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit will limit PM10 to less than 15 tons per year and will render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

D.1.3 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-1]

(a) Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations) the SO_2 emissions from the each of the test cells, EU-02A and EU-02B, shall not exceed five tenths (0.5) pounds per million British thermal units heat input.

(b) The requirements from Condition 4 of the following permits: OP 03-05-91-0146, issued on October 6, 1988, OP 03-05-91-0147, issued on October 6, 1988, OP 03-05-91-0148, issued on October 6, 1988, OP 03-05-91-0149, issued on October 6, 1988, and OP 03-05-91-0150, issued on October 6, 1988, which limited SO_2 emissions from the diesel engine test cells to six (6.0) pounds per million British thermal units heat input were not incorporated. The rule applicability was re-evaluated and since the diesel test cells only burn distillate oil then pursuant 326 IAC 7-1.1-2(a)(3), the sulfur dioxide emissions should be limited to five tenths (0.5) pounds per million British thermal units heat input.

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 EU-02A, EU-02B, EU-TS1, EU-TS2, EU-04, EU-09, EU-10, EU-11, EU-12 and their control devices.

Compliance Determination Requirements

D.1.5 Sulfur Dioxide Emissions and Sulfur Content

Compliance 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 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 thirty (30) test cells and the two (2) test stands, 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 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.6 Visible Emissions Notations

(a) Visible emission notations of the test cell stack exhausts 1 - 4, 101 -107, 201 - 207, 301 - 303, 401 - 403, 501 - 503 and 601 - 603 shall be performed once per day during normal

daylight operations when exhausting to the atmosphere. 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 Condition D.1.2, the Permittee shall maintain records of monthly diesel fuel usage for the endurance test cell (EU-04) and the containerized production cells (EU-09, EU-10, EU-11, EU-12).

(b) To document compliance with Condition D.1.3, the Permittee shall maintain records in accordance with (1) through (6) 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;

(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, the natural gas-fired boiler certification does not require the certification by the Aresponsible official@ as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) 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.

(c) To document compliance with Condition D.1.1(a), the Permittee shall maintain records in accordance with (1) and (2) below:

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

(2) Actual fuel oil usage since last compliance determination period and equivalent volatile organic compounds emissions.

(d) To document compliance with Condition D.1.6, the Permittee shall maintain records of visible emission notations of the test cell stack exhausts 1 - 4, 101 -107, 201 - 207, 301 - 303, 401 - 403, 501 - 503 and 601 - 603 once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

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

D.1.8 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1(a) and D.1.2 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 Aresponsible official@ as defined by 326 IAC 2-7-1(34).

SECTION D.2 FACILITY OPERATION CONDITIONS

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

(f) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03B, installed in 1961, exhausted to Stack B1, rated at 36 million British thermal units per hour.

(g) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03C, installed in 1951, exhausted to Stack B2, rated at 21 million British thermal units per hour.

(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 Matter (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3(d), the PM emissions from boilers, EU-03B and EU-03C, shall each be limited to 0.8 pounds per million British thermal units heat input.

D.2.2 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations), the SO_2 emissions from each of the boilers, EU-03B and EU-03C shall not exceed five-tenths (0.5) pound per million British thermal units heat input while combusting fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average. 326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable.

D.2.3 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 these facilities and their control devices.

Compliance Determination Requirements

D.2.4 Sulfur Dioxide Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options for boilers EU-03B and EU-03C.

(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 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 boiler 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 (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

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

D.2.5 Visible Emissions Notations

(a) Visible emission notations of the boiler stack exhausts (B1 and B2) shall be performed once per day during normal daylight operations while combusting 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 Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.6 Record Keeping Requirements

(a) To document compliance with Condition D.2.2, the Permittee shall maintain records in accordance with (1) through (6) 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;

(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, the natural gas-fired boiler certification does not require the certification by the Aresponsible official@ as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) 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.2.5, the Permittee shall maintain records of visible emission notations of the boiler stack exhausts once per day.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

D.2.7 Reporting Requirements

The Permittee shall certify, on the form provided, that natural gas was fired in each of the boilers at all times during each quarter. Alternatively, the Permittee shall report the number of days during which an alternate fuel was burned during each quarter.

SECTION D.3 FACILITY OPERATION CONDITIONS

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

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

(b) Trimmers that do not produce fugitive emissions and that are equipped with a dust collection or trim material recovery device such as a bag filter or cyclone. [326 IAC 6-3-2]

(c) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring; buffing; polishing; abrasive blasting; pneumatic conveying; and woodworking operations. [326 IAC 6-3-2]

(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.3.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the trimming, grinding and machining operations shall not exceed allowable PM emission rate based on the following equation:

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

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

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

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

D.3.2 Volatile Organic Compounds (VOC)

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

(a) Equip the cleaner with a cover;

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

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

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

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

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

D.3.3 Volatile Organic Compounds (VOC)

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

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

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

(B) The solvent is agitated; or

(C) The solvent is heated.

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

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

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

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38EC) (one hundred degrees Fahrenheit (100EF)), or if the solvent is heated to a temperature greater than forty-eight and 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 a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

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

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

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

SECTION E.1 PLANTWIDE APPLICABILITY LIMITATION REQUIREMENTS

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

Entire Source

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

Source wide emission limits [326 IAC 2-2.4-7(1)]

E.1.1 Emission limits [326 IAC 2-2.4-1(d)][326 IAC 2-2.4-7(1)]

(a) Pursuant to 326 IAC 2-2.4-7(1), the nitrogen oxides (NOx) emissions from the entire source shall not exceed 268.71 tons per 12 consecutive month period with compliance determined at the end of each month.

(b) Pursuant to 326 IAC 2-2.4-1(d), the Permittee shall continue to comply with all applicable federal or state requirements, emission limitations, and work practice requirements that were established prior to the effective date of the PAL

E.1.2 Major New Source Review Applicability [326 IAC 2-2.4-1(c)]

Pursuant to 326 IAC 2-2.4-1(c), any physical change in or change in the method of operation of this source that maintains its total source wide emissions below the PAL level, that meets the requirements in this rule, and that complies with the PAL permit:

(a) is not a major modification for the PAL pollutant;

(b) does not have to be approved through 326 IAC 2-2; and

(c) is not subject to 326 IAC 2-2-8(a)(3).

E.1.3 General PAL requirements [326 IAC 2-2.4-7, 326 IAC 2-2.4-8, 326 IAC 2-2.4-9, 326 IAC 2-2.4-10, 326 IAC 2-2.4-11, 326 IAC 2-2.4-15]

(a) Pursuant to 326 IAC 2-2.4-8(a), the requirements of this section E become effective on the issuance date of the PAL permit, and expire ten years after the issuance date of the PAL permit (SPM005-25282-00015).

(b) Pursuant to 326 IAC 2-2.4-10(b), if the Permittee applies to renew this PAL at least six months prior to expiration of the PAL, but no earlier than eighteen months prior to the expiration of the PAL, then notwithstanding the expiration date in subsection E.1.3(a), the PAL shall continue to be effective until the revised permit with the renewed PAL is issued. The application must contain the elements described in 326 IAC 2-2.4-3 and 326 IAC 2-2.4-10.

(c) Pursuant to 326 IAC 2-2.4-9(a), once this PAL expires, if not otherwise renewed, then the requirements of 326 IAC 2-2.4-9 are applicable.

(d) The Permittee shall comply with the requirements for renewing this PAL as described in 326 IAC 2-2.4-10.

(e) The Permittee shall comply with the requirements for increasing the emissions limits described in Condition E.1.1 as described in 326 IAC 2-2.4-11.

(f) The requirements applicable to terminating or revoking this PAL are described in 326 IAC 2-2.4-15.

Testing and Monitoring Requirements [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

E.1.4 Nitrogen Oxides (NO_X) Emission Limit Determination [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

The Permittee shall determine actual annual emissions of NOx by employing the following techniques:

(a) The Permittee shall calculate NOx emissions from burning natural gas in Boilers EU-03B and EU-03C, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an NOx emission factor of 100 lb NOx/million cubic feet of natural gas burned in Boilers EU-03B and EU-03C.

(b) The Permittee shall calculate NOx emissions from burning fuel oil in Boilers EU-03B and EU-03C, in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by a NOx emission factor of 20 lb NOx/1000 gallons of fuel oil burned in Boilers EU-03B and EU-03C.

(c) The Permittee shall determine NOx emissions from diesel engines EU-02A, EU-02B, EU-TS1, EU-TS2, EU-04, and EU-09 through EU-16 in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by a NOx emission factor of 4.41 lb NOx/million British thermal unit for diesel engines EU-02A, EU-03B, EU-TS1, EU-TS2, EU-04, and EU-09 through EU-16.

(d) Within six (6) months after the issuance of Significant Permit Modification SPM005-25282-00015, the Permittee shall perform validation testing to determine a site-specific emission factor for emission units EU-02A and EU-02B.

(e) When determining the actual annual emissions of NOx, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions.

E.1.5 Revalidation of emissions determination methods [326 IAC 2-2.4-12(i)]

The Permittee shall revalidate the emissions determination methods described in Condition E.1.4 through performance testing or other scientifically valid means approved by the department no later than five years after the effective date of the PAL provisions.

Record keeping and reporting [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

E.1.6 Record keeping requirements [326 IAC 2-7-5(3)] [326 IAC 2-2.4-13]

(a) The Permittee shall retain a copy of all records necessary to determine compliance with the requirements of this E Section, including a determination of each emissions unit's twelve (12) month rolling total emissions, for five years from the date of the record.

(b) The Permittee shall retain a copy of the PAL permit application, any applications for revisions to the PAL, each annual compliance certification as required by Condition B.9 of this permit, and data relied on in the certification for the duration of the PAL plus five years.

E.1.7 Reporting requirements [326 IAC 2-7-5(3)] [326 IAC 2-2.4-14]

(a) The Permittee shall submit a semi-annual report, containing the information described below, to the address listed in Section C – General Reporting Requirements, within thirty (30) days after the end of the calendar quarter being reported. This report requires the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). The report shall include the following information:

(1) The identification of the owner and operator of the facility and the permit number.

(2) Total emissions of NOx, in tons per rolling 12 month period for each month in the reporting period, as determined by Condition E.1.4.

(3) All data relied upon, including but not limited to, any quality assurance or quality control data, in determining emissions.

(4) A list of any emissions units modified or added to the major stationary source during the reporting period.

(5) If not previously reported pursuant to another condition in this permit, the number, duration, and cause of any deviations or monitoring malfunctions, other than the time associated with zero and span calibration checks, and any corrective action taken.

(6) If not required to be reported pursuant to another condition in this permit, information about monitoring system shutdowns including the following information:

(A) Notification to the department of the shutdown of any monitoring system.

(B) Whether the shutdown was permanent or temporary.

(C) The reason for the shutdown.

(D) The anticipated date that the monitoring system will be fully operational or replaced with another monitoring system.

(E) Whether the emissions unit monitored by the monitoring system continued to operate.

(F) If the emission unit monitored by the monitoring system continued to operate, the calculation of the:

(i) Emissions of the pollutant; or

(ii) Number determined by method included in the permit, as provided by 326 IAC 2-2.4-12(g).

(b) The procedures for reporting deviations from the requirements of this Section E, and the procedures for reporting emissions in excess of the limits described in Condition E.1.1 are described in Condition B.15. A report that describes emissions exceeding the PAL limits shall include the quantity of emissions emitted by the source. This term satisfies the requirements of 326 IAC 2-2.4-14(c).

(c) The Permittee shall submit to the department the results of any revalidation test or method within three months of completion of the test or method. These results do not require responsible official certification.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Section E.1 – Plantwide Applicability Limitations Requirements

Source Name: Cummins Inc. - Plant #1
Source Address: 1000 5th Street, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005, Columbus, Indiana 47202-3005
Part 70 Permit No.: T 005-7433-00015
Facility: Source wide
Parameter: Plantwide Emission Limits for NOx
PAL Limit: 268.71 tpy of NOx

Quarter: Year: Pollutant	Actual Emission Estimates, tons								
	Month 1	Previous 11 Months	12-month Total	Month 2	Previous 11 Months	12-month Total	Month 3	Previous 11 Months	12-month total
Endurance Test Cells (EU-02A, EU-04)									
NOx									
Performance and Production Test Cells (EU-02B, EU-09)									
NOx									
Test Stands (EU-TS1, EU-TS2, EU-13, EU-14, EU-15, EU-16)									
NOx									
Boilers (EU-03B - EU-03C)									
NOx									
TOTAL NOx									

☐ 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 Inc. - Plant #1
Source Address: 1000 5th Street, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005, Columbus, Indiana 47202-3005
Part 70 Permit No.: T 005-7433-00015
Facilities: Endurance test cell (EU-04) and Containerized production cells (EU-09, EU-10, EU-11, EU-12)
Parameter: Diesel Fuel
Limit: 675 kilo-gallons (kgal) per twelve (12) consecutive month period total

YEAR: _____

Month	Diesel Fuel (gallons)	Diesel Fuel (gallons)	Diesel Fuel (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

Addendum to the Technical Support Document for a Significant Source Modification and a Significant Permit Modification to a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	Cummins Inc. - Plant #1
Source Location:	1000 5th Street, Columbus, Indiana 47201
County:	Bartholomew
SIC Code:	3519
Operation Permit No.:	T005-7433-00015
Operation Permit Issuance Date:	May 15, 2001
Significant Source Modification No.:	005-25493-00015
Significant Permit Modification No.:	005-25597-00015
Permit Reviewer:	ERG/BL

On December 20, 2007, the Office of Air Quality (OAQ) had a notice published in the Republic newspaper of Columbus, Indiana, stating that Cummins Inc. - Plant #1 had applied for a Significant Source Modification and a Significant Permit Modification to their Part 70 Operating Permit. The notice also stated that OAQ proposed to issue a permit modification for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On January 17, 2008, comments on the draft permit were submitted by Elizabeth J. Hill of Bruce Carter Associates, LLC on behalf of Cummins Inc. - Plant #1 (Cummins). The summary of the comments is as follows. Changes made are shown throughout this addendum. New language is in **bold** while deleted language is in ~~strikeout~~. The Table of Contents has been updated as necessary.

Bruce Carter Associates, LLC Comments (on behalf of Cummins Inc. – Plant 1)

Comment 1:

Elizabeth J. Hill commented that the Cummins has removed the one (1) heavy duty robotic paint line, known as EU-04, installed in 1997, exhausted to Stacks RB, MB-1 and MB-2, capacity: 20 engines per hour, consisting of a robotic and manual paint booth.

Section A.2 should be revised to reflect the removal of these units. Section D.1 and the related reporting forms should also be removed as those conditions are no longer applicable. The technical support document should be revised to reflect these changes.

Response to Comment 1:

Condition A.2 has been revised to reflect the removal of the paint line. Section D.1 and the associated reporting forms have been removed. The Table of Contents and Condition numbers have been updated as necessary.

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the Technical Support Document that occur after the public notice are documented in this Addendum to the Technical

Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

The following changes were made in the permit:

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:

. . .

~~(i) One (1) heavy duty robotic paint line, known as EU-04, installed in 1997, exhausted to Stacks RB, MB-1 and MB-2, capacity: 20 engines per hour, consisting of:~~

~~(1) One (1) robotic paint booth, equipped with electrostatic application system and dry filters for overspray control, and~~

~~(2) One (1) manual paint booth, equipped with electrostatic application system and dry filters for overspray control.~~

. . .

~~**SECTION D.1 FACILITY OPERATION CONDITIONS**~~

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

~~(i) One (1) heavy duty robotic paint line, known as EU-04, installed in 1997, exhausted to Stacks RB, MB-1 and MB-2, capacity: 20 engines per hour, consisting of:~~

~~(1) One (1) robotic paint booth, equipped with electrostatic application system and dry filters for overspray control, and~~

~~(2) One (1) manual paint booth, equipped with electrostatic application system and dry filters for overspray control.~~

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

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

~~D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]~~

~~(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 3.5 pounds of VOC per gallon of coating excluding water for extreme performance coatings, delivered to spray applicator EU-04.~~

~~(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.~~

~~D.1.2 PSD Minor Limit [326 IAC 2-2]~~

~~The VOC delivered to the applicators of the heavy duty robotic paint line, EU-04, including coatings, dilution solvents, and cleaning solvents, shall be limited to less than 39.5 tons of VOC per twelve (12) consecutive month period, with compliance determined at the end of each month, including coatings, dilution solvents, and cleaning solvents. Compliance with this limit shall make the requirements of 326 IAC 2-2 not applicable.~~

~~D.1.3 Particulate [326 IAC 6-3-2(d)]~~

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

~~D.1.4 Hazardous Air Pollutants (HAP) [40 CFR 63]~~

~~(a) The usage of hexane at the coating operations, degreasing operations and miscellaneous solvent usage shall be limited to less than 8.70 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.~~

~~(b) The usage of each individual HAP, other than hexane, at the coating operations, degreasing operations and miscellaneous solvent usage, shall be limited to less than 9.51 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.~~

~~(c) The usage of total HAPs at the coating operations, degreasing operations and miscellaneous solvent usage, shall be limited to less than 21.9 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.~~

~~Due to these limitations, the requirements of 40 CFR 63, Subpart MMMM, and 40 CFR 63, Subpart PPPP, are not included in this permit.~~

~~D.1.5 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 EU-04 and any control devices.~~

~~Compliance Determination Requirements~~

~~D.1.6 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 usage limitations contained in Conditions D.1.1 and D.1.2 and the HAP emission limitations contained in Condition D.1.4 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.1.7 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 surface coating booth stacks (RB, MB-1, and MB-2) while one (1) or more of the booths exhausting to the stack are 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 stacks 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.1.8 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC content limit established in Condition D.1.1.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents; and

(2) A log of the dates of use.

(b) To document compliance with Condition D.1.2, 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 VOC usage limit established in Condition D.1.2.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The cleanup solvent usage for each month in EU-04;

(4) The total VOC usage for each month in EU-04; and

(5) The weight of VOCs emitted for each compliance period from EU-04.

(c) To document compliance with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the HAP usage limits established in Condition D.1.4.

(1) The HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;

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

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

(d) To document compliance with Condition D.1.7, the Permittee shall maintain a log of weekly overspray observations, and daily and monthly inspections.

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

D.1.9 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.2 and D.1.4 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form 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 Aresponsible official@ as defined by 326 IAC 2-7-1(34).

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

Part 70 Quarterly Report

Source Name: Cummins Inc. - Plant #1
Source Address: 1000 5th Street, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005, Columbus, Indiana 47202-3005
Part 70 Permit No.: T 005-7433-00015
Facilities: Robotic Paint Line, EU-04 (Robotic and Manual Paint Booths)
Parameter: VOC delivered to the applicators
Limit: 39.5 tons per twelve (12) consecutive month period

Month: _____ **Year:** _____

Month	VOC (tons)	VOC (tons)	VOC (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 Inc. - Plant #1
Source Address: 1000 5th Street, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005, Columbus, Indiana 47202-3005
Part 70 Permit No.: T 005-7433-00015
Facilities: Coating, degreasing and miscellaneous solvent usage
Parameter: Individual HAP Usage
Limit: Less than 8.70 tons of hexane per consecutive twelve (12) month period, with compliance determined at the end of each month
Less than 9.51 tons of each individual HAP, other than hexane, per consecutive twelve (12) month period, with compliance determined at the end of each month

YEAR: _____

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

Month	Hexane Usage (tons)	Hexane Usage (tons)	Hexane 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 Inc. - Plant #1
Source Address: 1000 5th Street, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005, Columbus, Indiana 47202-3005
Part 70 Permit No.: T 005-7433-00015
Facilities: Coating, degreasing and miscellaneous solvent usage
Parameter: Total HAPs Usage
Limit: Less than 21.9 tons per consecutive twelve (12) month period, with compliance determined at the end of each month

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.

Upon further review, IDEM, OAQ has decided to make the following revisions to the permit.

1. Condition E.1.4: The testing and monitoring requirements for the Plantwide Applicability Limitation (PAL) included in E.1.4(c) incorrectly stated unit EU-03B. The correct unit is EU-02B. The condition has been revised as shown below:

Testing and Monitoring Requirements [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

E.1.4 Nitrogen Oxides (NO_X) Emission Limit Determination [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

The Permittee shall determine actual annual emissions of NOx by employing the following techniques:

(a) The Permittee shall calculate NOx emissions from burning natural gas in Boilers EU-03B and EU-03C, in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an NOx emission factor of 100 lb NOx/million cubic feet of natural gas burned in Boilers EU-03B and EU-03C.

(b) The Permittee shall calculate NOx emissions from burning fuel oil in Boilers EU-03B and EU-03C, in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by a NOx emission factor of 20 lb NOx/1000 gallons of fuel oil burned in Boilers EU-03B and EU-03C.

(c) The Permittee shall determine NOx emissions from diesel engines EU-02A, ~~EU-03B~~ **EU-02B**, EU-TS1, EU-TS2, EU-04, and EU-09 through EU-16 in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by a NOx emission factor of 4.41 lb NOx/million British thermal unit for diesel engines EU-02A, EU-03B, EU-TS1, EU-TS2, EU-04, and EU-09 through EU-16.

(d) Within six (6) months after the issuance of Significant Permit Modification SPM005-25282-00015, the Permittee shall perform validation testing to determine a site-specific emission factor for emission units EU-02A and EU-02B.

(e) When determining the actual annual emissions of NOx, the Permittee shall include emissions occurring as a result of startups, shutdown, and malfunctions.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Source Modification and a Significant Permit Modification to a Part 70 Operating Permit

Source Description and Location

Source Name:	Cummins Inc. - Plant #1
Source Location:	1000 5th Street, Columbus, Indiana 47201
County:	Bartholomew
SIC Code:	3519
Operation Permit No.:	T005-7433-00015
Operation Permit Issuance Date:	May 15, 2001
Significant Source Modification No.:	005-25493-00015
Significant Permit Modification No.:	005-25597-00015
Permit Reviewer:	ERG/BL

Existing Approvals

The source was issued Part 70 Operating Permit No. T005-7433-00015 on May 15, 2001. The source has since received the following approvals:

(a) First Administrative Amendment, 005-14634-00015, issued on November 13, 2001;

(b) Second Administrative Amendment, 005-16171-00015, issued on July 17, 2002;

(c) First Significant Permit Modification, 005-17802-00015, issued on January 26, 2004;

(d) Third Administrative Amendment, 005-21280-00015, issued on July 19, 2005;

(e) Second Significant Permit Modification, 005-22915-00015, issued on December 22, 2006; and

(f) Significant Permit Modification and PAL, 005-25282-00015 (pending).

A Part 70 Operating Permit Renewal (T005-21670-00015) application was submitted on August 15, 2005. At this time this application is still under review.

County Attainment Status

The source is located in Bartholomew County.

Pollutant	Status
PM10	Attainment
PM2.5	Attainment
SO_2	Attainment
NO_2	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Bartholomew County has been classified as attainment for PM2.5. 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 PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions. See the State Rule Applicability – Entire Source section.

(b) 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 emissions 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 emissions and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

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

(d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

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

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/year)
PM	118
PM10	124
SO_2	311
VOC	187
CO	403
NO_x	1,672

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(b) These emissions are based upon the TSD for the Significant Permit Modification 005-25282-00015.

The table below summarizes the potential to emit HAPs for the entire source after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/year)
Hexane	8.70
Any single HAP	9.51
Total	21.9

This existing source is a minor source of HAPs, as defined in 40 CFR 63.41, because the HAP PTE is less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a minor source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

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

Pollutant	Actual Emissions (tons/year)
PM	Not reported
PM10	1
SO_2	2
VOC	1
CO	5
NO_x	14
Lead	Not reported

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Cummins Inc. - Plant #1 on November 2, 2007 relating to the following:

1. The Permittee has proposed to construct new test cells, new production cells, and new make up air units and remove a spray booth (EU-01E) and two boilers (EU-03A and EU-03D). The new equipment is listed below:

   (a) One (1) diesel fuel endurance test cell, known as EU-04, approved for construction in 2008, with a rated capacity of 500 HP.

   (b) Four (4) diesel containerized production cells, known as EU-09, EU-10, EU-11, EU-12, approved for construction in 2008, each with a rated capacity of 450 HP.

   (c) Four (4) electric motor-powered engine test cells, known as EU-13, EU-14, EU-15, EU-16, approved for construction in 2008. The cells power four (4) diesel engines, each with a maximum heat input of 1.0 MMBtu/hr. The combined maximum capacity of diesel fuel usage by the test cells is 0.055 gallons per hour (485.8 gallons of diesel fuel per year).

   (d) Make up air units, approved for construction in 2008, with at combined total heat input of less than 10 MMBtu/hr.

Cummins Inc. - Plant #1 was issued Part 70 Operating Permit No. T005-7433-00015 on May 15, 2001. Cummins was issued a significant permit modification (SPM005-25282-00015) to that Part 70 permit that created a NOx Plantwide Applicability Limit (PAL) of 268.71 tons per year on (pending). The PAL allows Cummins to streamline compliance determination and provide maximum operational flexibility. The additional equipment covered by this modification will be included in the NOx PAL since it covers the entire source.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission 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, 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, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE of the modification before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	PTE of the Revision (tons/year)	Limited PTE of the Revision (tons/year)
PM	22.2	14.7
PM10	20.9	14.7
SO_2	20.7	13.7
VOC	25.3	17.0
CO	67.3	44.9
NO_x	312	209

Pursuant to 326 IAC 2-7-10.5(f)(4), this source modification requires a Significant Source Modification because the NOx PTE of the new units is greater than 25 tons per year.

The monitoring and reporting requirements included in the existing source-wide PAL, Section E.1 of the Significant Permit Modification (SPM) No. 005-25282-00015, are sufficient for the Permittee to determine compliance with the PAL. Therefore, no revision of PAL provisions is required.

The modification will be incorporated into the Part 70 Operating Permit through a Significant Permit Modification, pursuant to 326 IAC 2-7-12(d), because this modification requires a case-by-case determination of an emission limitation.

Permit Level Determination – PSD or Emission Offset

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

	Potential to Emit (tons/year)						
Process/Emission Unit	**PM**	**PM10**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAP**
New test cells, new production cells, and new make up air units	14.7	14.7[(b)]	13.7	17.0	44.9	(a)	0.30
Significant Level or Major Source Threshold	less than 25	less than 15	less than 40	less than 40	less than 100	less than 40	-

(a) These units are covered by the existing NOx PAL established by SPM 005-25282-00015. Therefore, the NOx emissions from these units are included when determining compliance with that PAL and are not subject to the requirements of 326 IAC 2-2.
(b) The source will limit diesel fuel usage to the new test and production cells to less than 675 kilo-gallons (kgal) per year. Therefore, the potential to emit PM10 is limited to less than fifteen (15) tons per year.

This modification to an existing PSD major stationary source is not major because:

(a) The NOx emissions from the modification are included under the existing NOx PAL established under 326 IAC 2-2.4;

(b) The source will limit diesel fuel usage to the new test and production cells to less than 675 kilo-gallons (kgal) per year. Therefore, the potential to emit PM10 is limited to less than fifteen (15) tons per year.

(c) The PM, SO_2, VOC, and CO emissions from the modification are less than the respective PSD significant levels (25, 40, 40, and 100 tons per year respectively).

Therefore, the requirements of 326 IAC 2-2 do not apply to the modification.

Federal Rule Applicability Determination

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) The requirements of the NSPS, 40 CFR Part 60, Subpart IIII, Stationary Compression Ignition Internal Combustion Engines are not included in this permit modification because pursuant to 40 CFR 60.4200(b), the testing of internal combustion engines at a stationary engine test cell is exempt from this NSPS.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

(d) The requirements of the NESHAP, 40 CFR Part 63, Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82) are not included in this proposed modification because pursuant to 40 CFR 63.6585, the testing of internal combustion engines at a stationary engine test cell is exempt from this NESHAP.

(e) The requirements of the NESHAP, 40 CFR Part 63, Subpart PPPPP for Engine Test Cells/Stands (326 IAC 20-75) are not included in this proposed modification because this source is not a major source of HAPs.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

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

This existing major PSD source was major at the promulgation date of the PSD rules in 1977 because EU-01B, EU-01C and EU-01D, installed in 1960 as well as EU-02A and EU-02B, installed in 1974, due to the NOX emissions that exceeded 250 tons per year. This source is not in 1 of the 28 source categories defined in 326 IAC 2-2-1(p)(1).

The Permittee has proposed to construct new test cells, new production cells, and new make up air units. The potential to emit of the proposed modification is greater than the PSD significant level for PM10, fifteen (15) tons per twelve (12) consecutive month period. In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the modification the source shall comply with the following limitations:

(a) The endurance test cell (EU-04) and the containerized production cells (EU-09, EU-10, EU-11, EU-12) shall not exceed 675 kilo-gallons (kgal) of diesel fuel per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit will limit PM10 to less than 15 tons per year and will render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

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

The new test cells, new production cells, and new make up air units each have potential to emit sulfur dioxide less than twenty-five (25) tons per year and ten (10) pounds per hour. Therefore, 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations) does not apply.

326 IAC 8-1-6 (Best Available Control Technology (BACT))

The new test cells, new production cells, and new make up air units each have potential to emit less than twenty-five (25) tons of VOC per year. Therefore, 326 IAC 8-1-6 does not apply.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The new test cells, new production cells, and new make up air units are direct-fired emission units. These units do not produce usable heat that is transferred through a heat-conducting material barrier or by a heat storage medium. Therefore, 326 IAC 6-2-4 does not apply.

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

Diesel-fired test cells are not specifically identified in 326 IAC 6-3-2(b) through (d). Pursuant to 326 IAC 1-2-59, “Process weight; weight rate,” states that liquid and gaseous fuels will not be considered as part of the process rate. Therefore, the test cells are not subject to 326 IAC 6-3-2(e).

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 167-12146-00001. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

1. The Permittee has proposed to construct new test cells, new production cells, and new make up air units and remove a spray booth (EU-01E) and two boilers (EU-03A and EU-03D). Because equipment has been removed in several permit conditions in the Operating Permit No. 005-25282-00015, specifically D.1.1, D.1.5, D.3.1, D.3.3, D.3.5, D.3.6 and D.3.7 have been revised. Condition D.3.2 has been removed entirely and Section D.3 has been renumber as appropriate.

In order to render the requirements of 326 IAC 2-2 not applicable to the modification, the source will limit diesel fuel usage to the new test and production cells to less than 675 kilo-gallons (kgal) per year. Therefore, the potential to emit of PM10 is limited to less than fifteen (15) tons per year. The conditions in Section D.2 have been renumbered were appropriate. Reporting requirements and forms have been added to allow the Permittee to document compliance with the diesel fuel usage limit.

Also included below are clarifications to the record keeping requirements in Conditions D.2.7 and D.3.6. The intent of record keeping requirements was that the Permittee make a record of some sort every day. If no record was taken the Permittee shall write down why no record was taken. The following changes have been made throughout the permit as follows:

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

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

~~(a) One (1) Mod spray booth known as EU-01E, installed in 1963, equipped with one (1) conventional air applicator, exhausted to Stack MOD, capacity: 2 engines or 2 machined parts per hour.~~

(a) One (1) diesel fuel endurance test cell, known as EU-04, approved for construction in 2008, with a rated capacity of 500 HP.

(b) Ten (10) diesel fuel endurance test cells, known as EU-02A, installed in 1974 or prior, exhausted to Stacks 101-103, 601-603, and 1-4, with a combined total heat input of 33.73 million British thermal units per hour.

(c) Twelve (12) diesel fuel production test cells, known as EU-02B, installed in 1974 or prior, exhausted to stacks 201-203, 301-303, 401-403, and 501-503, with a combined total heat input of 27.72 million British thermal units per hour.

(d) Two (2) diesel fuel reciprocating internal combustion engine test stands, known as EUTS1 and EU-TS2, with a heat input rating of 0.008 million British thermal units per hour, capacity: 22 engines per hour.

~~(e) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03A, installed in 1960, exhausted to Stack B1, rated at 36 million British thermal units per hour.~~

(e) Four (4) diesel containerized production cells, known as EU-09, EU-10, EU-11, EU-12, approved for construction in 2008, each with a rated capacity of 450 HP.

(f) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03B, installed in 1961, exhausted to Stack B1, rated at 36 million British thermal units per hour.

(g) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03C, installed in 1951, exhausted to Stack B2, rated at 21 million British thermal units per hour.

~~(h) One (1) natural gas-fired boiler, known as EU-03D, installed in 1985, exhausted to Stack B2, rated at 50 million British thermal units per hour.~~

(h) Four (4) electric motor-powered engine test cells, known as EU-13, EU-14, EU-15, EU-16, approved for construction in 2008. The cells power four (4) diesel engines, each with a maximum heat input of 1.0 MMBtu/hr. The combined maximum capacity of diesel fuel usage by the test cells is 0.055 gallons per hour (485.8 gallons of diesel fuel per year).

(i) One (1) heavy duty robotic paint line, known as EU-04, installed in 1997, exhausted to Stacks RB, MB-1 and MB-2, capacity: 20 engines per hour, consisting of:

(1) One (1) robotic paint booth, equipped with electrostatic application system and dry filters for overspray control, and

(2) One (1) manual paint booth, equipped with electrostatic application system and dry filters for overspray control.

A.3 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 as defined in 326 IAC 2-7-1 (21):

. . .

(t) Make up air units, approved for construction in 2008, with at combined total heat input of less than 10 MMBtu/hr.

. . .

SECTION D.1 FACILITY OPERATION CONDITIONS

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

~~(a) One (1) Mod spray booth known as EU-01E, installed in 1963, equipped with one (1) conventional air applicator, exhausted to Stack MOD, capacity: 2 engines or 2 machined parts per hour.~~

(i) One (1) heavy duty robotic paint line, known as EU-04, installed in 1997, exhausted to Stacks RB, MB-1 and MB-2, capacity: 20 engines per hour, consisting of:

(1) One (1) robotic paint booth, equipped with electrostatic application system and dry filters for overspray control, and

(2) One (1) manual paint booth, equipped with electrostatic application system and dry filters for overspray control.

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

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

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts or products may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of 3.5 pounds of VOC per gallon of coating excluding water for extreme performance coatings, delivered to spray applicator~~s in EU-01E and~~ EU-04.

(b) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), solvent sprayed from the application equipment during clean up 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.

. . .

D.1.5 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 ~~EU-01E and~~ EU-04 and any control devices.

. . .

SECTION D.2 FACILITY OPERATION CONDITIONS

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

(a) One (1) diesel fuel endurance test cell, known as EU-04, approved for construction in 2008, with a rated capacity of 500 HP.

(b) Ten (10) diesel fuel endurance test cells, known as EU-02A, installed in 1974 or prior, exhausted to Stacks 101-103, 601-603, and 1-4, with a combined total heat input of 33.73 million British thermal units per hour.

(c) Twelve (12) diesel fuel production test cells, known as EU-02B, installed in 1974 or prior, exhausted to stacks 201-203, 301-303, 401-403, and 501-503, with a combined total heat input of 27.72 million British thermal units per hour**.**

(d) Two (2) diesel fuel reciprocating internal combustion engine test stands, known as EU-TS1 and EU-TS2, with a heat input rating of 0.008 million British thermal units per hour, capacity: 22 engines per hour.

(e) Four (4) diesel containerized production cells, known as EU-09, EU-10, EU-11, EU-12, approved for construction in 2008, each with a rated capacity of 450 HP.

(h) Four (4) electric motor-powered engine test cells, known as EU-13, EU-14, EU-15, EU-16, approved for construction in 2008. The cells power four (4) diesel engines, each with a maximum heat input of 1.0 MMBtu/hr. The combined maximum capacity of diesel fuel usage by the test cells is 0.055 gallons per hour (485.8 gallons of diesel fuel per year).

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

. . .

D.2.2 PSD Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 not applicable to the modification completed pursuant to SSM 005-25493-00015:

(a) The endurance test cell (EU-04) and the containerized production cells (EU-09, EU-10, EU-11, EU-12) shall not exceed 675 kilo-gallons (kgal) of diesel fuel per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit will limit PM10 to less than 15 tons per year and will render 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

. . .

~~D.2.3~~**D.2.4** 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 EU-02A, EU-02B, EU-TS1**,** ~~and~~ EU-TS2**, EU-04, EU-09, EU-10, EU-11, EU-12** and their control devices.

. . .

~~D.2.6~~**D.2.7** Record Keeping Requirements

(a) To document compliance with Condition D.2.2, the Permittee shall maintain records of monthly diesel fuel usage for the endurance test cell (EU-04) and the containerized production cells (EU-09, EU-10, EU-11, EU-12).

~~(a)~~**(b)** To document compliance with Condition ~~D.2.2~~**D.2.3**, the Permittee shall maintain records in accordance with (1) through (6) 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;

(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, the natural gas-fired boiler certification does not require the certification by the Aresponsible official@ as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) 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)~~**(c)** To document compliance with Condition D.2.1(a), the Permittee shall maintain records in accordance with (1) and (2) below:

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

(2) Actual fuel oil usage since last compliance determination period and equivalent volatile organic compounds emissions.

~~(c)~~**(d)** To document compliance with Condition ~~D.2.5~~**D.2.6**, the Permittee shall maintain records of visible emission notations of the test cell stack exhausts 1 - 4, 101 -107, 201 - 207, 301 - 303, 401 - 403, 501 - 503 and 601 - 603 once per day. **The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).**

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

~~D.2.7~~**D.2.8** Reporting Requirements

A quarterly summary of the information to document compliance with Condition**s** D.2.1(a) **and D.2.2** 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 Aresponsible official@ as defined by 326 IAC 2-7-1(34).

. . .

SECTION D.3 FACILITY OPERATION CONDITIONS

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

~~(e) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03A, installed in 1960, exhausted to Stack B1, rated at 36 million British thermal units per hour.~~

(f) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03B, installed in 1961, exhausted to Stack B1, rated at 36 million British thermal units per hour.

(g) One (1) natural gas-fired boiler with No. 2 fuel oil backup, known as EU-03C, installed in 1951, exhausted to Stack B2, rated at 21 million British thermal units per hour.

~~(h) One (1) natural gas-fired boiler, known as EU-03D, installed in 1985, exhausted to Stack B2, rated at 50 million British thermal units per hour.~~

(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 Particulate Matter (PM) [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3(d), the PM emissions from boilers, ~~EU-03A,~~ EU-03B and EU-03C, shall each be limited to 0.8 pounds per million British thermal units heat input.

~~D.3.2 Particulate Matter (PM) [326 IAC 6-2-4]~~

~~Pursuant to 326 IAC 6-2-4 (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from boiler, EU-03D, shall be limited to 0.300 pounds per million British thermal units heat input as calculated by the following equation:~~

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

~~where:~~

~~Pt = Pounds of particulate matter emitted per million British thermal units.~~

~~Q = Total source maximum operating capacity rating in million British thermal units heat input. The maximum operating capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility=s operation 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.3.3~~**D.3.2** Sulfur Dioxide (SO_2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations), the SO_2 emissions from each of the ~~three (3)~~ boilers, ~~EU-03A,~~ EU-03B~~,~~ and EU-03C shall not exceed five-tenths (0.5) pound per million British thermal units heat input while combusting fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average. 326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable.

. . .

~~D.3.5~~**D.3.4** Sulfur Dioxide Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options for ~~three (3)~~ boilers~~, EU-03A,~~ EU-03B~~,~~ and EU-03C.

. . .

~~D.3.6~~**D.3.5** Visible Emissions Notations

(a) Visible emission notations of the boiler stack exhausts (B1 and B2) shall be performed once per day during normal daylight operations while combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.

. . .

~~D.3.7~~**D.3.6** Record Keeping Requirements

(a) To document compliance with Condition ~~D.3.3~~**D.3.2**, the Permittee shall maintain records in accordance with (1) through (6) 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;

(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, the natural gas-fired boiler certification does not require the certification by the Aresponsible official@ as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) 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.3.6~~**D.3.5**, the Permittee shall maintain records of visible emission notations of the boiler stack exhausts once per day. **The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).**

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

Part 70 Quarterly Report

Source Name: **Cummins Inc. - Plant #1**
Source Address: **1000 5th Street, Columbus, Indiana 47201**
Mailing Address: **P.O. Box 3005, Columbus, Indiana 47202-3005**
Part 70 Permit No.: **T 005-7433-00015**
Facilities: **Endurance test cell (EU-04) and Containerized production cells (EU-09, EU-10, EU-11, EU-12)**
Parameter: **Diesel Fuel**
Limit: **675 kilo-gallons (kgal) per twelve (12) consecutive month period total**

YEAR: _____

Month	Diesel Fuel (gallons)	Diesel Fuel (gallons)	Diesel Fuel (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.

2. The source proposes to add new equipment. The Permittee has indicated they can operate the new equipment below the Actuals PAL established by Significant Permit Modification (SPM) No.

005-25282-00015. The monitoring and reporting requirements included in Section E.1 of the SPM are sufficient for the Permittee to determine compliance with the source-wide NOx PAL. The following changes have been made in the permit as follows:

E.1.4 Nitrogen Oxides (NO_X) Emission Limit Determination [326 IAC 2-2.4-7(6) & (7)] [326 IAC 2-2.4-12]

The Permittee shall determine actual annual emissions of NOx by employing the following techniques:

(a) The Permittee shall calculate NOx emissions from burning natural gas in Boilers ~~EU-03A,~~ EU-03B~~,~~ **and** EU-03C ~~and EU-03D,~~ in tons, each calendar month, by multiplying the amount of natural gas burned in each calendar month by an NOx emission factor of 100 lb NOx/million cubic feet of natural gas burned in Boilers ~~EU-03A,~~ EU-03B~~,~~ **and** EU-03C ~~and EU-03D~~.

(b) The Permittee shall calculate NOx emissions from burning fuel oil in Boilers ~~EU-03A,~~ EU-03B~~,~~ **and** EU-03C ~~and EU-03D,~~ in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by a NOx emission factor of 20 lb NOx/1000 gallons of fuel oil burned in Boilers ~~EU-03A,~~ EU-03B~~,~~ **and** EU-03C ~~and EU-03D~~.

(c) The Permittee shall determine NOx emissions from diesel engines EU-02A, EU-03B, EUTS1**,** ~~and~~ EU-TS2, **EU-04, and EU-09 through EU-16** in tons, each calendar month, by multiplying the amount of fuel oil burned in each calendar month by a NOx emission factor of 4.41 lb NOx/million British thermal unit for diesel engines EU-02A, EU-03B, EU-TS1**,** ~~and~~ EU-TS2, **EU-04, and EU-09 through EU-16**.

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

Section E.1 – Plantwide Applicability Limitations Requirements

Source Name: Cummins Inc. - Plant #1
Source Address: 1000 5th Street, Columbus, Indiana 47201
Mailing Address: P.O. Box 3005, Columbus, Indiana 47202-3005
Part 70 Permit No.: T 005-7433-00015
Facility: Source wide
Parameter: Plantwide Emission Limits for NOx
PAL Limit: 268.71 tpy of NOx

Quarter: Year: Pollutant	Actual Emission Estimates, tons								
	Month 1	Previous 11 Months	12-month Total	Month 2	Previous 11 Months	12-month Total	Month 3	Previous 11 Months	12-month total
Endurance Test Cells (EU-02A, EU-04)									
NOx									
Performance and Production Test Cells (EU-02B, EU-09, EU-10, EU-11, EU-12)									
NOx									
Test Stands (EU-TS1, EU-TS2, EU-13, EU-14, EU-15, EU-16)									
NOx									
Boilers ~~(EU-03A - EU-03D)~~ (EU-03B - EU-03C)									
NOx									
TOTAL NOx									

☐ 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.

Conclusion and Recommendation

The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 005-25493-00015. The staff recommends to the Commissioner that this Part 70 Significant Source Modification be approved.

Appendix A: Emission Calculations
Industrial Engine Test Cells

Company Name: Cummins Inc. - Plant #1
Address: 1000 5th Street, Columbus, Indiana 47201
Significant Source Modification: 005-25493-00015
Reviewer: ERG/BL
Date: November 26, 2007

Industrial Engine Test Cells:
One (1) endurance test cell, rated at 500 HP
Four (4) containerized production cells, each rated at 450 HP.

Total Heat Output Hp	Total Heat Input * MMBtu/hr	Fuel Usage kgal/yr	Engine Efficiency *
2,300	15.4	964	0.38

	Pollutant					
	PM	PM10	SO_2	NOx	VOC	CO
Emission Factor in lb/MMBtu, input	0.31	0.31	0.29	4.41	0.36	0.95
Potential to Emit in tons/yr	20.9	20.9	19.6	298	24.3	64.1

* Engine efficiency provided by the Permittee 38 percent.

Emission Factors are from AP 42, Chapter 3.3 Gasoline And Diesel Industrial Engines, Tables 3.3-1 and 3.3-2 (SCC 2-02-001-02, 2-03-001-01, Diesel engines) [Supplement B, October 1996].

Methodology
Total Heat Input (MMBtu/hr) = Total Heat Output (Hp) / Engine Efficiency x 2545.1 Btu/Hp x 1 MMBtu/1,000,000 Btu
Fuel Usage (gal/yr) = Total Heat Input (MMBtu/hr) x 1,000,000 Btu/1 MMBtu x 1 gal/140,000 Btu x 8,760 hrs/yr x 1kgal/1,000 gal
Potential to Emit (tons/yr) = Total Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x 1 ton/2,000 lb x 8,760 hrs/yr

See page 2 for HAP emission calculations.

Appendix A: HAP Emission Calculations
Industrial Engine Test Cells

Company Name: Cummins Inc. - Plant #1
Address: 1000 5th Street, Columbus, Indiana 47201
Significant Source Modification: 005-25493-00015
Reviewer: ERG/BL
Date: November 26, 2007

	HAPs					
	Benzene	Toluene	Xylenes	Propylene	Formaldehyde	Total HAPs
Emission Factor in lb/MMBtu, input	9.3E-04	4.1E-04	2.9E-04	2.6E-03	1.2E-03	6.4E-03
Limited Potential to Emit in tons/yr	0.06	0.03	0.02	0.17	0.08	0.43

Methodology
Potential to Emit (tons/yr) = Total Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x 1 ton/2,000 lb x 8,760 hrs/yr

Appendix A: Emission Calculations
Industrial Engine Test Cells

Company Name: Cummins Inc. - Plant #1
Address: 1000 5th Street, Columbus, Indiana 47201
Significant Source Modification: 005-25493-00015
Reviewer: ERG/BL
Date: November 26, 2007

Industrial Engine Test Cells:
One (1) endurance test cell, rated at 500 HP
Four (4) containerized production cells, each rated at 450 HP.

Total Heat Output Hp	Limited Heat Input * MMBtu/hr	Limited Fuel Usage kgal/yr	Engine Efficiency *
2,300	10.8	675	0.38

	Pollutant					
	PM	PM10	SO_2	NOx	VOC	CO
Emission Factor in lb/MMBtu, input	0.31	0.31	0.29	4.41	0.36	0.95
Limited Potential to Emit in tons/yr	14.6	14.6	13.7	208	17.0	44.9

* Engine efficiency provided by the Permittee 38 percent.

Emission Factors are from AP 42, Chapter 3.3 Gasoline And Diesel Industrial Engines, Tables 3.3-1 and 3.3-2 (SCC 2-02-001-02, 2-03-001-01, Diesel engines) [Supplement B, October 1996].

Methodology
Limited Heat Input (MMBtu/hr) = Limited Fuel Usage (kgal/yr) x 1,000 gal/kgal x 140,000 Btu/gal x MMBtu/1,000,000 Btu x 1yr/8,760 hrs
Limited Potential to Emit (tons/yr) = Limited Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x 1 ton/2,000 lb x 8,760 hrs/yr

See page 4 for HAP emission calculations.

Appendix A: HAP Emission Calculations
Industrial Engine Test Cells

Company Name: Cummins Inc. - Plant #1
Address: 1000 5th Street, Columbus, Indiana 47201
Significant Source Modification: 005-25493-00015
Reviewer: ERG/BL
Date: November 26, 2007

	HAPs					
	Benzene	Toluene	Xylenes	Propylene	Formaldehyde	Total HAPs
Emission Factor in lb/MMBtu, input	9.3E-04	4.1E-04	2.9E-04	2.6E-03	1.2E-03	6.4E-03
Limited Potential to Emit in tons/yr	0.04	0.02	0.01	0.12	0.06	0.30

Methodology
Limited Potential to Emit (tons/yr) = Limited Heat Input (MMBtu/hr) x Emission Factor (lb/MMBtu) x 1 ton/2,000 lb x 8,760 hrs/yr

Appendix A: Emission Calculations
Electric Powered Industrial Engine Test Cells

Company Name: Cummins Inc. - Plant #1
Address: 1000 5th Street, Columbus, Indiana 47201
Significant Source Modification: 005-25493-00015
Reviewer: ERG/BL
Date: November 26, 2007

Four (4) electric motor-powered engine test cells

Total Heat Input MMBtu/hr	Total Heat Input MMBtu/yr	Fuel Usage * gal/yr
0.01	68.0	486

	Pollutant					
	PM	PM10	SO_2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.29	4.41	0.35	0.95
Potential to Emit in tons/yr	0.01	0.01	0.01	0.15	0.01	0.03

* These test cells are turned over by an electric motor instead of using fuel for combustion. They use a little bit of fuel because fuel is misted through a certain engine component, approximately a tablespoon is used in each test. The permittee has provided the total maximum capacity of 485.8 gallons of diesel fuel per year for the four (4) electric motor-powered engines. To calculate a heat input IDEM assumed the thermal value of diesel fuel is 140,000 Btu per gallon.

Emission Factors are from AP 42, Chapter 3.3 Gasoline And Diesel Industrial Engines, Tables 3.3-1 and 3.3-2 (SCC 2-02-001-02, 2-03-001-01, Diesel engines) [Supplement B, October 1996].

Methodology
Total Heat Input (MMBtu/yr) = Fuel Usage (gal/yr) x 140,000 Btu/gal x 1 MMBtu/1,000,000 Btu
Total Heat Input (MMBtu/hr) = Total Heat Input (MMBtu/yr) x 1 yr/8,760 hrs
Potential to Emit (tons/yr) = Total Heat Input (MMBtu/yr) x Emission Factor (lb/MMBtu) x 1 ton/2,000 lb

See page 6 for HAP emission calculations.

Appendix A: HAP Emission Calculations
Electric Powered Industrial Engine Test Cells

Company Name: Cummins Inc. - Plant #1
Address: 1000 5th Street, Columbus, Indiana 47201
Significant Source Modification: 005-25493-00015
Reviewer: ERG/BL
Date: November 26, 2007

	HAPs					
	Benzene	Toluene	Xylenes	Propylene	Formaldehyde	Total HAPs
Emission Factor in lb/MMBtu	9.3E-04	4.1E-04	2.9E-04	2.6E-03	1.2E-03	6.4E-03
Limited Potential to Emit in tons/yr	3.2E-05	1.4E-05	9.7E-06	8.8E-05	4.0E-05	2.2E-04

Methodology
Potential to Emit (tons/yr) = Total Heat Input (MMBtu/yr) x Emission Factor (lb/MMBtu) x 1 ton/2,000 lb

Appendix A: Emission Calculations
Summary

Company Name: Cummins Inc. - Plant #1
Address: 1000 5th Street, Columbus, Indiana 47201
Significant Source Modification: 005-25493-00015
Reviewer: ERG/BL
Date: November 26, 2007

1. Unlimited Potential to Emit of the Proposed Modification

	Pollutant (tons/yr)							
	PM	PM10	SO_2	NOx	VOC	CO	Single HAP	Total HAPs
Diesel Test Cells (at 964 kgal/yr)	20.9	20.9	19.6	298	24.3	64.1	0.17	0.43
Electric Powered Test Cells	0.01	0.01	0.01	0.15	0.01	0.03	8.8E-05	1.8E-04
Total	20.9	20.9	19.6	298	24.3	64.1	0.17	0.43

2. Limited Potential to Emit of The Proposed Modification

	Pollutant (tons/yr)							
	PM	PM10	SO_2	NOx	VOC	CO	Single HAP	Total HAPs
Diesel Test Cells (at 675 kgal/yr)	14.6	14.6	13.7	208	17.0	44.9	0.12	0.30
Electric Powered Test Cells	0.01	0.01	0.01	0.15	0.01	0.03	8.8E-05	1.8E-04
Total	14.7	14.7	13.7	209	17.0	44.9	0.12	0.30