INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To:	Interested Parties
Date:	October 7, 2014
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	Cummins, Inc.
Permit Level:	Title V- SPM
Permit Number:	071-34122-00015
Source Location:	800 E Third Street
Type of Action Taken:	Modification at an existing source

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 matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 34122.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) 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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

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

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov
Michael R. Pence
Governor
Thomas W. Easterly
Commissioner

Mr. David Wehrkamp
Cummins Inc., Seymour Engine Plant
800 East Third Street
Seymour, IN 47274

October 7,2014

Re: 071-34122-00015
Significant Permit Modification to
Part 70 Renewal No.: T071-30358-00015

Dear Mr. Wehrkamp,

Cummins Inc., Seymour Engine Plant was issued a Part 70 Operating Permit Renewal No. 071-30358-00015 on November 29, 2011 for a stationary internal combustion engine manufacturer plant located at 800 E. Third Street, Seymour, IN 47274. An application requesting changes to this permit was received on January 10, 2014. Pursuant to the provisions of 326 IAC 2-7-12, a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

Please find attached the entire Part 70 Operating Permit as modified. The permit references the below listed attachments. Since these attachments have been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of these attachments with this modification:

Attachment A: 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.
Attachment B: 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
Attachment C: 40 CFR 63, Subpart ZZZZ, National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
Attachment D: 40 CFR 63, Subpart HHHHHH, National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.

Previously issued approvals for this source containing these attachments are available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Deena Patton, of my staff, at 317-234-5400 or 1-800-451-6027, and ask for extension 4-5400.

Sincerely,

Tripurari P. Sinha, Ph. D,
Section Chief
Permits Branch
Office of Air Quality

Attachment(s): Updated Permit, Technical Support Document and Appendix A

TS/dp

cc: File - Jackson County
Jackson County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
IDEM Southeast Regional Office

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

Part 70 Operating Permit Renewal

OFFICE OF AIR QUALITY

Cummins Inc., Seymour Engine Plant
800 E. Third Street
Seymour, IN 47274

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

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

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

Operation Permit No.: T071-30358-00015	
Issued by: Original Signed Tripurari Sinha, Ph.D., Section Chief Permits Branch, Office of Air Quality	Issuance Date: November 29, 2011 Expiration Date: November 29, 2016

Significant Source Modification No. 071-30956-00015, issued on February 20, 2012
Significant Permit Modification No. 071-30962-00015, issued on March 8, 2012
Administrative Amendment No. 071-32100-00015, issued on July 19, 2012
Minor Source Modification No. 071-32374-00015, issued on October 23, 2012
Significant Permit Modification No. 071-32412-00015, issued on January 10, 2013
Administrative Amendment No. 071-32763-00015, issued on January 28, 2013
Minor Source Modification No. 071-32823-00015, issued on April 11, 2013
Significant Permit Modification No. 071-32903-00015, issued on June 2, 2013
Administrative Amendment No. 071-33400-00015, issued on July 31, 2013
Significant Source Modification No. 071-33555-00015, issued on January 22, 2014
Significant Permit Modification No. 071-33585-00015, issued on February 7, 2014

Fifth Significant Permit Modification No.: 071-34122-00015	
Issued by: Tripurari Sinha, Ph. D., Section Chief, Permits Branch Office of Air Quality	Issuance Date: October 7, 2014 Expiration Date: November 29, 2016

TABLE OF CONTENTS

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(14)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary internal combustion engine manufacturing plant, for which the testing and painting of the product is included.

Source Address:	800 East Third Street, Seymour, Indiana 47274
General Source Phone Number:	(812) 524-6325
SIC Code:	3519
County Location:	Jackson
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source under PSD; Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

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

(a) One (1) paint spray line, identified as EU-01, consisting of the following equipment:

(1) Two (2) primer and topcoat spray booths, identified as EU-01G and EU-01H, approved for construction in 2011, each with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S9.1 and S9.2, for EU-01G and stacks S10.1 and S10.2 for EU-01H.

(2) One (1) offline spray booth, identified as EU-01I, approved for construction in 2011, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S11.1 and S11.2.

(3) One (1) primer and topcoat spray booth, identified as EU-01J, approved for construction in 2011, with a maximum capacity of 0.5 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S12.1 and S12.2.

(4) One (1) primer and topcoat spray booth, identified as EU-01K, approved for construction in 2011, with a maximum capacity of 0.5 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S13.1 and S13.2.

(b) The test cells described in the table below:

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
801	Production	Diesel	1650		1978	801.1 - 801.2
802	Production	Diesel	1650		1978	802.1 - 802.2

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
803	Production	Diesel	1650		1978	802.1 - 803.2
804	Production	Diesel	1650		1978	804
805	Production	Diesel	1650		1978	805
806	Engineering	Diesel Biodiesel LPG Natural gas	1800		1978	806
807	Engineering	Diesel Biodiesel LPG Natural gas	1800		1978	807
808	Production	Diesel Natural gas	1650		1978	808
Test Pad 8	Engineering	Diesel Biodiesel LPG Natural gas	3000 3000 2200 2200		1978	PD8.1 and PD8.2
Test Pad 9	Engineering	Diesel Biodiesel LPG Natural gas	4500 4500 2200 2200		2005	PD9.1 and PD9.2
Test Pad 10	Engineering	Diesel Biodiesel LPG Natural gas	1850 1850 1850 1850		????	PD10.1
Test Pad 11	Engineering	Diesel Biodiesel LPG Natural gas	1850 1850 1850 1850		????	PD11.1
HHP1	Engineering	Diesel Biodiesel Natural gas NG + CO2 Hydrogen LPG	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	1978/modified 2011	HHP.1
HHP2	Engineering	Diesel Biodiesel	4500		1978	HHP.2
HHP3	Engineering	Diesel Biodiesel LPG Natural gas	4500		1978	HHP3.1 and HHP3.2
HHP4	Engineering	Diesel Biodiesel LPG Natural gas	2200	Vent uncontrolled NG or LPG for 24 hrs/yr	1978	HHP4.1 and HHP4.2

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
HHP5	Engineering	Diesel Biodiesel LPG Natural gas	2200 2200 600 600		1978	HHP5.1 and HHP5.2
HHP6	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr	2011	HHP6.1
HHP7	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP7.1
HHP8	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP8.1
HHP9	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP9.1
HHP10	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr	2011	HHP10.1
HHP11	Production	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP11.1
HHP12	Production	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP12.1
HHP13	Production	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP13.1

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
HHP14	Production	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP14.1
HHP15	Production	Diesel Biodiesel Natural gas	9000	SCR Catalytic oxidation 5.0 MMBtu Duct Burner	2014	HHP15.1
HHP16	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 5.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr	2014	HHP16.1
HHP17	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 5.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr	2014	HHP17.1

(c) The natural gas-fired boilers described in the table below:

Boiler Group	Identification number	Capacity	Controls	Construction date	Stack
1	EU03C EU03D EU03L EU03M EU03S EU03T EU03U EU03V	2.0 MMBtu/hr each		2011	
	EU03X	4.2 MMBtu/hr		2011	
2	EU03I EU03J	4.0 MMBtu/hr each		2012	
	EU03K	3.2 MMBtu/hr		2012	
3	EU03E EU03F EU03G EU03H EU03R	3.0 MMBtu/hr each	Low-NOx burners	2012	
	EU03N EU03O EU03P EU03Q	3.5 MMBtu/hr each	Low-NOx burners	2012	

Boiler Group	Identification number	Capacity	Controls	Construction date	Stack
4	EU03Y EU03Z	3.0 MMBtu/hr each		2014	

(d) The natural gas-fired combustion sources listed in the table below:

Natural gas-fired equipment Group	Quantity	Type	Capacity	Construction date
Hedgehog expansion natural gas heating units (Group 1)	4	Direct fired air handling unit	0.47 MMBtu/hr each	2012
	1	Direct fired air handling unit	0.80 MMBtu/hr	2012
	1	Direct fired air handling unit	0.67 MMBtu/hr	2012
	2	Direct fired air handling unit	0.30 MMBtu/hr each	2012
	2	Direct fired air handling unit	2.72 MMBtu/hr each	2012
	1	Direct fired air handling unit	2.59 MMBtu/hr	2012
	2	Direct fired air handling unit with Low-NOx burner	3.27 MMBtu/hr each	2012
	8	Unit heaters	0.15 MMBtu/hr each	2012
	9	Unit heaters	0.18 MMBtu/hr each	2012
Hedgehog expansion drying and curing ovens (Group 2)	2	Drying and curing combustion units	2.4 MMBtu/hr each	2012
	2	Drying and curing combustion units with Low-NOx burner	1.76 MMBtu/hr each	2012
Natural gas heating units (Group 3)	17	Direct fired air handling units	25.5 MMBtu/hr total	2013
	1	Unit heater	0.40 MMBtu/hr	2013
HHP16/HHP17 expansion combustion units (Group 4)	1	Direct fired air handling unit	0.34 MMBtu/hr	2014
	3	Unit heaters	0.175 MMBtu/hr each	2014
	1	Propane vaporizer	0.50 MMBtu/hr	2014

(e) One (1) Hedgehog Block Line Facility, approved for construction in 2013, and consisting of the following units:

(1) Four (4) engine block boring and machining operations, with a max operation of 3.0 engine blocks per day, using a demister as control, and exhausting indoors.

(2) One (1) engine block washing operation, with a max operation of 3.0 engine blocks per day, using a demister as control, and exhausting to BLW 1.1

(3) One (1) emergency diesel generator, identified as emergency generator, with a rating of 967 hp, and exhausting outdoors;

(4) One (1) emergency diesel fire pump, identified as fire pump, with a rating of 175

hp, and exhausting outdoors;

(5) Fourteen (14) natural gas combustion units, consisting of the following:

(A) Two (2) direct fired roof top units, identified as RTU-1 and RTU-2, each with a heat capacity of 3.00 MMBtu/hr, each using no controls, and each exhausting outdoors;

(B) One (1) Indirect fired air handler unit, identified as AHU-1, with a heat capacity of 0.25 MMBtu/hr, using no controls, and exhausting outdoors;

(C) Six (6) Unit heaters, identified as UH-1 through UH-6, each with a heat capacity of 0.20 MMBtu/hr, each using no controls, and each exhausting outdoors;

(D) Five (5) Dock heaters, identified as DH-1 through DH-5, each with a heat capacity of 1.00 MMBtu/hr, each using no controls, and each exhausting outdoors.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

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

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

(b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3];

(c) Sources that have the potential to emit less than five (5) tons per year of particulate matter (PM) (326 IAC 2-1.1-3(e)(1)(a));

(i) 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]; and

(d) One (1) 25,000 gallon No.2 diesel storage tank, constructed in 1998

(e) One (1) 20,000 gallon No.2 diesel storage tank, constructed in 2011

(f) One (1) 100,000 gallon No 2 diesel storage tank, approved for construction in 2011

(g) One (1) emergency diesel powered generator permitted in 2011, with maximum output capacity of 1490 horse power. [Under 40 CFR 60, Subpart IIII, the emergency generator is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, the emergency generator is considered a new affected source.].

(h) One (1) emergency diesel powered fire pump engine constructed in 1994, with maximum output capacity of 208 horse power. [Under 40 CFR 63, Subpart ZZZZ, the fire pump engine is considered an existing affected source.].

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

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

(a) The Part 70 Operating Permit Renewal, T071-30358-00015, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

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

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

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

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

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

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

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

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

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)] [326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

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

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

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

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

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

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

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

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

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T071-30358-00015 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

(1) That this permit contains a material mistake.

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

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

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

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

B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

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

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

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

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

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee’s right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Particulate Emission Limitations for Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

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

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

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

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

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

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Stack Height [326 IAC 1-7]

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

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140.

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

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

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

Compliance Requirements [**326 IAC 2-1.1-11]**

C.8 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)] [40 CFR 64]

(a) For new units:

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) **For existing units:**

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.10 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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

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

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

C.11 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

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

C.12 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]

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

C.13 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

(l) Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

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

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

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

(1) monitoring results;

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

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

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

(e) The Permittee shall record the reasonable response steps taken.

(II)

(a) CAM Response to excursions or exceedances.

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring

results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) CAM recordkeeping requirements.

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on

alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.15 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

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

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

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

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2] [326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable
(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, document and maintain the following records:

(A) A description of the project.

(B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

(C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

(i) Baseline actual emissions;

(ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1(kk)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation

(PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 2-3] [40 CFR 64][326 IAC 3-8]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report

and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

(b) The address for report submittal is:

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

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

(d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(qq) and/or 326 IAC 2-3-1(ll) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C - General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(xx) and/or 326 IAC 2-3-1(qq), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(f) The report for project at an existing emissions unit shall be submitted within sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2 (c) (3).

(4) Any other information that the Permittee deems fit to include in this report.

Reports required in this part shall be submitted to:

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

(g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C - General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

C.18 Reserved

Stratospheric Ozone Protection

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

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

SECTION D.0 HAP Limits

Emissions Unit Description:

(a) Entire Source

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

D.0.1 HAPs Minor Limits [40 CFR 63] [326 IAC 20] [326 IAC 4.1]

The Permittee shall comply with the following:

(a) Emissions of glycol ethers from the paint spray line shall not exceed six (6) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Natural gas combustion by engines in all the test cells at the plant shall be limited to 265 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The emissions of formaldehyde from the natural gas combustion shall not exceed 52.8 lb per million cubic feet.

Compliance with these limits and the potential to emit of HAPs from all other emission units and for all other HAPs at this source, will limit the source-wide emissions of HAPs to less than ten (10) tons of a single HAP and less than twenty-five (25) tons of a combination of HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1, not applicable to this source and make the source an area source of HAPs.

D.0.2 Compliance Determination Requirements

(a) To demonstrate compliance with the limit in Condition D.0.1(a), the Permittee shall determine the following for each calendar month:

(1) The amount of each coating applied;
(2) The amount of clean up or dilution solvent used;
(3) The glycol ether content in the coatings applied and solvents used.

(b) To demonstrate compliance with the limit in Condition D.0.1(b), the Permittee shall determine the amount of natural gas burned in the test cells for each calendar month and each 12 consecutive month period.

D.0.3 Record Keeping Requirements

(a) To document compliance with the limit in Condition D.0.1(a), the Permittee maintain records, including purchase orders, invoices, and material safety data sheets, of the following for each calendar month:

(1) The amount of each coating applied;
(2) The amount of clean up or dilution solvent used;
(3) The glycol ether content in the coatings applied and solvents used.

(b) To demonstrate compliance with the limit in Condition D.0.1(b), the Permittee shall maintain records of the amount of natural gas burned in the test cells for each calendar month.

(c) Section C – General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.0.4 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.0.1(b) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.1 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

(a) One (1) paint spray line, identified as EU-01, consisting of the following equipment:

(1) Two (2) primer and topcoat spray booths, identified as EU-01G and EU-01H, approved for construction in 2011, each with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S9.1 and S9.2, for EU-01G and stacks S10.1 and S10.2 for EU-01H.

(2) One (1) offline spray booth, identified as EU-01I, approved for construction in 2011, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S11.1 and S11.2.

(3) One (1) primer and topcoat spray booth, identified as EU-01J, approved for construction in 2011, with a maximum capacity of 0.5 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S12.1 and S12.2.

(4) One (1) primer and topcoat spray booth, identified as EU-01K, approved for construction in 2011, with a maximum capacity of 0.5 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S13.1 and S13.2.

(b) The test cells described in the table below:

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
HHP1	Engineering	Diesel Biodiesel Natural gas NG + CO2 Hydrogen LPG	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	1978/modified 2011	HHP.1
HHP6	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr	2011	HHP6.1
HHP7	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP7.1
HHP8	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP8.1

HHP9	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP9.1
HHP10	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr	2011	HHP10.1
HHP11	Production	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP11.1
HHP12	Production	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP12.1
HHP13	Production	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP13.1
HHP14	Production	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 2.0 MMBtu Duct Burner	2011	HHP14.1

(c) The natural gas-fired boilers described in the table below:

Boiler Group	Identification number	Capacity	Controls	Construction date	Stack
1	EU03C EU03D EU03L EU03M EU03S EU03T EU03U EU03V	2.0 MMBtu/hr each		2011	
	EU03X	4.2 MMBtu/hr		2011	
2	EU03I EU03J	4.0 MMBtu/hr each		2012	

	EU03K	3.2 MMBtu/hr		2012	
3	EU03E EU03F EU03G EU03H EU03R	3.0 MMBtu/hr each	Low-NOx burners	2012	
	EU03N EU03O EU03P EU03Q	3.5 MMBtu/hr each	Low-NOx burners	2012	

(d) The natural gas-fired combustion sources listed in the table below:

Natural gas-fired equipment Group	Quantity	Type	Capacity	Construction date
Hedgehog expansion natural gas heating units (Group 1)	4	Direct fired air handling unit	0.47 MMBtu/hr each	2012
	1	Direct fired air handling unit	0.80 MMBtu/hr	2012
	1	Direct fired air handling unit	0.67 MMBtu/hr	2012
	2	Direct fired air handling unit	0.30 MMBtu/hr each	2012
	2	Direct fired air handling unit	2.72 MMBtu/hr each	2012
	1	Direct fired air handling unit	2.59 MMBtu/hr	2012
	2	Direct fired air handling unit with Low-NOx burner	3.27 MMBtu/hr each	2012
	8	Unit heaters	0.15 MMBtu/hr each	2012
	9	Unit heaters	0.18 MMBtu/hr each	2012
Hedgehog expansion drying and curing ovens (Group 2)	2	Drying and curing combustion units	2.4 MMBtu/hr each	2012
	2	Drying and curing combustion units with Low-NOx burner	1.76 MMBtu/hr each	2012

(g) One (1) emergency diesel powered generator permitted in 2011, with maximum output capacity of 1490 horse power. [Under 40 CFR 60, Subpart IIII, the emergency generator is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, the emergency generator is considered a new affected source.].

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

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

D.1.1 Particulate Emission Limitations Work Practices, and Control Technologies [326 IAC 6-3-2(d)]

Pursuant to 326 IAC 6-3-2(d) (Particulate emission limitations, work practices, and control technologies), the particulate matter from EU-01G, EU-01H, EU-01I, EU-01J and EU-01K shall be controlled by a dry filter, and the Permittee shall operate the control device in accordance with the manufacturer's specifications.

D.1.2 Particulate Emission Limitations for Sources of Indirect Heating Matter (PM) Limitation [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the boilers known as Boiler Group 1 shall each be limited to 0.338 pounds per MMBtu heat input.

(b) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the boilers known as Boiler Group 2 shall each be limited to 0.374 pounds per MMBtu heat input.

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, the volatile organic compound (VOC) emissions from the paint lines shall not exceed four and three-tenths (4.3) pounds per gallon (excluding water) for clear coatings, three and five-tenths (3.5) pounds per gallon (excluding water) for coatings that are air dried or force warm air dried, three and five-tenths (3.5) pounds per gallon (excluding water) for extreme performance coatings, and three (3.0) pounds per gallon (excluding water) for all other coatings.

D.1.4 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not be limited to, the following:

(1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(4) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(5) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

D.1.5 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

(a) The total CO emissions from the ten (10) test cells HHP1, HHP6, HHP7, HHP8, HHP9, HHP10, HHP11, HHP12, HHP13, and HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2 shall not exceed 243 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total NOx emissions from the ten (10) test cells HHP1, HHP6, HHP7, HHP8, HHP9, HHP10, HHP11, HHP12, HHP13, and HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2 shall not exceed 243 tons per twelve (12) consecutive month period with compliance determined at the end of each

month.

(c) The total VOC emissions from the paint booths, the ten (10) test cells HHP1, HHP6, HHP7, HHP8, HHP9, HHP10, HHP11, HHP12, HHP13, and HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2 shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit the emissions of CO, NOx, and VOC emissions to less than two hundred and fifty (250) tons per year, each and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the Hedgehog expansion project in year 2011.

(d) The total CO2e emissions from the ten (10) test cells HHP1, HHP6, HHP7, HHP8, HHP9, HHP10, HHP11, HHP12, HHP13, and HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2 shall not exceed 99,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this emission limit will limit the potential to emit CO2e to less than 100,000 tons, per year and render the requirements of 326 IAC 2-2, not applicable the Hedgehog expansion project.

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

(a) A Preventive Maintenance Plan is required for each of the five (5) spray booths, EU-01G, EU-01H, EU-01I, EU-01J and EU-01K, and the dry filters.

(b) A Preventive Maintenance Plan is required for the engine test cells HHP1, HHP6-HHP14 and their respective control devices.

(c) Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to preventive maintenance plans.

Compliance Determination Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] [40 CFR 64]

D.1.7 Particulate Control [326 IAC 2-7-6(6)]

The dry filters for particulate control shall be in operation and controlling particulate, at all times when spray booths EU-01G, EU-01H, EU-01I, EU-01J and EU-01K are in operation.

D.1.8 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

Compliance with the VOC content contained in condition D.1.2 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 (and local agency if applicable) reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.9 Carbon Monoxide (CO) Control

In order to ensure compliance with Condition D.1.5 (a), the CO emissions from each test cell shall be controlled with an oxidation catalyst. The tests cells may be operated without the DOC control system with emissions reported as specified in Condition D.1.10.

D.1.10 Carbon Monoxide (CO) Emission Limit Determination

In order to demonstrate compliance with the CO emission limit in Condition D.1.5(a), the Permittee shall determine actual CO emissions as the sum of the following quantities:

(a) Test cells fuel combustion: CO emissions from test cells HHP1 and HHP6-HHP14 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific/temperature zone specific CO emission factor pursuant to this general equation:

Monthly CO emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific CO emission factor in lb CO/unit of fuel

Total monthly CO emissions from the test cells shall be the sum of the individual monthly CO emissions for each fuel burned in the test cell, as illustrated in the table at the end of this condition.

If CO emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific CO emission factor.

(b) Other fuel combustion equipment: CO emissions from combustion of fuel in the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate CO emission factor pursuant to this general equation:

Monthly CO emissions = Monthly fuel usage X emission factor in lb CO/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly CO emissions
HHP1 HHP6 HHP7 HHP8 HHP9 HHP10 HHP11 HHP12 HHP13 HHP14	Diesel fuel (gallons)	CO-TZ1DieselEf	
	Diesel fuel (gallons)	CO-TZ2DieselEf	
	Diesel fuel (gallons)	CO-TZ3DieselEf	
	Diesel fuel (gallons)	CO-DieselEf-uncontrolled	
	Biodiesel fuel (gallons)	CO- TZ1BDieselEf	
	Biodiesel fuel (gallons)	CO- TZ2BDieselEf	
	Biodiesel fuel (gallons)	CO- TZ3BDieselEf	
	Biodiesel fuel (gallons)	CO-BDieselEf-uncontrolled	
	Natural gas (mmcf)	CO-TZ1NatGasEf	
	Natural gas (mmcf)	CO-TZ2NatGasEf	
	Natural gas (mmcf)	CO-TZ3NatGasEf	
	Natural gas (mmcf)	CO-NatGasEf-uncontrolled	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ1LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ2LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ3LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-LPEf-uncontrolled	

HHP1, HHP6-HHP14 duct burners, Boiler Groups 1, 2, and 3, Natural gas heating units (Group 1) and Drying and Curing ovens (Group 2)	Natural gas (mmcf)	CO-EPA-NatGasEf = 84 lb/mmcf	
Main plant diesel fired emergency generator	Diesel fuel (gallons)	CO-EPA-DieselEF = 0.95 lb/mmbtu	
		Total Monthly CO emissions	

D.1.11 Nitrogen Oxides (NOx) Control

In order to demonstrate compliance with Condition D.1.5 (b), the NOx emissions from each test cell shall be controlled with a selective catalytic reduction system (SCR). The tests cells may be operated without the SCR control system with emissions reported as specified in D.1.12.

D.1.12 Nitrogen Oxides (NOx) Emission Limit Determination

In order to demonstrate compliance with the NOx emission limit in Condition D.1.5(b), the Permittee shall determine actual NOx emissions as the sum of the following quantities:

(a) Test cells fuel combustion: NOx emissions from test cells HHP1 and HHP6-HHP14 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific/temperature zone specific NOx emission factor pursuant to this general equation:

Monthly NOx emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific NOx emission factor in lb NOx/unit of fuel

Total monthly NOx emissions from the test cells shall be the sum of the individual monthly NOx emissions for each fuel burned in the test cell, as illustrated in the table at the end of this condition.

If NOx emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific NOx emission factor.

(b) Other fuel combustion equipment: NOx emissions from combustion of fuel in the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator are determined for each calendar month by a calculation using the monthly fuel usage by the appropriate NOx emission factor pursuant to this general equation:

Monthly NOx emissions = Monthly fuel usage X emission factor in lb NOx/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly NOx emissions
HHP1 HHP6 HHP7 HHP8 HHP9 HHP10 HHP11 HHP12 HHP13	Diesel fuel (gallons)	NOx-TZ1DieselEf	
	Diesel fuel (gallons)	NOx-TZ2DieselEf	
	Diesel fuel (gallons)	NOx-TZ3DieselEf	
	Diesel fuel (gallons)	NOx-TZ4DieselEf	
	Diesel fuel (gallons)	NOx-TZ5DieselEf	
	Diesel fuel (gallons)	NOx-TZ6DieselEf	
	Diesel fuel (gallons)	NOx-TZ7DieselEf	

HHP14	Diesel fuel (gallons)	NOx-DieselEf-uncontrolled	
	Biodiesel fuel (gallons)	NOx- TZ1BDieselEf	
	Biodiesel fuel (gallons)	NOx- TZ2BDieselEf	
	Biodiesel fuel (gallons)	NOx- TZ3BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ4BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ5BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ6BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ7BDieselEf	
	Biodiesel fuel (gallons)	NOx-BDieselEf-uncontrolled	
	Natural gas (mmcf)	NOx-TZ1NatGasEf	
	Natural gas (mmcf)	NOx-TZ2NatGasEf	
	Natural gas (mmcf)	NOx-TZ3NatGasEf	
	Natural gas (mmcf)	NOx-TZ4NatGasEf	
	Natural gas (mmcf)	NOx-TZ5NatGasEf	
	Natural gas (mmcf)	NOx-TZ6NatGasEf	
	Natural gas (mmcf)	NOx-TZ7NatGasEf	
	Natural gas (mmcf)	NOx-NatGasEf-uncontrolled	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ1LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ2LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ3LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ4LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ5LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ6LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ7LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-LPEf-uncontrolled	
	Hydrogen gas (mass)	NOx-TZ1HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ2HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ3HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ4HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ5HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ6HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ7HydrogenEf	
	Hydrogen gas (mass)	NOx-HydrogenEf-uncontrolled	

HHP1, HHP6-HHP14 duct burners, Boiler Groups 1, 2, and 3, Natural gas heating units (Group 1) and Drying and Curing ovens (Group 2)	Natural gas (mmcf)	NOx-EPA-NatGasEf = 100lb/mmcf	
Low NOx Boilers, heaters, and drying/curing ovens	Natural gas (mmcf)	LowNOx-EPA-NatGasEf= 50lb/mmcf	
Main plant diesel fired emergency generator	Diesel fuel (gallons)	NOx-EPA-DieselEf = 4.41 lb/MMBtu	
		Total Monthly NOx emissions	

D.1.12a Alternative Nitrogen Oxides (NO_X) Emission Limit Determination

As an alternative to the NOx emission determination method in D.1.12, the Permittee may determine actual monthly NOx emissions from test cells HHP1, HHP6, HHP7, HHP8, HHP9, HHP10, HHP11, HHP12, HHP13, or HHP14 pursuant to this section. NOx emissions from other combustion units subject to the NOx emission limits in D.1.5 shall be determined as specified in Section D.1.12.

(a) Continuous Emissions Monitoring Systems

(1) **NOx measurement**: The Permittee shall continuously measure NOx concentration in the exhaust of with a NOx continuous emission monitoring system (CEMS) installed and operated in accordance with the following requirements:

(A) 40 CFR Part 60, Appendix B, Performance Specification 2;
(B) 40 CFR Part 60, Appendix F, Procedure 1;
(C) 326 IAC 3-5-2 for performance and operating specifications;
(D) 326 IAC 3-5-3 for monitor system certification;
(E) 326 IAC 3-5-4 for standard operating procedures;
(F) 326 IAC 3-5-5 for quality assurance requirements;
(G) 326 IAC 3-5-6 for record keeping requirements;
(H) 326 IAC 3-5-7 for reporting requirements; and
(I) 326 IAC 3-5-8 for operation and maintenance of continuous emission monitoring systems.

Continuous monitoring operation is defined as the collection of at least one measurement for each 15-minute block period while the test cell is in operation.

(2) **Emission calculation**: The Permittee shall calculate NOx emissions, in tons, each calendar month by using the following data:

(A) NOx CEMS data;
(B) NOx emission rate calculations performed pursuant to 40 CFR Part 60, Appendix A, Method 19;
(C) Fuel heat content; and
(D) Fuel consumption rate.

(3) **Data substitution:**

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute NOx concentration measurement obtained prior to the calibration in lieu of actual readings.

(B) During periods of CEMS maintenance, malfunction, repair, or other

periods of invalid NOx data collection, the Permittee shall determine NOx emissions in accordance with Section D.1.12 of this permit

D.1.13 Volatile Organic Compound (VOC) Emission Limit Determination

In order to demonstrate compliance with the VOC emission limit in Condition D.1.5(c), the Permittee shall determine actual VOC emissions as the sum of the following quantities:

(a) Painting operations: VOC emissions from the painting operations are determined each calendar month by measuring and recording:

(1) The amount of each coating applied during the month;
(2) The amount of cleanup or dilution solvent used during the month;
(3) The VOC content in the coatings applied and solvents used.

(b) Test cells fuel combustion: VOC emissions from combustion of fuel in test cells HHP1 and HHP6-HHP14 are determined each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific VOC emission factor pursuant to this general equation:

Monthly VOC emissions per test cell = Monthly Fuel usage x Fuel-specific VOC emission factor in lb VOC/unit of fuel

Total monthly VOC emissions from the test cells shall be the sum of the individual monthly VOC emissions for each fuel burned in the test cells, as illustrated in the table at the end of this condition.

(c) Other fuel combustion equipment: VOC emissions from combustion of fuel in the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator are determined each calendar month by a calculation using the monthly fuel usage by the appropriate VOC emission factor pursuant to this general equation:

Monthly VOC emissions = Monthly fuel usage X emission factor in lb VOC/unit of fuel

Total monthly VOC emissions from the other fuel combustion equipment shall be the sum of the individual monthly VOC emissions for each device, as illustrated in the table at the end of this condition.

(d) Unburned natural gas and unburned Liquid Petroleum Gas/Propane: VOC emissions from the release of unburned natural gas and LPG/Propane in test cells HHP6 and HHP10 are equal to 3.5% of the unburned natural gas vented each month and 100% of the unburned LPG/Propane vented each month from the test cells.

Emission unit	Monthly fuel usage and units	Fuel-specific emission factor	Monthly VOC emissions
HHP1 HHP6 HHP7 HHP8 HHP9 HHP10 HHP11 HHP12 HHP13 HHP14	Diesel fuel (gallons)	VOC-DieselEf = 0.012 lb/gal	
	Biodiesel fuel (gallons)	VOC-BDieselEf = 0.012 lb/gal	
	Natural gas (mmcf)	VOC-NatGasEf = 0.118 lb/MMBtu	
	Liquid Petroleum Gas or Propane (gallons)	VOC-LPEf = 83lb/kgal	

HHP1, HHP6-HHP14 duct burners, Boiler Groups 1, 2, and 3, Natural gas heating units (Group 1) and Drying and Curing ovens (Group 2)	Natural gas (mmcf)	VOC-EPA-NatGasEf = 5.50 lb/mmcf	
Main plant diesel fired emergency generator	Diesel fuel (gallons)	VOC-EPA-DieselEF = 0.00247 lb/bhp-hr	
	Total Monthly combustion related VOC emissions		

D.1.14 Greenhouse Gas (GHG) Emission Limit Determination

In order to determine compliance with the GHG emission limit in Condition D.1.5(d), the Permittee shall determine actual GHG emissions as the sum of the following quantities:

(a) Unburned natural gas: GHG emissions, expressed as CO2e, from the release of unburned natural gas in test cells HHP6 and HHP10 are equal to 95% of the unburned natural gas vented each month from the test cells multiplied by the global warming potential of methane (25).

(b) GHG emissions from combustion of fuels determined from the following information:

(1) Monthly fuel usage for each fuel combusted in test cells HHP1 and HHP6-HHP14, the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator;
(2) The default fuel-specific higher heating value (HHV) from 40 CFR 98, Subpart C, Table C-1;
(3) The fuel-specific GHG specific emission factor for each GHG from 40 CFR 98, Subpart C, Tables C-1 and C-2; and
(4) The global warming potential (GWP) for each GHG from 40 CFR 98, Subpart A, Table A-1;

And pursuant to this general equation:

Monthly CO2e emissions = (Monthly fuel usage x
Part 98 default HHV x
Part 98 CO2 emission factor x
Global warming potential of CO2)

+

(Monthly fuel usage x
Part 98 default HHV x
Part 98 CH4 emission factor x
Global warming potential of CH4)

+

(Monthly fuel usage x
Part 98 default HHV x
Part 98 N2O emission factor x
Global warming potential of N2O)

Total monthly CO2e emissions from combustion of fuels shall be the sum of the individual monthly CO2e emissions from each combustion unit for each fuel burned in the test cell, as illustrated in the table below.

Emission unit	Monthly fuel usage and units	Higher heating value of fuel from 40 CFR 98, Subpart C, Table C-1	Fuel-specific/GHG-specific emission factor from 40 CFR 98, Subpart C, Tables C-1 or C-2	Global Warming Potential from 40 CFR Part 98, Subpart A, Table A-1	Monthly CO2e emissions
HHP1 HHP6 HHP7 HHP8 HHP9 HHP10 HHP11 HHP12 HHP13 HHP14	Diesel and Biodiesel fuel (gallons)	HHV	CO2-DieselEf=73.96 (kg/mmBtu) CH4-DieselEf =0.009 lb/mmBtu N2O-DieselEf =0.0001 lb/mmBtu	GWP-CO2 GWP-CH4 GWP-N2O	
	Natural gas (mmcf)	HHV	CO2-NatGasEf=53.06 kg/mmBtu CH4-NatGasEf=0.002 lb/mmBtu N2O-NatGasEf=0.0002 lb/mmBtu	GWP-CO2 GWP-CH4 GWP-N2O	
	Liquid Petroleum Gas or Propane (gallons)	HHV	CO2-LPEf=61.46 kg/mmBtu CH4-LPEf=0.0009 lb/gal N2O-LPEf=0.0001lb/gal	GWP-CO2 GWP-CH4 GWP-N2O	
HHP1, HHP6-HHP14 duct burners, Boiler Groups 1, 2, and 3, Natural gas heating units (Group 1) and Drying and Curing ovens (Group 2)	Natural gas (mmcf)	HHV	CO2-NatGasEf =53.06kg/mmBtu CH4-NatGasEf=2.20 lb/mmcf N2O-NatGasEf=0.22 lb/mmcf	GWP-CO2 GWP-CH4 GWP-N2O	
Main plant diesel fired emergency generator	Diesel fuel (gallons)	HHV	CO2-DieselEf=73.96 kg/mmBtu CH4-DieselEf= 0.0066lb/MMBtu N2O-DieselEf = 0.0013lb/MMBtu	GWP-CO2 GWP-CH4 GWP-N2O	
Total Monthly GHG emissions, expressed as CO2e					

D.1.15 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to establish the fuel-specific/temperature zone-specific emission factors used to calculate NOx emissions as described in Condition D.1.12, and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the SCR, the Permittee shall conduct NOx emissions stack testing of the emissions controlled by selective catalytic reduction (SCR) on a representative test cell utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.1.12 upon submittal of test results to IDEM.

(b) In order to establish the fuel-specific uncontrolled emission factors used to calculate NOx emissions as described in Condition D.1.12 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after startup of the test cells, the Permittee shall conduct NOx emissions stack testing of the uncontrolled emissions from a representative test cell utilizing methods as approved by the commissioner. This test shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) or NRPD Air-14-NPD. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.1.12 upon submittal of test results to IDEM.

(c) In order to establish the fuel-specific/temperature zone-specific emission factors used to calculate CO emissions as described in Condition D.1.10, and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the catalytic oxidizer, the Permittee shall conduct CO emissions stack testing of the emissions controlled by the catalytic oxidizer on HHP15 utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.1.10 upon submittal of test results to IDEM.

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

D.1.16 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 stacks (S9, S10, S11, S12 and S13) while one (1) or more of the booths are in operation. If a condition exists which should result in a response step, the Permittee shall take reasonable response steps.

(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 evidence of overspray emissions, the Permittee shall take reasonable response steps.

(c) Failure to take response steps shall be considered a deviation of this permit. Section C – Response to Excursions and Exceedances contains the Permittee’s obligation with regard to response to excursions and exceedances.

(d) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

D.1.17 Visible Emissions Notations

(a) Visible emissions notations for each of the engine test cell stack exhausts shall be performed once per day during normal daylight operations when combusting diesel fuel or biodiesel. A trained employee will 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. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to response to excursions or exceedances.

D.1.18 Oxidation Catalyst Parametric Monitoring

In order to utilize the fuel-specific/temperature zone specific CO emission factors described in Condition D.1.10, the Permittee shall conduct the following monitoring:

(a) The Permittee shall monitor the Diesel Oxidation Catalyst (DOC) temperature and fuel used by the test cell with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.1.14(c). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour block average. If the temperature or fuel monitoring systems fail to operate normally for more than three (3) hours the Permittee shall take reasonable response steps to return the monitoring system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.1.10 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall monitor the CO emissions performance characteristics of the DOC using a portable analyzer in accordance with the compliance monitoring plan described in section D.1.16(c). If the CO emissions performance characteristics of the DOC as measured by the portable analyzer are not equivalent to or better than those established during the stack test in which the CO emission factor was established, the Permittee shall take reasonable response steps to restore the DOC performance characteristics to normal levels. For each period of time the Permittee is unable to attain the performance characteristics established during the stack test, the Permittee shall use an uncontrolled fuel-specific CO emission factor in the compliance determination provisions of Condition D.1.10.

(c) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conducting monitoring pursuant to this Condition.

(d) Failure to take reasonable response steps as described in (a) or (b) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.1.19 SCR Parametric Monitoring

In order to utilize the fuel-specific/temperature zone specific NOx emission factors described in Condition D.1.12, the Permittee shall conduct the following monitoring except when the Permittee is determining compliance with the NOx emissions limit by using continuous emissions monitoring systems in accordance with Condition D.1.12a:

(a) The Permittee shall monitor the selective catalyst reduction (SCR) temperature and fuel usage with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.1.14(a). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour block average. If the temperature or fuel monitoring system fails to operate for more than three consecutive (3) hours the Permittee shall take reasonable response steps to return the system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.1.12 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall continuously monitor the urea flow rate of the. If the urea flow rate monitoring system fails to operate for more than three (3) continuous hours, the Permittee shall take reasonable response steps to return the monitoring system to normal operations. If the Permittee is unable to return the urea monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.1.10 for the period of time the monitoring system was not operating normally.

(c) The Permittee shall continuously evaluate the effectiveness of the SCR system by monitoring NOx concentrations with NOx sensors at the SCR inlet and outlet to establish the control device efficiency, and comparing the control efficiency to the control efficiency achieved for the applicable temperature zone during the stack test for which the emission factor was established. If the measured control efficiency is 7% less than the control efficiency achieved during the stack test for which the emission factor was established or lower, the Permittee shall take reasonable response steps. If the Permittee is unable to return the SCR control efficiency to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.1.12 for the period of time the monitoring system was not operating normally.

(d) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conduction monitoring pursuant to this condition.

(e) Failure to take reasonable response steps as described in (a), (b), and (c) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

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

D.1.20 Record Keeping Requirements

(a) In order to document the compliance status with condition D.1.3, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limit established in condition D.1.5(c).

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

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

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

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

(3) The monthly cleanup solvent usage; and

(4) The total VOC usage for each month.

(b) In order to document the compliance status with conditions D.1.16 - Monitoring, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) In order to document the compliance status with Condition D.1.5, D.1.18, and D.1.19, the Permittee shall maintain the following records:

(1) Actual fuel usage for each type of fuel burned in an emission unit subject to the limits in Condition D.1.5.

(2) Oxidation catalyst temperature and temperature zone.

(3) Selective catalytic reduction temperature and temperature zone.

(4) Selective catalytic reduction urea flow rate.

(5) Selective catalytic reduction control efficiency, as measured by NOx sensors.

(6) An explanation or basis for failure to collect any of the required monitoring data.

(d) In order to document the compliance status with Condition D.1.17 - Visible Emission Notations, the Permittee shall maintain records of daily visible emission notations of the engine test cell stack exhausts when combusting diesel fuel or biodiesel. 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) To document compliance with Condition D.1.12a, if the Permittee chooses this option, then the Permittee shall maintain the following records:

(1) All data recorded by continuous monitoring systems (CMS), including continuous emission monitoring systems (CEMS), required by Conditions D.1.12a.

(2) The Permittee shall maintain records of the continuous monitoring required by

Condition D.1.12.a. The records shall include data required by 326 IAC 3-5-6.

(3) Pursuant to 326 IAC 3-5-4, the Permittee shall maintain and submit a complete, written continuous monitoring standard operating procedure (SOP) for the continuous emissions monitors. The CEMS SOP should contain, at a minimum, the items described in 326 IAC 3-5-4(a).

(f) Section C – General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.1.21 Reporting Requirements

A quarterly summary of the information to document the compliance status with condition D.1.5 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. A summary report of NOx monitor downtime and other information required by 326 IAC 3-5-7(4) shall also be included in the report. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.2 EMISSION UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]::

Sixteen (16) Engine Test cells with the following identification numbers:
801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5

(See Section A.2 for detailed information)

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

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

D.2.1 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

(a) The total nitrogen oxides (NO_X) emissions from the sixteen (16) engine test cells 801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5 shall not exceed 217.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total volatile organic compound (VOC) emissions from the sixteen (16) engine test cells 801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5 shall not exceed the 163.56 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total carbon monoxide (CO) emissions from the sixteen (16) engine test cells 801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5 shall not exceed 183.62 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) The total Greenhouse Gas (GHG) emissions, expressed as CO2e from sixteen (16) engine test cells 801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5 shall not exceed 99,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit the NO_X, VOC, and CO emissions from the engine test cells to less than two hundred and fifty (250) tons per year and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the 2009 modification and not applicable to the Hedgehog expansion project.

Compliance with these limits shall limit the GHG emissions from the engine test cells to less than one hundred thousand (100,000) tons per year expressed as CO2e and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the Hedgehog expansion project.

D.2.2 Sulfur Dioxide (SO_2) Operational Limits

All the test cells and production lines at the source shall comply with the following.

(a) All test cells and production lines shall utilize a ultra low sulfur diesel (ULSD) (15 PPM S) fuel during normal operation

(b) Four (4) test cells, HHP2, HHP4, Test Pad 8, and Test Pad 10, may burn diesel with a fuel sulfur content no greater than 1,000 parts per million (ppm), but only two (2) of these four test cells may burn diesel fuel with up to 1000 PPM S at any given time.

Alternatively, three (3) existing test cells, HHP4, Test Pad 8 and Test Pad 10 may burn diesel with a fuel sulfur content no greater than 2,000 parts per million (ppm), but only one (1) of these three test cells may burn diesel fuel with up to 2000 PPM S at any given time.

D.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for the engine test cells. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to preventive maintenance plans.

Compliance Determination Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] [40 CFR 64]

D.2.4 Nitrogen Oxide (NOx) Emission Limitation Determination

To determine compliance with the NOx emissions limit in Condition D.2.1(a), the Permittee shall determine actual NOx emissions for each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific NOx emission factor pursuant to this general equation:

Monthly NOx emissions per test cell = Monthly Fuel usage x Fuel-specific NOx emission factor in lb NOx/unit of fuel

Total monthly NOx emissions from the sixteen test cells shall be the sum of the individual monthly NOx emissions from each test cell for each fuel burned in the test cell, as illustrated in the table below.

Test cell(s)	Monthly fuel usage and units	Fuel-specific NOx emission factor	Monthly NOx emissions
801, 802, 803, 804, 805 and 808	Diesel fuel (gallons)	NOx-DieselEf1= 0.427 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Diesel fuel (gallons)	NOx-DieselEf2=0.155 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Biodiesel fuel (gallons)	NOx-BDieselEf = 1.64E-01 lb/gal	
806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Natural gas (mmcf)	NOx-NatGasEf = 4.08 lb/MMBtu	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Liquid Petroleum Gas / Propane (gallons)	NOx-LPGEf = 0.139 lb/gal	

D.2.5 Volatile Organic Compound (VOC) Emission Limitation Determination

To determine compliance with the VOC emission limit in Condition D.2.1(b), the Permittee shall determine actual VOC emissions for each calendar month as the sum of the following quantities:

(a) Test cells fuel combustion: VOC emissions from the test cells are determined each month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific VOC emission factor pursuant to this general equation:

Monthly VOC emissions per test cell = Monthly Fuel usage x Fuel-specific VOC emission factor in lb VOC/unit of fuel

Total monthly VOC emissions from the sixteen test cells shall be the sum of the individual monthly VOC emissions from each test cell for each fuel burned in the test cell, as illustrated in the table below.

(b) Unburned natural gas and unburned Liquid Petroleum Gas/Propane: VOC emissions from the release of unburned natural gas and LPG/Propane in test cell HHP4 are equal to 3.5% of the unburned natural gas vented each month and 100% of the unburned LPG/Propane vented each month from the test cell.

Test cell(s)	Monthly fuel usage and units	Fuel-specific emission factor	Monthly VOC emissions
801, 802, 803, 804, 805 and 808	Diesel fuel (gallons)	VOC-DieselEf1 = 0.0493 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Diesel fuel (gallons)	VOC-DieselEf2 =0.0493 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Biodiesel fuel (gallons)	VOC-BDieselEf = 0.0493 lb/gal	
806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Natural gas (mmcf)	VOC-NatGasEf =0.118 lb/MMBtu	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Liquid Petroleum Gas / Propane (gallons)	VOC-LPGEf = 8.30E-02 lb/gal	
		Total Monthly VOC emissions	

D.2.6 Carbon monoxide (CO) Emission Limitation Determination

To determine compliance with the CO emission limit in Condtion D.2.1(c), the Permittee shall determine actual CO emissions from the test cells for each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific CO emission factor pursuant to this general equation:

Monthly CO emissions per test cell = Monthly Fuel usage x Fuel-specific CO emission factor in lb CO/unit of fuel

Total monthly CO emissions from the sixteen test cells shall be the sum of the individual monthly CO emissions from each test cell for each fuel burned in the test cell, as illustrated in the table below.

Test cell(s)	Monthly fuel usage and units	Fuel-specific emission factor	Monthly CO emissions
801, 802, 803, 804, 805 and 808	Diesel fuel (gallons)	CO-DieselEf1 = 0.13 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Diesel fuel (gallons)	CO-DieselEf2 = 0.13 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Biodiesel fuel (gallons)	CO-BDieselEf = 0.13 lb/gal	
806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Natural gas (mmcf)	CO-NatGasEf = 0.317 lb/MMBtu	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Liquid Petroleum Gas / Propane (gallons)	CO-LPGEf = 0.129 lb/gal	
		Total Monthly CO emissions	

D.2.7 Greenhouse Gas (GHG) Emission Limitation Determination

To determine compliance with the GHG emission limit in Condition D.2.1(d), the Permittee shall determine actual GHG emissions as the sum of the following quantities:

(a) Unburned natural gas: GHG emissions, expressed as CO2e, from the release of unburned natural gas in test cell HHP4 are equal to 95% of the unburned natural gas vented each month from the test cells multiplied by the global warming potential of methane (25).

(b) GHG emissions from combustion of fuels determined from the following information:

(1) Monthly fuel usage for each fuel combusted in the sixteen test cells;
(2) The default fuel-specific higher heating value (HHV) from 40 CFR 98, Subpart C, Table C-1;
(3) The fuel-specific GHG specific emission factor for each GHG from 40 CFR 98, Subpart C, Tables C-1 and C-2; and
(4) The global warming potential (GWP) for each GHG from 40 CFR 98, Subpart A, Table A-1;

And pursuant to this general equation:

Monthly CO2e emissions = (Monthly fuel usage x
Part 98 default HHV x
Part 98 CO2 emission factor x
Global warming potential of CO2)

+

(Monthly fuel usage x
Part 98 default HHV x
Part 98 CH4 emission factor x
Global warming potential of CH4)

+

(Monthly fuel usage x
Part 98 default HHV x
Part 98 N2O emission factor x
Global warming potential of N2O)

Total monthly CO2e emissions from combustion of fuels shall be the sum of the individual monthly CO2e emissions from each combustion unit for each fuel burned in the test cell, as illustrated in the table below.

Test cell(s)	Monthly fuel usage and units	Higher heating value of fuel from 40 CFR 98, Subpart C, Table C-1	Fuel-specific emission factors from 40 CFR 98, Subpart C, Tables C-1 or C-2	Global warming potential from 40 CFR 98, Subpart A, Table A-1	Monthly CO2e emissions
801, 802, 803, 804, 805 and 808 806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Diesel and biodiesel fuel (gallons)	HHV	CO2-DieselEf = 165 lb/MMBtu	GWP-CO2	
			CH4-DieselEf = 8.10E-03 lb/MMBtu	GWP-CH4	
			N2O-DieselEf = 1.32 E-03 lb/MMBtu	GWP-N2O	
806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Natural gas (mmcf)	HHV	CO2-NatGasEf = 120000 lb/MMBtu	GWP-CO2	
			CH4-NatGasEf = 2.3lb/MMBtu	GWP-CH4	
			N2O-NatGasEf = 2.2 lb/MMBtu	GWP-N2O	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Liquid Petroleum Gas / Propane (gallons)	HHV	CO2-LPGEf = 125000 lb/kgal	GWP-CO2	
			CH4-LPGEf 0.2 lb/kgal	GWP-CH4	
			N2O-LPGEf = 0.9 lb/kgal	GWP-N2O	
				Total Monthly CO2e emissions	

D.2.8 Fuel-specific emission factors

(a) The Permittee may use fuel-specific emission factors for NOx, VOC, and CO based on the following:

(1) USEPA emission factors from USEPA Compilation of Emission Factors AP-42, Chapter 3, Sections 2, 3, or 4, as applicable based on fuel and engine size.

(2) Emission factors developed by conducting a stack test in a manner that would reflect representative engine size, operating mode, and other factors present in the test cells. The stack test must be conducted using methods approved by the commissioner and in accordance with 326 IAC 3-6.

(3) For test cells that perform testing on USEPA certified engine families for purposes of distribution into commerce, the emission rate that supported the USEPA certification, as found on the USEPA web site http://www.epa.gov/otaq/certdata.htm.

(b) The Permittee shall identify the type of each fuel-specific emission factor used in each reporting period in the period report required by Condition D.2.11.

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

D.2.9 Visible Emissions Notations

(a) Visible emissions notations for each of the engine test cell stack exhausts shall be performed once per day during normal daylight operations when combusting diesel fuel or biodiesel. A trained employee will 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. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to response to excursions or exceedances.

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

D.2.10 Record Keeping Requirements

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

(1) Actual diesel, biodiesel, liquid propane, and natural gas usage within each test cell for each calendar month and equivalent emissions; and,

(2) Identification of each fuel-specific emission factor used to calculate emissions.

(b) To document the compliance status with Condition D.2.3(a) , the Permittee shall maintain records in accordance with (1) through (5) below.

(1) Calendar dates covered in the calendar month average 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; and

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

(4) The name of the fuel supplier; and

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

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information

includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(c) To document compliance with Condition D.2.2(b), the Permittee shall keep a log record of High Sulfur Testing conducted at the facility. The log record will include the following:

(1) Test Cells used for high sulfur testing including the time and date the each test started and ended.

(2) Sulfur content of the fuel used for high sulfur testing

(d) To document the compliance status with Condition D.2.9 - Visible Emission Notation, the Permittee shall maintain records of daily visible emission notations of the engine test cell stack exhausts when combusting diesel fuel or biodiesel. 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) Section C – General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.2.11 Reporting Requirements

A quarterly summary of the information to document the compliance status with conditions D.2.1, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.3 **Reserved**

SECTION D.4 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

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

(b) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. [326 IAC 6-3];

(c) Sources that have the potential to emit less than five (5) tons per year of particulate matter (PM) (326 IAC 2-1.1-3(e)(1)(a));

(i) 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]; and

(d) One (1) 25,000 gallon No.2 diesel storage tank, constructed in 1998.

(e) One (1) 20,000 gallon No.2 diesel storage tank, constructed in 2011.

(f) One (1) 100,000 gallon No 2 diesel storage tank, approved for construction in 2011

(g) One (1) emergency diesel powered generator permitted in 2011, with maximum output capacity of 1490 horse power. [Under 40 CFR 60, Subpart IIII, the emergency generator is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, the emergency generator is considered a new affected source.].

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

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

D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control and Equipment Operating Requirements), the Permittee shall:

(a) Ensure the following control equipment and operating requirements are met:

(1) Equip the degreaser with a cover.

(2) Equip the degreaser with a device for draining cleaned parts.

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

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

(5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).

(6) Store waste solvent only in closed containers.

(7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(b) Ensure the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):

(A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
(B) A water cover when solvent used is insoluble in, and heavier than, water.
(C) A refrigerated chiller.
(D) Carbon adsorption.
(E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

(2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.

(3) If used, solvent spray:
(A) must be a solid, fluid stream; and
(B) shall be applied at a pressure that does not cause excessive splashing.

D.4.2 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), on and after January 1, 2015, the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

D.4.3 Particulate Emission Limitations for Manufacturing Processes[326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(d) (Particulate emission limitations, work practices, and control technologies), the particulate from the grinding and machining operations shall be limited by the following:

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

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

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

D.4.4 Record Keeping Requirements

To document the compliance status with Condition D.4.2, on and after January 1, 2015, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.

(a) The name and address of the solvent supplier.

(b) The date of purchase.

(c) The type of solvent purchased.

(d) The total volume of the solvent purchased.

(e) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

SECTION D.5 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

(b) The test cells described in the table below:

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
HHP15	Production	Diesel Biodiesel Natural gas	9000	SCR Catalytic oxidation 5.0 MMBtu Duct Burner	2014	HHP15.1

(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.5.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) The total CO emissions from the engine test cell, HHP15, shall not exceed 99 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total NOx emissions from the engine test cell, HHP15, shall not exceed 39 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit the CO emissions from the engine test cell HHP15 to less than one hundred (100) tons per year, limit the NOx emissions from the engine test cell HHP15 to less than forty (40) tons per year, and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the 2014 modification.

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for the engine test cell HHP15 and its control devices. Section B --Preventive Maintenance Plan contains the Permittee's obligation with regard to preventive maintenance plans.

Compliance Determination Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)][40 CFR 64]

D.5.3 Carbon Monoxide (CO) Control

In order to ensure compliance with Condition D.5.1 (a), the CO emissions from each test cell shall be controlled with an oxidation catalyst. The tests cells may be operated without the DOC control system with emissions reported as specified in D.5.4.

D.5.4 Carbon Monoxide (CO) Emission Limit Determination

To determine compliance with the CO emission limit in Condition D.5.1(a), the Permittee shall determine actual CO emissions from test cell HHP15 for each calendar month as the sum of the following quantities:

(a) HHP15 Test cell fuel combustion: CO emissions from test cell HHP15 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific/temperature zone specific CO emission factor pursuant to this general equation:

Monthly CO emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific CO emission factor in lb CO/unit of fuel

Total monthly CO emissions from HHP15 shall be the sum of the individual monthly CO emissions for each fuel burned in the test cell, as illustrated in the table below.

If CO emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific CO emission factor.

(b) HHP15 duct burner: CO emissions from combustion of natural gas in the duct burner are determined for each calendar month by a calculation using the monthly fuel usage and the default EPA CO emission factor for natural gas combustion pursuant to this general equation:

Monthly CO emissions = Monthly fuel usage X emission factor in lb CO/unit of fuel

Monthly fuel usage and units	Fuel-specific emission factor	Monthly CO emissions
Diesel fuel (gallons)	CO-TZ1DieselEf	
Diesel fuel (gallons)	CO-TZ2DieselEf	
Diesel fuel (gallons)	CO-TZ3DieselEf	
Diesel fuel (gallons)	CO-DieselEf-uncontrolled	
Biodiesel fuel (gallons)	CO- TZ1BDieselEf	
Biodiesel fuel (gallons)	CO- TZ2BDieselEf	
Biodiesel fuel (gallons)	CO- TZ3BDieselEf	
Biodiesel fuel (gallons)	CO-BDieselEf-uncontrolled	
Natural gas (mmcf)	CO-TZ1NatGasEf	
Natural gas (mmcf)	CO-TZ2NatGasEf	
Natural gas (mmcf)	CO-TZ3NatGasEf	
Natural gas (mmcf)	CO-NatGasEf-uncontrolled	
Duct burner natural gas (mmcf)	CO-EPA-NatGasEf = 84 lb/mmcf	
	Total Monthly CO emissions	

D.5.5 Nitrogen Oxide (NOx) Control

In order to ensure compliance with Condition D.5.1(b), the NOx emissions from HHP15 shall be controlled with selective catalytic reduction (SCR). HHP15 may be operated without the SCR control system with emissions reported as specified in D.5.6.

D.5.6 Nitrogen Oxide (NOx) Emission Limit Determination

To determine compliance with the NOx emission limit in Condition D.5.1(b), the Permittee shall determine actual NOx emissions from test cell HHP15 for each calendar month as the sum of the following quantities:

(a) HHP15 Test cell fuel combustion: NOx emissions from test cell HHP15 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific/temperature zone specific NOx emission factor pursuant to this general equation:

Monthly NOx emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific NOx emission factor in lb NOx/unit of fuel

Total monthly NOx emissions from HHP15 shall be the sum of the individual monthly NOx emissions for each fuel burned in the test cell, as illustrated in the table below.

If NOx emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific NOx emission factor.

(b) HHP15 duct burner: NOx emissions from combustion of natural gas in the duct burner are determined for each calendar month by a calculation using the monthly fuel usage and the default EPA NOx emission factor for natural gas combustion pursuant to this general equation:

Monthly NOx emissions = Monthly fuel usage X emission factor in lb NOx/unit of fuel

Monthly fuel usage and units	Fuel-specific emission factor	Monthly NOx emissions
Diesel fuel (gallons)	NOx-TZ1DieselEf	
Diesel fuel (gallons)	NOx-TZ2DieselEf	
Diesel fuel (gallons)	NOx-TZ3DieselEf	
Diesel fuel (gallons)	NOx-TZ4DieselEf	
Diesel fuel (gallons)	NOx-TZ5DieselEf	
Diesel fuel (gallons)	NOx-TZ6DieselEf	
Diesel fuel (gallons)	NOx-TZ7DieselEf	
Diesel fuel (gallons)	NOx-DieselEf-uncontrolled	
Biodiesel fuel (gallons)	NOx-TZ1BDieselEf	
Biodiesel fuel (gallons)	NOx-TZ2BDieselEf	
Biodiesel fuel (gallons)	NOx-TZ3BDieselEf	
Biodiesel fuel (gallons)	NOx-TZ4BDieselEf	
Biodiesel fuel (gallons)	NOx-TZ5BDieselEf	
Biodiesel fuel (gallons)	NOx-TZ6BDieselEf	
Biodiesel fuel (gallons)	NOx-TZ7BDieselEf	
Biodiesel fuel (gallons)	NOx-BDieselEf-uncontrolled	
Natural gas (mmcf)	NOx-TZ1NatGasEf	
Natural gas (mmcf)	NOx-TZ2NatGasEf	
Natural gas (mmcf)	NOx-TZ3NatGasEf	
Natural gas (mmcf)	NOx-TZ4NatGasEf	
Natural gas (mmcf)	NOx-TZ5NatGasEf	
Natural gas (mmcf)	NOx-TZ6NatGasEf	
Natural gas (mmcf)	NOx-TZ7NatGasEf	
Natural gas (mmcf)	NOx-NatGasEf-uncontrolled	
Duct burner natural gas (mmcf)	NOx-EPA-NatGasEf = 100 lb/mmcf	
	Total Monthly NOx emissions	

D.5.6a Alternative Nitrogen Oxides (NO_X) Emission Limit Determination

As an alternative to the NOx emission determination method in D.5.6, the Permittee may determine actual monthly NOx emissions from test cells HHP15 pursuant to this section.

(a) Continuous Emissions Monitoring Systems

(1) **NOx measurement**: The Permittee shall continuously measure NOx concentration in the exhaust of with a NOx continuous emission monitoring system (CEMS) installed and operated in accordance with the following requirements:

(A) 40 CFR Part 60, Appendix B, Performance Specification 2;
(B) 40 CFR Part 60, Appendix F, Procedure 1;
(C) 326 IAC 3-5-2 for performance and operating specifications;
(D) 326 IAC 3-5-3 for monitor system certification;
(E) 326 IAC 3-5-4 for standard operating procedures;
(F) 326 IAC 3-5-5 for quality assurance requirements;
(G) 326 IAC 3-5-6 for record keeping requirements;
(H) 326 IAC 3-5-7 for reporting requirements; and
(I) 326 IAC 3-5-8 for operation and maintenance of continuous emission monitoring systems.

Continuous monitoring operation is defined as the collection of at least one measurement for each 15-minute block period while the test cell is in operation.

(2) **Emission calculation**: The Permittee shall calculate NOx emissions, in tons, each calendar month by using the following data:
(A) NOx CEMS data;
(B) NOx emission rate calculations performed pursuant to 40 CFR Part 60, Appendix A, Method 19;
(C) Fuel heat content; and
(D) Fuel consumption rate.

(3) **Data substitution:**

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute NOx concentration measurement obtained prior to the calibration in lieu of actual readings.

(b) During periods of CEMS maintenance, malfunction, repair, or other periods of invalid NOx data collection, the Permittee shall determine NOx emissions in accordance with Section D.5.6 of this permit.

D.5.7 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to establish the fuel-specific/temperature zone-specific emission factors used to calculate NOx emissions as described in Condition D.5.6, and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the SCR, the Permittee shall conduct NOx emissions stack testing of the emissions controlled by selective catalytic reduction (SCR). These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. In lieu of these tests, the Permittee may use emission factors developed by the tests performed in Condition D.1.15(a). Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin

using the emission factors derived from this testing in the emission calculations described in Condition D.5.6 upon submittal of test results to IDEM.

(b) In order to establish the fuel-specific uncontrolled emission factors used to calculate NOx emissions as described in Condition D.5.6 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after startup of the test cells, the Permittee shall conduct NOx emissions stack testing of the uncontrolled emissions utilizing methods as approved by the commissioner. This test shall be performed once. In lieu of this test, the Permittee may use emission factors developed by the test performed in Condition D.1.15 (b). Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) or NRPD Air-14-NPD. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.5.6 upon submittal of test results to IDEM.

(c) In order to establish the fuel-specific/temperature zone-specific emission factors used to calculate CO emissions as described in Condition D.5.4, and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the catalytic oxidizer, the Permittee shall conduct CO emissions stack testing of the emissions controlled by the catalytic oxidizer utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. In lieu of this test, the Permittee may use emission factors developed by the tests performed in Condition D.1.15(c). Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.5.4 upon submittal of test results to IDEM.

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

D.5.8 Visible Emission Notations

(a) Visible emissions notations of the engine test cell stack exhausts HHP15.1 shall be performed once per day during normal daylight operations when combusting diesel fuel or biodiesel. A trained employee will 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 a reasonable response. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to response to excursions or exceedances.

D.5.9 SCR Parametric Monitoring

In order to utilize the fuel-specific/temperature zone specific NOx emission factors described in Condition D.5.6, the Permittee shall conduct the following monitoring except when the Permittee is determining compliance with the NOx emissions limit by using continuous emissions monitoring systems in accordance with Condition D.5.6a:

(a) The Permittee shall monitor the selective catalyst reduction (SCR) temperature and fuel usage with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.5.7(a). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour blcok average. If the temperature or fuel monitoring system fails to operate for more than three consecutive (3) hours the Permittee shall take reasonable response steps to return the system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.5.6 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall continuously monitor the urea flow rate of the SCR. If the urea flow rate monitoring system fails to operate for more than three (3) continuous hours, the Permittee shall take reasonable response steps to return the monitoring system to normal operations. If the Permittee is unable to return the urea monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.5.6 for the period of time the monitoring system was not operating normally.

(c) The Permittee shall continuously evaluate the effectiveness of the SCR system by monitoring NOx concentrations with NOx sensors at the SCR inlet and outlet to establish the control device efficiency, and comparing the control efficiency to the control efficiency achieved for the applicable temperature zone during the stack test for which the emission factor was established. If the measured control efficiency is 7% less than the control efficiency achieved during the stack test for which the emission factor was established or lower, the Permittee shall take reasonable response steps. If the Permittee is unable to return the SCR control efficiency to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.5.6 for the period of time the monitoring system was not operating normally.

(d) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conduction monitoring pursuant to this condition.

(e) Failure to take reasonable response steps as described in (a), (b), and (c) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.5.10 Oxidation Catalyst Parametric Monitoring [40 CFR 64]

In order to utilize the fuel-specific/temperature zone specific CO emission factors described in Condition D.5.4, the Permittee shall conduct the following monitoring:

(a) The Permittee shall monitor the Diesel Oxidation Catalyst (DOC) temperature and fuel used by the test cell with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.5.7(c). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour block average. If the temperature or fuel monitoring systems fail to operate normally for more than three (3) hours the Permittee shall take reasonable response steps to return the monitoring system to normal operation. If the Permittee is unable to

return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.5.4 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall monitor the CO emissions performance characteristics of the DOC using a portable analyzer in accordance with the compliance monitoring plan described in section D.5.10(c). If the CO emissions performance characteristics of the DOC as measured by the portable analyzer are not equivalent to or better than those established during the stack test in which the CO emission factor was established, the Permittee shall take reasonable response steps to restore the DOC performance characteristics to normal levels. For each period of time the Permittee is unable to attain the performance characteristics established during the stack test, the Permittee shall use an uncontrolled fuel-specific CO emission factor in the compliance determination provisions of Condition D.5.4.

(c) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conducting monitoring pursuant to this Condition.

(d) Failure to take reasonable response steps as described in (a) or (b) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

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

D.5.11 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.1(a) and D.5.1(b), the Permittee shall maintain the following records:

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

(2) Actual diesel, biodiesel fuel oil and natural gas, usage since last compliance determination period and equivalent NOx and CO emissions.

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 the compliance status with Condition D.5.8 - Visible Emission Notation, the Permittee shall maintain records of daily visible emission notations of the engine test cell stack exhausts HHP15.1 when combusting diesel fuel or biodiesel. 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).

(c) In order to document the compliance status with Condition D.5.9, the Permittee shall maintain records of the urea flow rate and the SCR temperature used in conjunction with the test cells. The Permittee shall include in its daily record when a flow rate and temperature reading are not taken and the reason for the lack of a flow rate and temperature reading (e.g. the process did not operate that day).

(d) In order to document the compliance status with Condition D.5.10, the Permittee shall maintain continuous temperature records (on a three (3) hourly average basis) for each oxidation catalyst to demonstrate compliance.

(e) To document compliance with Condition D.5.6a, if the Permittee chooses this option, then the Permittee shall maintain the following records:

(1) All data recorded by continuous monitoring systems (CMS), including continuous emission monitoring systems (CEMS), required by Conditions D.5.6a.

(2) The Permittee shall maintain records of the continuous monitoring required by Condition D.5.6.a. The records shall include data required by 326 IAC 3-5-6.

(3) Pursuant to 326 IAC 3-5-4, the Permittee shall maintain and submit a complete, written continuous monitoring standard operating procedure (SOP) for the continuous emissions monitors. The CEMS SOP should contain, at a minimum, the items described in 326 IAC 3-5-4(a).

(f) Section C -- General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.5.12 Reporting Requirements

A quarterly summary of the information to document the compliance status with condition D.5.1 shall be submitted using the reporting form located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. A summary report of NOx monitor downtime and other information required by 326 IAC 3-5-7(4) shall also be included in the report. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined in 326 IAC 2-7-1(34). Section C -- General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.6 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

(b) The test cells described in the table below:

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
HHP16	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 5.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr	2014	HHP16.1
HHP17	Engineering	Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen	9000	SCR Catalytic oxidation 5.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr	2014	HHP17.1

(c) The natural gas-fired boilers described in the table below:

Boiler Group	Identification number	Capacity	Controls	Construction date	Stack
4	EU03Y EU03Z	3.0 MMBtu/hr each		2014	

(d) The natural gas-fired combustion sources listed in the table below:

Natural gas-fired equipment Group	Quantity	Type	Capacity	Construction date
HHP16/HHP17 expansion combustion units (Group 4)	1	Direct fired air handling unit	0.34 MMBtu/hr	2014
	3	Unit heaters	0.175 MMBtu/hr each	2014
	1	Propane vaporizer	0.50 MMBtu/hr	2014

(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.6.1 Prevention of Significant Deterioration (PSD) minor limit [326 IAC 2-2] and VOC BACT [326 IAC 8-1-6]

(a) The total CO emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall be less than 95 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total GHG emissions from the engine test cells HHP16 and HHP17, their respective duct burners, shall not exceed 70,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total NOx emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall be less than 37 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) The total PM2.5 emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall be less than 9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(e) The total VOC emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall be less than 39 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(f) The total VOC emissions from the engine test cells HHP16 and HHP17, their respective duct burners, shall be less than 24 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit the CO, GHGs, NOx, PM2.5, and VOC emissions from the engine test cells (HHP16 and HHP17), their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer to less than one hundred (100) tons per year of CO, to less than seventy thousand (70,000) tons per year of GHGs, to less than forty (40) tons per year of NOx, to less than ten (10) tons per year of PM2.5, and to less than forty (40) tons per year of VOC, and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the 2014 modification.

D.6.2 Particulate Emission Limitations for Sources of Indirect Heating Matter (PM) Limitation [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the boilers known as Boiler Group 4 shall each be limited to 0.359 pounds per MMBtu heat input.

D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for the engine test cell HHP16 and HHP17 and control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to preventive maintenance plans.

Compliance Determination Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)][40 CFR 64]

D.6.4 Carbon Monoxide (CO) Control

In order to ensure compliance with Condition D.6.1(a), the CO emissions from each test cell shall be controlled with an oxidation catalyst. The test cells may be operated without the DOC control system with emissions reported as specified in D.6.5.

D.6.5 Carbon Monoxide (CO) Emission Limit Determination

To determine compliance with the CO emission limit in Condition D.6.1(a), the Permittee shall determine actual CO emissions from test cell HHP16 and HHP17 and their respective duct burners, Boiler Group 4, and Natural gas combustion unit Group 4 for each calendar month as the sum of the following quantities:

(a) HHP16 and HHP17 Test cell fuel combustion: CO emissions from test cell HHP16 and HHP17 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific/temperature zone specific CO emission factor pursuant to this general equation:

Monthly CO emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific CO emission factor in lb CO/unit of fuel

Total monthly CO emissions from HHP16 and HHP17 shall be the sum of the individual monthly CO emissions for each fuel burned in the test cell, as illustrated in the table below.

If CO emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific CO emission factor.

(b) Other fuel combustion equipment: CO emissions from combustion of fuel in the duct burners for HHP16 and HHP17, Boiler Group 4, and Natural Gas emission unit Group 4, are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate CO emission factor pursuant to this general equation:

Monthly CO emissions = Monthly fuel usage X emission factor in lb CO/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly CO emissions
HHP16 HHP17	Diesel fuel (gallons)	CO-TZ1DieselEf	
	Diesel fuel (gallons)	CO-TZ2DieselEf	
	Diesel fuel (gallons)	CO-TZ3DieselEf	
	Diesel fuel (gallons)	CO-DieselEf-uncontrolled	
	Biodiesel fuel (gallons)	CO- TZ1BDieselEf	
	Biodiesel fuel (gallons)	CO- TZ2BDieselEf	
	Biodiesel fuel (gallons)	CO- TZ3BDieselEf	
	Biodiesel fuel (gallons)	CO-BDieselEf-uncontrolled	
	Natural gas (mmcf)	CO-TZ1NatGasEf	
	Natural gas (mmcf)	CO-TZ2NatGasEf	
	Natural gas (mmcf)	CO-TZ3NatGasEf	
	Natural gas (mmcf)	CO-NatGasEf-uncontrolled	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ1LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ2LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ3LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-LPEf-uncontrolled	
HHP16 & HHP17 duct burners Boiler Group 4 Natural gas combustion Group 4	Natural gas (mmcf)	CO-EPA-NatGasEf = 84 lb/mmcf	
Propane vaporizer	Propane (gallons)	CO-EPA-LPEf = 0.0075lb/gal	
		Total Monthly CO emissions	

D.6.6 Greenhouse Gas (GHG) Emission Limit Determination

To determine compliance with the GHG emission limit in Condition D.6.1(b), the Permittee shall determine actual GHG emissions as the sum of the following quantities:

(a) Unburned natural gas: GHG emissions, expressed as CO2e, from the release of unburned natural gas in test cells HHP16 and HHP17 are equal to 95% of the unburned natural gas vented each month from the test cells multiplied by the global warming potential of methane (25).

(b) GHG emissions from combustion of fuels determined from the following information:

(1) Monthly fuel usage for each fuel combusted in test cells HHP1 and HHP6-HHP14, the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator;
(2) The default fuel-specific higher heating value (HHV) from 40 CFR 98, Subpart C, Table C-1;
(3) The fuel-specific GHG specific emission factor for each GHG from 40 CFR 98, Subpart C, Tables C-1 and C-2; and
(4) The global warming potential (GWP) for each GHG from 40 CFR 98, Subpart A, Table A-1;

And pursuant to this general equation:

Monthly CO2e emissions = (Monthly fuel usage x
Part 98 default HHV x
Part 98 CO2 emission factor x
Global warming potential of CO2)

+

(Monthly fuel usage x
Part 98 default HHV x
Part 98 CH4 emission factor x
Global warming potential of CH4)

+

(Monthly fuel usage x
Part 98 default HHV x
Part 98 N2O emission factor x
Global warming potential of N2O)

Total monthly CO2e emissions from combustion of fuels shall be the sum of the individual monthly CO2e emissions from each combustion unit for each fuel burned in the test cell, as illustrated in the table below.

Emission unit	Monthly fuel usage and units	Higher heating value of fuel from 40 CFR 98, Subpart C, Table C-1	Fuel-specific/GHG-specific emission factor from 40 CFR 98, Subpart C, Tables C-1 or C-2	Global Warming Potential from 40 CFR Part 98, Subpart A, Table A-1	Monthly CO2e emissions
HHP16 HHP17	Diesel and Biodiesel fuel (gallons)	HHV	CO2-DieselEf = 22.50 lb/MMBtu CH4-DieselEf = 0.000913 lb/MMBtu N2O-DieselEf = 0.000183 lb/MMBtu	GWP-CO2 GWP-CH4 GWP-N2O	

	Natural gas (mmcf)	HHV	CO2-NatGasEf = 116.89 lb/MMBtu CH4-NatGasEf = 0.0022 lb/MMBtu N2O-NatGasEf = 0.00022 lb/MMBtu	GWP-CO2 GWP-CH4 GWP-N2O	
	Liquid Petroleum Gas or Propane (gallons)	HHV	CO2-LPEf = 22.50 lb/gal CH4-LPEf = 0.000913 lb/gal N2O-LPEf = 0.000183 lbl/gal	GWP-CO2 GWP-CH4 GWP-N2O	
HHP16 and HHP17 duct burners, Boiler Group 4, Natural gas combustion units (Group 4)	Natural gas (mmcf)	HHV	CO2-NatGasEf = 116890 lb/mmcf CH4-NatGasEf = 2.20 lb/mmcf N2O-NatGasEf = 0.22 lb/mmcf	GWP-CO2 GWP-CH4 GWP-N2O	
Propane vaporizer	LPG/Propane	HHV	CO2-LPEf = 12.50 lb/gal CH4-LPEf = 0.0002 lb/gal N2O-LPEf = 0.009 lb/gal	GWP-CO2 GWP-CH4 GWP-N2O	
				Total Monthly GHG emissions, expressed as CO2e	

D.6.7 Nitrogen Oxide (NOx) Control

In order to ensure compliance with Condition D.6.1(c), the NOx emissions from HHP16 and HHP17 shall be controlled with selective catalytic reduction (SCR). HHP16 and HHP17 may be operated without SCR control system with emissions reported as specified in D.6.8 or D.6.8a.

D.6.8 Nitrogen Oxide (NOx) Emission Limit Determination

To determine compliance with the NOx emission limit in Condition D.6.1(c), the Permittee shall determine actual NOx emissions from test cell HHP16 and HHP17 and their respective duct burners, Boiler Group 4, and Natural gas combustion unit Group 4 for each calendar month as the sum of the following quantities:

(a) HHP16 and HHP17 Test cell fuel combustion: NOx emissions from test cell HHP16 and HHP17 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific/temperature zone specific NOx emission factor pursuant to this general equation:

Monthly NOx emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific NOx emission factor in lb NOx/unit of fuel

Total monthly NOx emissions from HHP16 and HHP17 shall be the sum of the individual monthly NOx emissions for each fuel burned in the test cell, as illustrated in the table below.

If NOx emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific NOx emission factor.

(b) Other fuel combustion equipment: NOx emissions from combustion of fuel in the duct burners for HHP16 and HHP17, Boiler Group 4, and Natural Gas emission unit Group 4, are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate NOx emission factor pursuant to this general equation:

Monthly NOx emissions = Monthly fuel usage x emission factor in lb NOx/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly NOx emissions
HHP16 HHP17	Diesel fuel (gallons)	NOx-TZ1DieselEf	
	Diesel fuel (gallons)	NOx-TZ2DieselEf	
	Diesel fuel (gallons)	NOx-TZ3DieselEf	
	Diesel fuel (gallons)	NOx-TZ4DieselEf	
	Diesel fuel (gallons)	NOx-TZ5DieselEf	
	Diesel fuel (gallons)	NOx-TZ6DieselEf	
	Diesel fuel (gallons)	NOx-TZ7DieselEf	
	Diesel fuel (gallons)	NOx-DieselEf-uncontrolled	
	Biodiesel fuel (gallons)	NOx- TZ1BDieselEf	
	Biodiesel fuel (gallons)	NOx- TZ2BDieselEf	
	Biodiesel fuel (gallons)	NOx- TZ3BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ4BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ5BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ6BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ7BDieselEf	
	Biodiesel fuel (gallons)	NOx-BDieselEf-uncontrolled	
	Natural gas (mmcf)	NOx-TZ1NatGasEf	
	Natural gas (mmcf)	NOx-TZ2NatGasEf	
	Natural gas (mmcf)	NOx-TZ3NatGasEf	
	Natural gas (mmcf)	NOx-TZ4NatGasEf	
	Natural gas (mmcf)	NOx-TZ5NatGasEf	
	Natural gas (mmcf)	NOx-TZ6NatGasEf	
	Natural gas (mmcf)	NOx-TZ7NatGasEf	
	Natural gas (mmcf)	NOx-NatGasEf-uncontrolled	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ1LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ2LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ3LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ4LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ5LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ6LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-TZ7LPEf	
	Liquid Petroleum Gas or Propane (gallons)	NOx-LPEf-uncontrolled	
	Hydrogen gas (mass)	NOx-TZ1HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ2HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ3HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ4HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ5HydrogenEf	
	Hydrogen gas (mass)	NOx-TZ6HydrogenEf	

	Hydrogen gas (mass)	NOx-TZ7HydrogenEf	
	Hydrogen gas (mass)	NOx-HydrogenEf-uncontrolled	
HHP16 and HHP17 duct burners, Boiler Group 4, Natural gas combustion units Group 4	Natural gas (mmcf)	NOx-EPA-NatGasEf = 100 lb/mmcf	
Propane vaporizer	LPG/Propane (gallons)	NOx-EPA-LPEf = 0.013 lb/gal	
		Total Monthly NOx emissions	

D.6.8a Alternative Nitrogen Oxides (NO_X) Emission Limit Determination

As an alternative to the NOx emission determination method in D.6.8, the Permittee may determine actual monthly NOx emissions from test cells HHP16 or HHP17 pursuant to this section. NOx emissions from other combustion units subject to the NOx emission limits in D.6.1 shall be determined as specified in Section D.6.8.

(a) Continuous Emissions Monitoring Systems

(1) **NOx measurement**: The Permittee shall continuously measure NOx concentration in the exhaust of with a NOx continuous emission monitoring system (CEMS) installed and operated in accordance with the following requirements:

(A) 40 CFR Part 60, Appendix B, Performance Specification 2;
(B) 40 CFR Part 60, Appendix F, Procedure 1;
(C) 326 IAC 3-5-2 for performance and operating specifications;
(D) 326 IAC 3-5-3 for monitor system certification;
(E) 326 IAC 3-5-4 for standard operating procedures;
(F) 326 IAC 3-5-5 for quality assurance requirements;
(G) 326 IAC 3-5-6 for record keeping requirements;
(H) 326 IAC 3-5-7 for reporting requirements; and
(I) 326 IAC 3-5-8 for operation and maintenance of continuous emission monitoring systems.

Continuous monitoring operation is defined as the collection of at least one measurement for each 15-minute block period while the test cell is in operation.

(3) **Emission calculation**: The Permittee shall calculate NOx emissions, in tons, each calendar month by using the following data:

(A) NOx CEMS data;
(B) NOx emission rate calculations performed pursuant to 40 CFR Part 60, Appendix A, Method 19;
(C) Fuel heat content; and
(D) Fuel consumption rate.

(4) **Data substitution:**

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute NOx concentration measurement obtained prior to the calibration in lieu of actual readings.

(B) During periods of CEMS maintenance, malfunction, repair, or other periods of invalid NOx data collection, the Permittee shall determine NOx emissions in accordance with Section D.6.8 of this permit.

D.6.9 PM2.5 Emission Limit Determination

To determine compliance with the PM2.5 emission limit in Condition D.6.1(d), the Permittee shall determine actual PM2.5 emissions from test cell HHP16 and HHP17 and their respective duct burners, Boiler Group 4, and Natural gas combustion unit Group 4 for each calendar month as the sum of the following quantities:

(a) HHP16 and HHP17 Test cell fuel combustion: PM2.5 emissions from test cell HHP16 and HHP17 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific PM2.5 emission factor pursuant to this general equation:

Monthly PM2.5 emissions per test cell = Monthly Fuel usage x Fuel-specific PM2.5 emission factor in lb PM2.5/unit of fuel

Total monthly PM2.5 emissions from HHP16 and HHP17 shall be the sum of the individual monthly PM2.5 emissions for each fuel burned in the test cell, as illustrated in the table below.

(b) Other fuel combustion equipment: PM2.5 emissions from combustion of fuel in the duct burners for HHP16 and HHP17, Boiler Group 4, and Natural Gas emission unit Group 4, are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate PM2.5 emission factor pursuant to this general equation:

Monthly PM2.5 emissions = Monthly fuel usage X emission factor in lb PM2.5/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly PM2.5 emissions
HHP16 HHP17	Diesel fuel (gallons)	PM2.5-DieselEf = 0.0076 lb/MMBtu	
	Biodiesel fuel (gallons)	PM2.5-BDieselEf = 0.0076 lb/MMBtu	
	Natural gas (mmcf)	PM2.5-NatGasEf = 0.009987 lb/MMBtu	
	Liquid Petroleum Gas or Propane (gallons)	PM2.5-LPEf = 0.005 lb/gal	
HHP16 & HHP17 duct burners Boiler Group 4 Natural gas combustion Group 4	Natural gas (mmcf)	PM2.5-EPA-NatGasEf = 7.60 lb/mmcf	
Propane vaporizer	Propane (gallons)	PM2.5-EPA-LPEf = 0.0007 lb/gal	
		Total Monthly PM2.5 emissions	

D.6.10 VOC Emission Limit Determination

To determine compliance with the VOC emission limit in Conditions D.6.1(e) and D.6.1(f), the Permittee shall determine actual VOC emissions from test cell HHP16 and HHP17 and their respective duct burners, Boiler Group 4, and Natural gas combustion unit Group 4 for each calendar month as the sum of the following quantities:

(a) HHP16 and HHP17 Test cell fuel combustion: VOC emissions from test cell HHP16 and HHP17 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific VOC emission factor pursuant to this general equation:

Monthly VOC emissions per test cell = Monthly Fuel usage x Fuel-specific VOC emission factor in lb VOC/unit of fuel

Total monthly VOC emissions from HHP16 and HHP17 shall be the sum of the individual monthly VOC emissions for each fuel burned in the test cell, as illustrated in the table below.

(b) Other fuel combustion equipment: VOC emissions from combustion of fuel in the duct burners for HHP16 and HHP17, Boiler Group 4, and Natural Gas emission unit Group 4, are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate VOC emission factor pursuant to this general equation:

Monthly VOC emissions = Monthly fuel usage X emission factor in lb VOC/unit of fuel

(c) Unburned natural gas and unburned Liquid Petroleum Gas/Propane: VOC emissions from the release of unburned natural gas and LPG/Propane in test cells HHP16 and HHP17 are equal to 3.5% of the unburned natural gas vented each month and 100% of the unburned LPG/Propane vented each month from the test cells.

Emission unit	Monthly fuel usage and units	Fuel-specific emission factor	Monthly VOC emissions
HHP16 HHP17	Diesel fuel (gallons)	VOC-DieselEf = 0.0123 lb/MMBtu	
	Biodiesel fuel (gallons)	VOC-BDieselEf = 0.0123 lb/MMBtu	
	Natural gas (mmcf)	VOC-NatGasEf = 0.118 lb/MMBtu	
	Liquid Petroleum Gas or Propane (gallons)	VOC-LPEf = 0.083 lb/gal	
HHP16 & HHP17 duct burners Boiler Group 4 Natural gas combustion Group 4	Natural gas (mmcf)	VOC-EPA-NatGasEf = 5.50 = lb/mmcf	
Propane vaporizer	Propane (gallons)	VOC-EPA-LPEf = 0.001 lb/gal	
		Total Monthly VOC emissions	

D.6.11 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to establish the fuel-specific/temperature zone-specific emission factors used to calculate NOx emission as described in Condition D.6.8 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the SCR, the Permittee shall conduct NOx emissions stack testing of the emissions controlled by selective catalytic reduction (SCR) utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. In lieu of these tests, the Permittee may use emission factors developed by the tests performed in Condition D.1.15(a). Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.6.8 upon submittal of test results to IDEM.

(b) In order to establish the fuel-specific uncontrolled emission factors used to calculate NOx emissions as described in Condition D.6.8 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after startup of the test cells, the Permittee shall conduct NOx emissions stack testing of the uncontrolled emissions utilizing methods as approved by the commissioner. This test shall be performed once. In lieu of this test, the Permittee may use emission factors developed by the tests performed in Condition D.1.15(b).Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) or NRPD Air-14-NPD. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.6.8 upon submittal of test results to IDEM.

(c) In order to establish the fuel-specific/temperature zone-specific emission factors used to calculate CO emissions as described in D.6.5, and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the catalytic oxidizer, the Permittee shall conduct CO emissions stack testing of the emissions controlled by the catalytic oxidizer utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. In lieu of this test, the Permittee may use emission factors developed by the tests performed in Condition D.1.15(c).Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.6.4 upon submittal of test results to IDEM.

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

D.6.12 Visible Emission Notations

(a) Visible emissions notations of the engine test cell stack exhausts HHP16.1 and HHP17.1 shall be performed once per day during normal daylight operations when combusting diesel fuel or biodiesel. A trained employee will 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 a reasonable response. Observation of abnormal emissions that do not violate and applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to response to excursions or exceedances.

D.6.13 SCR Parametric Monitoring

In order to utilize the fuel-specific/temperature zone specific NOx emission factors described in Condition D.6.8, the Permittee shall conduct the following monitoring except when the Permittee is determining compliance with the NOx emissions limit by using continuous emissions monitoring

systems in accordance with Condition D.6.8a:

(a) The Permittee shall monitor the selective catalyst reduction (SCR) temperature and fuel usage with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.6.11(a). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour block average. If the temperature or fuel monitoring system fails to operate for more than three consecutive (3) hours the Permittee shall take reasonable response steps to return the system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.6.8 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall continuously monitor the urea flow rate of the SCR. If the urea flow rate monitoring system fails to operate for more than three (3) continuous hours, the Permittee shall take reasonable response steps to return the monitoring system to normal operations. If the Permittee is unable to return the urea monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.6.8 for the period of time the monitoring system was not operating normally.

(c) The Permittee shall continuously evaluate the effectiveness of the SCR system by monitoring NOx concentrations with NOx sensors at the SCR inlet and outlet to establish the control device efficiency, and comparing the control efficiency to the control efficiency achieved for the applicable temperature zone during the stack test for which the emission factor was established. If the measured control efficiency is 7% less than the control efficiency achieved during the stack test for which the emission factor was established or lower, the Permittee shall take reasonable response steps. If the Permittee is unable to return the SCR control efficiency to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.6.8 for the period of time the monitoring system was not operating normally.

(d) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conduction monitoring pursuant to this condition.

(e) Failure to take reasonable response steps as described in (a), (b), and (c) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.6.14 Oxidation Catalyst Parametric Monitoring

In order to utilize the fuel-specific/temperature zone specific CO emission factors described in Condition D.6.5, the Permittee shall conduct the following monitoring:

(a) The Permittee shall monitor the Diesel Oxidation Catalyst (DOC) temperature and fuel used by the test cell with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.6.11(c). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour block average. If the temperature or fuel monitoring systems fail to operate normally for more than three (3) hours the Permittee shall take reasonable response steps to return the monitoring system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.6.5 for the period of time the monitoring system

was not operating normally.

(b) The Permittee shall monitor the CO emissions performance characteristics of the DOC using a portable analyzer in accordance with the compliance monitoring plan described in section D.6.14(c). If the CO emissions performance characteristics of the DOC as measured by the portable analyzer are not equivalent to or better than those established during the stack test in which the CO emission factor was established, the Permittee shall take reasonable response steps to restore the DOC performance characteristics to normal levels. For each period of time the Permittee is unable to attain the performance characteristics established during the stack test, the Permittee shall use an uncontrolled fuel-specific CO emission factor in the compliance determination provisions of Condition D.6.5.

(c) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conducting monitoring pursuant to this Condition.

(d) Failure to take reasonable response steps as described in (a) or (b) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

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

D.6.15 Record Keeping Requirements

(a) To document the compliance status with Condition D.6.1, the Permittee shall maintain the following records:

(1) Actual fuel usage for each type of fuel burned in an emission unit subject to the limits in Condition D.6.1.

(2) Oxidation catalyst temperature and temperature zone.

(3) Selective catalytic reduction temperature and temperature zone.

(4) Selective catalytic reduction urea flow rate.

(5) Selective catalytic reduction control efficiency, as measured by NOx sensors.

(6) An explanation or basis for failure to collect any of the required monitoring data.

(b) To document the compliance status with Condition D.6.12 - Visible Emission Notation, the Permittee shall maintain records of daily visible emission notations of the engine test cell stack exhausts HHP16 and HHP17.1 when combusting diesel fuel or biodiesel. 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).

(c) To document compliance with Condition D.6.8a, if the Permittee chooses this option, then the Permittee shall maintain the following records:

(1) All data recorded by continuous monitoring systems (CMS), including continuous emission monitoring systems (CEMS), required by Conditions D.6.8a.

(2) The Permittee shall maintain records of the continuous monitoring required by Condition D.6.8.a. The records shall include data required by 326 IAC 3-5-6.

(3) Pursuant to 326 IAC 3-5-4, the Permittee shall maintain and submit a complete,

written continuous monitoring standard operating procedure (SOP) for the continuous emissions monitors. The CEMS SOP should contain, at a minimum, the items described in 326 IAC 3-5-4(a).

(d) Section C -- General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.6.16 Reporting Requirements

A quarterly summary of the information to document the compliance status with condition D.6.1 shall be submitted using the reporting form located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. A summary report of NOx monitor downtime and other information required by 326 IAC 3-5-7(4) shall also be included in the report. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined in 326 IAC 2-7-1(34). Section C -- General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

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

Emissions Unit Description:

(s) One (1) Hedgehog Block Line, approved for construction in 2013, and consisting of the following units:

(3) One (1) emergency diesel generator, identified as emergency generator, with a rating of 967 hp, and exhausting outdoors;

(4) One (1) emergency diesel fire pump, identified as fire pump, with a rating of 175 hp, and exhausting outdoors;

Insignificant Activities:

(e) One (1) emergency diesel powered generator, permitted in 2012, with maximum capacity of 1,490 horse power.

Under 40 CFR 60, Subpart IIII, the emergency generators and the diesel fire pump are affected sources.

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

New Source Performance Standards (NSPS) [40 CFR Part 60]

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

The provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the emergency generators and fire pump engine described in this section except when otherwise specified in Table 8 to 40 CFR Part 60, Subpart IIII.

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

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines), which are included as Attachment B as specified as follows:

(a) The emergency generator is subject to the following portions of Subpart IIII:

(1) 40 CFR 60.4200(a)(2), (a)(3), and (d)
(2) 40 CFR 60.4205(b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207(b)
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211(c)
(8) 40 CFR 60.4212
(9) 40 CFR 60.4214(b) and (c)
(10) 40 CFR 60.4218
(11) 40 CFR 60.4219
(12) Table 2 to Subpart IIII
(13) Table 5 to Subpart IIII
(14) Table 8 to Subpart IIII

(b) The emergency generator to the Hedgehog block line is subject to the following portions of Subpart IIII.

(1) 40 CFR 60.4200(a)(2), and (d)
(2) 40 CFR 60.4205(b)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207(b)
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211(a), (c), (f), and (g)
(8) 40 CFR 60.4212
(9) 40 CFR 60.4214(b), (c), and (d)
(10) 40 CFR 60.4218
(11) 40 CFR 60.4219
(12) Table 5 to Subpart IIII
(13) Table 8 to Subpart IIII

(c) The fire pump engine is subject to the following portions of Subpart IIII.

(1) 40 CFR 60.4200(a)(2), and (d)
(2) 40 CFR 60.4205(c)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207(b)
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211(a), (c), (f), and (g)
(8) 40 CFR 60.4212
(9) 40 CFR 60.4214(b), (c), and (d)
(10) 40 CFR 60.4218
(11) 40 CFR 60.4219
(12) Table 3 to Subpart IIII
(12) Table 4 to Subpart IIII
(13) Table 8 to Subpart IIII

SECTION E.2 National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Emissions Unit Description: Insignificant Activities:

(e) One (1) emergency diesel powered generator, permitted in 2012, with maximum capacity of 1,490 horse power.

(s) One (1) Hedgehog Block Line, approved for construction in 2013, and consisting of the following units:

(3) One (1) emergency diesel generator, identified as emergency generator, with a rating of 967 hp, and exhausting outdoors;

(4) One (1) emergency diesel fire pump, identified as fire pump, with a rating of 175 hp, and exhausting outdoors;

(h) One (1) emergency diesel powered fire pump engine constructed in 1994, with maximum output capacity of 208 horse power.

Under 40 CFR 63, Subpart ZZZZ, the 1490 horsepower and the 1482 horsepower emergency generators, and the 175 horsepower emergency diesel fire pump are new affected sources.

Under 40 CFR 63, Subpart ZZZZ, the 208 horsepower fire pump engine is an existing affected source.

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

National Emissions Standard for Hazardous Air Pollutants (NESHAP) [40 CFR Part 63]

E.2.1 General Provisions Relating to NESHAP [326 IAC 20] [40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20, apply to the emergency generators and fire pump engines described in this section except when otherwise specified in Table 8 to 40 CFR Part 63, Subpart ZZZZ.

E.2.2 National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Pursuant to 40 CFR 63.6595, the Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ (National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines), which are included as Attachment C and incorporated by reference as 326 IAC 20-82 as specified as follows:

(a) The engine plant emergency generator, the Hedgehog block line facility emergency generator and the Hedgehog block line facility fire pump are new affected sources and must comply with the following portions of Subpart ZZZZ, upon start-up.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590, (a)(2)(iii) and (c)
(4) 40 CFR 63.6595(a)(7)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675
(8) Table 8 to Subpart ZZZZ

(b) The 208 horsepower fire pump engine is an existing affected source and must comply with the following portions of Subpart ZZZZ.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625 (e)(3), (f), (h), and (i)
(8) 40 CFR 63.6640(a), (b), (e), and (f)
(9) 40 CFR 63.6645(a)(5)
(10) 40 CFR 63.6655(a), (d), (e), and (f)
(11) 40 CFR 63.6660
(12) 40 CFR 63.6665
(13) 40 CFR 63.6670
(14) 40 CFR 63.6675
(15) Table 2d (item 1)
(16) Table 6 (item 9)
(17) Table 8

SECTION E.3 National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources [40 CFR Part 63, Subpart HHHHHH]

Emissions Unit Description:

(a1) One (1) paint spray line, identified as EU-01, consisting of the following equipment:

(1) Two (2) primer and topcoat spray booths, identified as EU-01G and EU-01H, approved for construction in 2011, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S9 and S10.

(2) One (1) offline spray booth, identified as EU-01I, approved for construction in 2011, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S11.

(3) One (1) primer and topcoat spray booth, identified as EU-01J, approved for construction in 2011, with a maximum capacity of 0.5 engines per hour, equipped with dry filters for overspray control, exhausting to stack S12.

(4) One (1) primer and topcoat spray booth, identified as EU-01K, approved for construction in 2011, with a maximum capacity of 0.5 engines per hour, equipped with dry filters for overspray control, exhausting to stack S13.

Under 40 CFR 63, Subpart HHHHHH, the paint spray line, identified as EU-01, is an existing affected area source.

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

National Emissions Standard for Hazardous Air Pollutants (NESHAP) [40 CFR Part 63]

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

The provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20, apply to the paint spray line, identified as EU-01, described in this section whenever coatings are used that contain one of the target HAPs (chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd)) except when otherwise specified in Table 1 to 40 CFR Part 63, Subpart HHHHHH.

E.3.2 National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources [40 CFR Part 63, Subpart HHHHHH]

Pursuant to 40 CFR 63.11172, the Permittee shall comply with the following provisions of 40 CFR 63, Subpart HHHHHH (National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources), which are included as Attachment D for the paint spray line, identified as EU-01, described in this section whenever coatings are used that contain one of the target HAPs (chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd)), on and after the initial compliance date of January 10, 2011, as specified as follows:

(1) 40 CFR 63.11169, (c), (d)(4), (d)(5)
(2) 40 CFR 63.11170(a), (a)(3), (b)
(3) 40 CFR 63.11171
(4) 40 CFR 63.11172, (b)

(5) 40 CFR 63.11173(e), (e)(1), (e)(2)(i), (e)(2)(iii), (e)(2)(iv), (e)(3), (e)(4), (e)(5), (f), (g), (g)(2), (g)(3)
(6) 40 CFR 63.11174
(7) 40 CFR 63.11175
(8) 40 CFR 63.11176
(9) 40 CFR 63.11177
(10) 40 CFR 63.11178
(11) 40 CFR 63.11179
(12) 40 CFR 63.11180
(13) Table 1 to Subpart HHHHHH

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015

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

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify): _____

☐ Report (specify): _____

☐ Notification (specify): _____

☐ Affidavit (specify): _____

☐ Other (specify): _____

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

Signature:

Printed Name:

Title/Position:

Phone:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015

This form consists of 2 pages Page 1 of 2

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), no later than four (**4**) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and
- The Permittee must submit notice in writing or by facsimile no later than two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

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

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

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

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY - COMPLIANCE BRANCH

Part 70 Quarterly Report for Fuel Usage Limit

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facilities: Sixteen (16) engine test cells, known as 801, 802, 803, 804, 805, 808, 806, 807, HHP2, HHP3, HHP5, Test Pad 8, Test Pad 10, Test Pad 11, HHP4, and Test Pad 9
Parameter: NO_X Emissions
Limit: NO_X emissions shall not exceed 217.9 tons of NO_X per twelve (12) consecutive month period

YEAR: _____

Month	**NOx Emissions for This Month** (tons)	**NOx Emissions for Previous 11 Months** (tons)	**NOx Emissions for 12-Month Period** (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: 808, 806, 807, HHP1, HHP2, HHP3, HHP5, Test Pad 8, Test Pad 10, Test Pad 11, HHP4, and Test Pad 9
Parameter: VOC Emissions
Limit: Less than 163.56 tons per twelve (12) consecutive month period.

YEAR: _____

Month	**VOC Emissions for This Month** (tons)	**VOC Emissions for Previous 11 Months** (tons)	**VOC Emissions for 12-Month Period** (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: 808, 806, 807, HHP1, HHP2, HHP3, HHP5, Test Pad 8, Test Pad 10, Test Pad 11, HHP4, and Test Pad 9
Parameter: CO Emissions
Limit: Less than 183.62 tons per twelve (12) consecutive month period.

YEAR: _____

Month	**CO Emissions for This Month** (tons)	**CO Emissions for Previous 11 Months**(tons)	**CO Emissions for 12-Month Period** (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Ten (1) test cells HHP1, HHP6 through HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2.
Parameter: NOx Emissions
Limit: Less than 243 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total NOx Emissions for This Month (tons)	Total NOx Emissions for Previous 11 Months (tons)	Total NOx Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: One (1) engine test cell HHP15, one (1) duct burner,
Parameter: NOx Emissions
Limit: Shall not exceed 39 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total NOx Emissions for This Month (tons)	Total NOx Emissions for Previous 11 Months (tons)	Total NOx Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Two (2) engine test cells HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters
Parameter: NOx Emissions
Limit: Shall be less than 37 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total NOx Emissions for This Month (tons)	Total NOx Emissions for Previous 11 Months (tons)	Total NOx Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Ten (10) test cells HHP1, HHP6 through HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2.
Parameter: CO Emissions
Limit: Less than 243 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total CO Emissions for This Month (tons)	Total CO Emissions for Previous 11 Months (tons)	Total CO Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP15
Parameter: CO Emissions
Limit: Shall not exceed 99 tons per twelve (12) consecutive month period.

YEAR: _____

Month	**CO Emissions for This Month** (tons)	**CO Emissions for Previous 11 Months**(tons)	**CO Emissions for 12-Month Period** (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters

Parameter: CO Emissions
Limit: Shall be less than 95 tons per twelve (12) consecutive month period.

YEAR: _____

Month	**CO Emissions for This Month** (tons)	**CO Emissions for Previous 11 Months**(tons)	**CO Emissions for 12-Month Period** (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Ten (10) test cells HHP1, HHP6 through HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2.
Parameter: VOC Emissions
Limit: Less than 248 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total VOC Emissions for This Month (tons)	Total VOC Emissions for Previous 11 Months (tons)	Total VOC Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters

Parameter: VOC Emissions
Limit: Shall be less than 39 tons per twelve (12) consecutive month period.

YEAR: _____

Month	VOC Emissions for This Month (tons)	VOC Emissions for Previous 11 Months(tons)	VOC Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: 808, 806,807, HHP1, HHP2, HHP3, HHP5, Test Pad 8, Test Pad 10, Test Pad 11, HHP4, and Test Pad 9
Parameter: CO2e Emissions
Limit: Less than 99,000 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total CO2e Emissions for This Month (tons)	Total CO2e Emissions for Previous 11 Months (tons)	Total CO2e Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Ten (10) test cells HHP1, HHP6 through HHP14, the twenty-two (22) boilers Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2
Parameter: CO2e Emissions
Limit: Less than 99,000 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total CO2e Emissions for This Month (tons)	Total CO2e Emissions for Previous 11 Months (tons)	Total CO2e Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters Parameter: CO2e Emissions
Limit: Less than 70,000 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total CO2e Emissions for This Month (tons)	Total CO2e Emissions for Previous 11 Months (tons)	Total CO2e Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Entire Site
Parameter: Glycol Ether (Single HAP) Emissions
Limit: Shall not exceed six (6) tons per twelve (12) consecutive month period

YEAR: _____

Month	**Single HAP Emissions for This Month** (tons)	**Single HAP Emissions for Previous 11 Months** (tons)	**Single HAP Emissions for 12-Month Period** (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Natural gas combustion by engines in all test cells under Condition A.2(b)
Parameter: Formaldehyde (Single HAP) Emissions
Limit: Shall not exceed 52.80 lb/mmcf per twelve (12) consecutive month period.

YEAR: _____

Month	**Total HAP Emissions for This Month** (tons)	**Total HAP Emissions for Previous 11 Months** (tons)	**Total HAP Emissions for 12-Month Period** (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters
Parameter: PM2.5 Emissions
Limit: Shall be less than 9 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total PM2.5 Emissions for This Month (tons)	Total PM2.5 Emissions for Previous 11 Months (tons)	Total PM2.5 Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP16
Parameter: VOC Emissions
Limit: Shall be less than 24 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total VOC Emissions for This Month (tons)	Total VOC Emissions for Previous 11 Months (tons)	Total VOC Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP17
Parameter: VOC Emissions
Limit: Shall be less than 24 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total VOC Emissions for This Month (tons)	Total VOC Emissions for Previous 11 Months (tons)	Total VOC Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD
Permit Requirement (specify permit condition #)
Date of Deviation: **Duration of Deviation:**
Number of Deviations:
Probable Cause of Deviation:
Response Steps Taken:
Permit Requirement (specify permit condition #)
Date of Deviation: **Duration of Deviation:**
Number of Deviations:
Probable Cause of Deviation:
Response Steps Taken:

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	Cummins Inc., Seymour Engine Plant
Source Location:	800 E. Third Street, Seymour, IN 47274
County:	Jackson
SIC Code:	3519
Operation Permit No.:	T071-30358-00015
Operation Permit Issuance Date:	November 29, 2011
Significant Source Modification No.:	071-34061-00015
Significant Permit Modification No.:	071-34122-00015
Permit Reviewer:	Deena Patton

Existing Approvals

The source was issued Part 70 Operating Permit No. 071-30358-00015 on November 29, 2011. The source has since received the following approvals:

Permit Type	Permit Number	Issuance Date
Significant Source Modification	071-30956-00015	February 20, 2012
Significant Permit Modification	071-30962-00015	March 8, 2012
Review Request	071-31949-00015	June 14, 2012
Administrative Amendment	071-32100-00015	July 19, 2012
Minor Source Modification	071-32374-00015	October 23, 2012
Significant Permit Modification	071-32412-00015	January 10, 2013
Administrative Amendment	071-32763-00015	January 28, 2013
Minor Source Modification	071-32823-00015	April 11, 2013
Significant Permit Modification	071-32903-00015	June 3, 2013
Administrative Amendment	071-33400-00015	July 31, 2013
Interim Significant Source Modification	071-33555I-00015	September 11, 2013
Significant Source Modification	071-33555-00015	January 22, 2014
Significant Permit Modification	071-33585-00015	February 07, 2014

County Attainment Status

The source is located in Jackson County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective July 20, 2012, for the 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

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

(b) $PM_{2.5}$
Jackson County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

Fugitive Emissions

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

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	**Potential to Emit** (ton/yr)
PM	155
PM_{10}	146
$PM_{2.5}$	141
SO_2	331
VOC	432
CO	540
NO_X	511
GHGs as CO_2e	221,143
Total HAPs	24.13
Worst Single	9.5 (Glycol Ethers)

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of a regulated pollutant is greater than 250 tons per year, the potential to emit of GHGs are equal to or greater than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) These emissions are based upon Technical Support Document for Significant Source Modification No. 071-33555-00015.

(c) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because the potential to emit HAPs is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Cummins Inc., Seymour Engine Plant on January 10, 2014, relating to the construction of two (2) new test engine cells (HHP16 and HHP17) and nine (9) small combustion units. The following is a list of the modified emission units and pollution control devices:

(a) One (1) engineering test cell, identified as HHP16, permitted in 2014, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped to vent uncontrolled natural gas and liquid propane for a maximum time of 24 hours per year and equipped with an in-stack duct burner, with maximum capacity of 5.0 MMBtu/hr, selective catalytic reduction for the control of NOx emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP16.1.

(b) One (1) engineering test cell, identified as HHP17, permitted in 2014, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped to vent uncontrolled natural gas and liquid propane for a maximum time of 24 hours per year and equipped with an in-stack duct burner, with maximum capacity of 5.0 MMBtu/hr, selective catalytic reduction for the control of NOx emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP17.1.

(c) Two (2) natural gas fired boilers, identified as EU-03Y and EU-03Z, permitted in 2014, with a maximum heat input rate of 3.0 MMBtu/hr each, with no emission controls, and exhausting to stack EU-03Y.1 and EU-03Z.1, respectively.

(d) Natural gas fired combustion sources, permitted in 2014, consisting of the following:

(1) One (1) direct fired air handling unit, rated at 0.34 MMBtu/hr

(2) Three (3) unit heaters, rated at 0.175 MMBtu/hr, each.

(e) One (1) propane fired propane vaporizer, rated at 0.50 MMBtu/hr.

Enforcement Issues

There are no pending enforcement actions.

Emission Calculations

See Appendix A of this Technical Support 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 before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Increase in PTE Before Controls of the Modification	
Pollutant	**Potential To Emit** (ton/yr)
PM	15.10
PM_{10}	14.50
$PM_{2.5}$	13.98
SO_2	0.96
VOC	226.17
CO	348.23
NO_X	1483.68
Single HAPs	12.74
Total HAPs	19.68

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

This source modification is subject to 326 IAC 2-7-10.5 because this modification has a potential to emit greater than or equal to twenty-five (25) tons per year of VOC and Nitrogen Oxides (NOx). Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d)(1), because this modification requires case-by-case determination of an emission limitation.

Since this source is considered a major PSD source and the unrestricted potential to emit of this modification is greater than one-hundred (100) tons of CO per year and forty (40) tons of NOx and

VOC per year, and greater than ten (10) tons of $PM_{2.5}$ per year, each, this modification will be subject to PSD review unless the source takes limits on these emissions to be not subject to PSD review.

In order to avoid PSD (326 IAC 2-2) and VOC BACT (326 IAC 8-1-6) the Permittee shall limit HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer as follows:

(a) The total CO emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall be less than 95 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total GHG emissions from the engine test cells HHP16 and HHP17, their respective duct burners, shall not exceed 70,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total NOx emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall be less than 37 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) The total PM2.5 emissions from the engine test cells HHP16 and HHP17, their respective duct burners, shall be less than 9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(e) The total VOC emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall be less than 39 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(f) The total VOC emissions from each of the engine test cells HHP16 and HHP17, and their respective duct burners, shall be less than 24 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Permit Level Determination – PSD

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 source modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**VOC**	**CO**	**NO_X**	**GHGs**
HHP16 and HHP17	14.96	13.90	<10.00	0.92	<39	<95	<37	70000
Small Combustion Units	0.14	0.60		0.04				
Fuel Venting	-	-	-	-			-	
Total for Modification	15.10	14.50	<10.00	0.96	<39	<95	<37	70000
Significant Level	25	15	10	40	40	100	40	75,000 CO_2e

*$PM_{2.5}$ listed is direct $PM_{2.5}$.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply to this modification.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

NSPS:

(a) The test engine cells (HHP16 and HHP17) are not subject to the requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60.4200, Subpart IIII, due to the provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(b) The 208 horsepower fire pump is not subject to the requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60.4200, Subpart IIII, since this engine was constructed prior to July 11, 2005.

(c) The two (2) natural gas fired boilers (EU-03Y and EU-03Z) are not subject to the requirements of the New Source Performance Standard for Fossil-Fuel-Fired Steam Generators, 40 CFR 60.40, Subpart Dc, since the boilers each have a heat capacity of 3.0 MMBtu/hr, which is below the 10 MMBtu/hr required to apply for this subpart.

(d) The two (2) natural gas fired boilers (EU-03Y and EU-03Z) are not subject to the requirements of the New Source Performance Standard for Incinerators, 40 CFR 60.50, Subpart E, since these boilers are not incinerators as defined in section 60.51.

(e) The three (3) diesel storage tanks are not subject to the requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) For Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, because the liquid stored has a maximum true vapor pressure less than 3.5 kilopascals (kPa) for the 100,000 gallon storage tank and less than 15.0 kPa for the 25,000 and 20,000 gallon storage tanks.

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

NESHAP:

(g) The test engine cells (HHP16 and HHP17) are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, Subpart ZZZZ due to the stationary RICEs being tested at a stationary RICE test cell/stand.

(h) The 208 horsepower fire pump is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), because the fire pump is at an area source and is an existing engine.

The unit subject to this rule include the following:

One (1) emergency diesel powered fire pump engine constructed in 1994, with maximum output capacity of 208 horse power. [Under 40 CFR 63, Subpart ZZZZ, the emergency generator is considered an existing affected source.].

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605

(7) 40 CFR 63.6625 (e)(3), (f), (h), and (i)
(8) 40 CFR 63.6640(a), (b), (e), and (f)
(9) 40 CFR 63.6645(a)(5)
(10) 40 CFR 63.6655(a), (d), (e), and (f)
(11) 40 CFR 63.6660
(12) 40 CFR 63.6665
(13) 40 CFR 63.6670
(14) 40 CFR 63.6675
(15) Table 2d (item 1)
(16) Table 6 (item 9)
(17) Table 8

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the unit except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

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

(j) The two (2) natural gas fired boilers, identified as EU-03Y and EU-03Z are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, Subpart DDDDD since the source is not a major source of HAPs.

(k) The two (2) natural gas fired boilers, identified as EU-03Y and EU-03Z are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, Subpart JJJJJJ (6J), since pursuant to section 63.11195(e) a gas-fired boiler is not subject to the requirements of this subpart.

CAM:

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

(1) has a potential to emit before controls equal to or greater than the Part 70 major source threshold for the pollutant involved;

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

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

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, for new or modified emission unit , which have emissions more than TV threshold and control equipment:

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
HHP16 - NOx	SCR	Y	>100	18.5	100	Y	N
HHP17- NOx	SCR	Y	>100	18.5	100	Y	N
HHP16 -	Oxidation	Y	>100	75	100	Y	N

CAM Applicability Analysis							
Emission Unit	**Control Device Used**	**Emission Limitation** (Y/N)	**Uncontrolled PTE** (ton/yr)	**Controlled PTE** (ton/yr)	**Part 70 Major Source Threshold** (ton/yr)	**CAM Applicable** (Y/N)	**Large Unit** (Y/N)
CO	Catalyst						
HHP17-CO	Oxidation Catalyst	Y			100	Y	N

There are no controls for VOC, even thoough the emissions are more than 100tpy.
Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to test engine cells (HHP16 and HHP17) for NOx and CO upon issuance of the Title V Renewal.

The following emission units have emissions less than the TV threshold or do not have controls for other pollutants and therefore are not subject to the requirements of 40 CFR 64 (CAM).

(m) Natural gas fired combustion sources, permitted in 2014, consisting of the following:

(1) One (1) direct fired air handling unit, rated at 0.34 MMBtu/hr

(2) Three (3) unit heaters, rated at 0.175 MMBtu/hr, each.

(n) One (1) propane fired propane vaporizer, rated at 0.50 MMBtu/hr.

State Rule Applicability Determination

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

326 IAC 2-2 (PSD)
PSD applicability is discussed under the Permit Level Determination – PSD section.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of each test engine cells (HHP16 and HHP17) will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply. Single HAP and combined HAPs from the entire source shall be limited to less than 10 tons per year and 25 tons per year, respectively.

40 CFR 63 (HAP Minor Limit)
The single HAP and combined HAPs emissions shall be calculated using the equations located in D.0.1 of the permit.

326 IAC 2-6 (Emission Reporting)
Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted annually, since the source has potential to emit greater than two thousand five hundred (2,500) tons per year of CO. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1, the two (2) engine test cells (HHP16 and HHP17), the one (1) direct fired air handling unit, one (1) 208 horsepower fire pump, and the three (3) unit heaters are not subject to the requirements of 326 IAC 6-2-4, since they are not sources of indirect heating.

Pursuant to 326 IAC 6-2-1, the two (2) natural gas fired boilers (EU-03Y and EU-03Z) and the one (1) propane fired propane vaporizer are subject to the requirements of 326 IAC 6-2-4, since they are sources of indirect heating and are constructed after September 21, 1983. Pursuant to 326 IAC 6-2-4, the Permittee shall comply with the following emission limits:

Emission Unit/ID	Construction Year	Q (mmBtu/hr)	Pt (lb/mmBtu)
Boilers EU03C, EU03D, EU03L, EU03M, EU03S through EU03V, EU03X	2011	2.0+2.0+2.0+2.0+2.0+2.0+2.0+2.0+4.2=20.2	0.338
EU-03E through EU-03K, EU-03N through EU-03R, and EU-03W	2012	3.0+3.0+3.0+3.0+3.0+4.0+4.0+3.2+ 3.5+3.5+3.5+3.5+5.0+20.2=65.4	0.374
Boiler/EU-03Y, Boiler/EU-0Z, and Propane Vaporizer	**2014**	**3.0+3.0+0.5 +65.4=71.9**	**0.359**

Particulate emissions from indirect heating facilities constructed after September 21, 1983 shall be limited by the following equation:

$Pt = 1.09/ Q^{0.26}$

Where: Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.
Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b), the two (2) engine test cells (HHP16 and HHP17) are not subject to the requirements of 326 IAC 6-3-2, since liquid and gaseous fuels and combustion air are not considered part of the process weight.

326 IAC 7 (Sulfur Dioxide Rules)
Pursuant to 326 IAC 7-1.1-1, the two (2) test engine cells (HHP16 and HHP17) are not subject to the requirements of 326 IAC 7-1.1-1, since the potential emissions of sulfur dioxide (SO2) is less than twenty-five (25) tons per year each.

326 IAC 8-1-6 (Volatile Organic Compounds New Facilities; General Reduction Requirements)
Pursuant to 326 IAC 8-1-6, the two (2) engine test cells (HHP16 and HHP17) are not subject to the requirements of 326 IAC 8-1-6, since the uncontrolled emissions of VOC are limited to less than twenty-five (25) tons per year each.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the

requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The Compliance Determination and Monitoring Requirements applicable to this modification are as follows:

(a) The testing requirements applicable to this source are as follows:

Testing Requirements				
Emission Unit	**Control Device**	**Pollutant**	**Timeframe for Testing**	**Frequency of Testing**
Test Engine Cell (HHP16 and HHP17) or representative test cell	SCR and Catalytic Oxidizer	NOx and CO	180 days after initial startup of each test cell	every 5 years from a representative engine (HHP1, HHP6 through HHP17)

IDEM, OAQ Compliance, has accepted this testing condition.

(b) The two (2) test engine cells (HHP16 and HHP17) has applicable compliance monitoring conditions as specified below:

Emission Unit/ID	**Control**	**Operating Parameter**	**Monitoring Frequency**	**Range**	**Excursions and Exceedances**
Test Engine Cell (HHP16 and HHP17)	SCR (NOx)	Temperature and Fuel rate Urea Flow Rate	Continuously	Normal-Abnormal	Response Steps
Test Engine Cell (HHP16 and HHP17)	Catalytic Oxidizer (CO)	Temperature and Fuel Rate Performance Characteristics	Continuously	Normal-Abnormal	Response Steps

These monitoring conditions are necessary because the selective catalytic reduction (SCR) and the catalytic oxidizer must operate properly for the source to utilize a reduced emission factor for purposes of demonstrating compliance with the PSD Minor limits and 326 IAC 2-7 (Part 70).

Dave Cline of the Compliance Data Section has approved this testing schedule.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 071-30358-00015. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

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

***

~~(b) Six (6) production engine test cells, identified as EU-02A, constructed in 1978, consisting of the following equipment:~~

~~(1) Three (3) diesel-powered production engine test cells, identified as 801, 802, and 803, with maximum outputs of 1000, 1000 and 1650 hp respectively, with heat inputs of 6.41, 6.41 and 10.57 MMBtu/hr, respectively and exhausting to stacks 801.1 - 801.2, 802.1 - 802.2, and 803.1 and 803.2, respectively;~~

~~(2) Two (2) diesel-powered production engine test cells, identified as 804 and 805, with maximum outputs of 1650 hp, each, with heat input of 10.57 MMBtu/hr each and exhausting to stacks 804 and 805, respectively; and~~

~~(3) One (1) diesel-powered or natural gas-fired production engine test cell, identified as 808, with maximum output of 1650 hp when combusting diesel fuel or 600hp when combusting natural gas, with heat input of 10.57 MMBtu/hr when combusting diesel fuel or 4.1 MMBtu/hr when combusting natural gas and exhausting to stack 808.~~

~~(c) Ten (10) engineering engine test cells, identified as EU-02B, installed in 1978, consisting of the following equipment:~~

~~(1) Two (2) diesel or biodiesel-powered engineering engine test cells, identified as 806 and 807, may be alternatively powered by liquid propane or natural gas with maximum outputs of 1800 hp, each, when combusting diesel or biodiesel, or 1800hp, each, when combusting liquid propane or natural gas and exhausting to stacks 806 and 807, respectively;~~

~~(2) One (1) engineering test cell engine with duct burners, identified as HHP1, modified in 2011 powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with maximum output of 9000 hp, equipped with an in-stack duct burner with maximum capacity of 2.0 MMbtu/hr, selective catalytic reduction for the control of NOx emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP1.1.~~

~~(3) One (1) diesel or biodiesel-powered engineering engine test cells, identified as HHP2, with maximum output of 4500 hp when combusting diesel or biodiesel, with heat input of 28.82 MMBtu/hr and exhausting to stack HHP2;~~

~~(4) One (1) diesel or biodiesel-powered engineering engine test cell, identified as HHP3, may be alternatively powered by liquid propane or natural gas, with maximum output of 4500 hp when combusting diesel or biodiesel and 4500hp when combusting liquid propane or natural gas, with heat input of 28.82 MMBtu/hr when combusting diesel/biodiesel or liquid propane/natural gas and exhausting to stacks HHP3.1 and HHP3.2;~~

~~(5) One (1) diesel or biodiesel-powered engineering test cell, identified as HHP5, may be alternatively powered by liquid propane or natural gas, with output of 2200 hp when combusting diesel or biodiesel or 600 hp when combusting liquid propane or natural gas, with heat input of 14.09 MMBtu/hr when combusting diesel or biodiesel or 4.10 when combusting liquid propane or natural gas and exhausting to stack HHP5.1 - HHP5.2;~~

(6) One (1) diesel or biodiesel-powered engine test pad 8 (PI), identified as PI, may be alternatively powered by liquid propane or natural gas, with maximum outputs of 3000 hp when combusting diesel or biodiesel or 2200 hp when combusting liquid propane or natural gas, with heat input of 19.22 MMBtu/hr when combusting diesel or biodiesel and 14.40 MMBtu/hr when combusting liquid propane or natural gas and exhausting to stacks PD8.1 and PD8.2;

(7) Two (2) diesel or biodiesel-powered engine test pad 10(PI) and 11(PI), identified as PI, may be alternatively powered by liquid propane or natural gas, with maximum outputs of 1850, each, when combusting diesel, or biodiesel, or 1850 hp, each when combusting liquid propane or natural gas, with heat input of 11.85 MMBtu/hr, each, when combusting diesel, or biodiesel or 12.70 MMBtu/hr, each when combusting liquid propane or natural gas and exhausting to stacks PD10.1 and PD11.1; and

(8) One (1) diesel or biodiesel-powered engineering engine test cell, identified as HHP4, may be alternatively powered by liquid propane or natural gas, with a maximum output of 2200 hp when combusting diesel or biodiesel and 2200hp when combusting liquid propane or natural gas and a heat input of 14.09 MMBtu per hour when combusting diesel or biodiesel or 14.40 MMBtu/hr when combusting liquid propane or natural gas and exhausting to stacks HHP4.1 and HHP4.2.

(d) One (1) diesel or biodiesel-powered engineering engine test cell Test Pad 9, identified as EU-02C, installed in 2005, may be alternatively powered by liquid propane or natural gas, with maximum outputs of 4500 hp when combusting diesel or biodiesel or 2200 hp when combusting liquid propane or natural gas, exhausting to stacks PD9.1 and PD9.2.

(e) One (1) engineering engine test cell, identified as HHP6, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped to vent uncontrolled natural gas and liquid propane for a maximum time of 24 hours per year and equipped with an in-stack duct burners, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP6.1.

(f) One (1) engineering engine test cell, identified as HHP7, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP7.1.

(g) One (1) engineering engine test cell, identified as HHP8, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP8.1.

(h) One (1) engineering engine test cell, identified as HHP9, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP9.1.

(i) One (1) engineering engine test cell, identified as HHP10, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped to vent uncontrolled natural

~~gas and liquid propane for a maximum time of 24 hours per year and equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP10.1.~~

~~(j) One (1) production engine test cell, identified as HHP11, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP11.1.~~

~~(k) One (1) production engine test cell, identified as HHP12, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP12.1.~~

~~(l) One (1) production engine test cell, identified as HHP13, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP13.1.~~

~~(m) One (1) production engine test cell, identified as HHP14, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP14.1.~~

~~(n) Nine (9) natural gas fired boilers, identified as EU03C, EU03D, EU03L, EU03M, EU03S, EU03T EU03U and EU03V, approved for construction in 2011, each having a maximum capacity of 2.0 MMBtu/hr and EU03X having a maximum capacity of 4.2 MMBtu/hr.~~

~~(o) Four (4) natural gas fired boilers, approved for construction in 2012, consisting of the following:~~

~~(1) Two (2) boilers, identified as EU03I, and EU03J, each with a maximum heat input capacity of 4.0 MMBtu/hr.~~

~~(2) One (1) boiler, identified as EU03K, with a maximum heat input capacity of 3.2 MMBtu/hr.~~

~~(3) One (1) boiler, identified as EU03W, with a maximum heat input capacity of 5.0 MMBtu/hr.~~

~~(p) Nine (9) natural gas fired boilers, approved for construction in 2012, each equipped with Low NOx burners for NOx reduction, consisting of the following:~~

~~(1) Five (5) boilers, identified as EU03E, EU03F, EU03G, EU03H, and EU03R, each rated at a maximum heat input capacity of 3.0 MMBtu/hr.~~

~~(2) Four (4) boilers, identified as EU03N, EU03O, EU03P, and EU03Q, each rated at a maximum heat input capacity of 3.5 MMBtu/hr.~~

~~(q) Natural gas-fired combustion sources, approved for construction in 2012, consisting of the~~

~~following:~~

~~(1) Four (4) direct fired AHU, rated at 0.47 million British thermal units per hour, each.~~

~~(2) One (1) direct fired AHU, rated at 0.80 million British thermal units per hour.~~

~~(3) One (1) direct fired AHU, rated at 0.67 million British thermal units per hour.~~

~~(4) Two (2) direct fired AHU, rated at 0.30 million British thermal units per hour, each.~~

~~(5) Two (2) direct fired AHU, rated at 2.72 million British thermal units per hour, each.~~

~~(6) One (1) direct fired AHU, rated at 2.59 million British thermal units per hour.~~

~~(7) Two (2) direct fired AHU, rated at 3.27 million British thermal units per hour, each equipped with Low NOx burner.~~

~~(8) Two (2) dry and curing combustion units, rated at 2.40 million British thermal units per hour, each.~~

~~(9) Two (2) dry and curing combustion units, rated at 1.76 million British thermal units per hour, each, equipped with Low NOx burner.~~

~~(10) Eight (8) unit heaters, rated at 0.15 million British thermal units per hour, each.~~

~~(11) Nine (9) unit heaters, rated at 0.18 million British thermal units per hour, each~~

~~(r) Natural gas-fired combustion sources, approved for construction in 2013, consisting of the following:~~

~~(1) Seventeen (17) natural gas direct fired air handling units, permitted in 2013, with a cumulative total heat input capacity of 25.5 mmBTU/hr.~~

~~(2) One (1) natural gas-fired unit heater, permitted in 2013, with a heat input capacity of 0.4 mmBTU/hr.~~

~~(s) One (1) Hedgehog Block Line Facility, approved for construction in 2013, and consisting of the following units:~~

~~(1) Four (4) engine block boring and machining operations, with a max operation of 3.0 engine blocks per day, using a demister as control, and exhausting indoors.~~

~~(2) One (1) engine block washing operation, with a max operation of 3.0 engine blocks per day, using a demister as control, and exhausting to BLW 1.1~~

~~(3) One (1) emergency diesel generator, identified as emergency generator, with a rating of 1482 hp, and exhausting outdoors;~~

~~(4) One (1) emergency diesel fire pump, identified as fire pump, with a rating of 175 hp, and exhausting outdoors;~~

~~(5) Fourteen (14) natural gas combustion units, consisting of the following:~~

~~(A) Two (2) direct fired roof top units, identified as RTU-1 and RTU-2, each with a heat capacity of 3.00 MMBtu/hr, each using no controls, and each exhausting outdoors;~~

~~(B) One (1) Indirect fired air handler unit, identified as AHU-1, with a heat~~

~~capacity of 0.25 MMBtu/hr, using no controls, and exhausting outdoors;~~

~~(C) Six (6) Unit heaters, identified as UH-1 through UH-6, each with a heat capacity of 0.20 MMBtu/hr, each using no controls, and each exhausting outdoors;~~

~~(D) Five (5) Dock heaters, identified as DH 1 through DH 5, each with a heat capacity of 1.00 MMBtu/hr, each using no controls, and each exhausting outdoors.~~

~~(t) One (1) production engine test cell, identified as HHP15, permitted in 2014, powered by diesel, biodiesel, or natural gas with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 5.0 MMBtu/hr, selective catalytic reduction (SCR) for the control of NOx emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP15.1.~~

(b) The test cells described in the table below:

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
801	Production	Diesel	1650		1978	801.1 - 801.2
802	Production	Diesel	1650		1978	802.1 - 802.2
803	Production	Diesel	1650		1978	802.1 - 803.2
804	Production	Diesel	1650		1978	804
805	Production	Diesel	1650		1978	805
806	Engineering	Diesel Biodiesel LPG Natural gas	1800		1978	806
807	Engineering	Diesel Biodiesel LPG Natural gas	1800		1978	807
808	Production	Diesel Natural gas	1650		1978	808
Test Pad 8	Engineering	Diesel Biodiesel LPG Natural gas	3000 3000 2200 2200		1978	PD8.1 and PD8.2
Test Pad 9	Engineering	Diesel Biodiesel LPG Natural gas	4500 4500 2200 2200		2005	PD9.1 and PD9.2
Test Pad 10	Engineering	Diesel Biodiesel LPG Natural gas	1850 1850 1850 1850		????	PD10.1

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
Test Pad 11	**Engineering**	**Diesel Biodiesel LPG Natural gas**	**1850 1850 1850 1850**		**????**	**PD11.1**
HHP1	**Engineering**	**Diesel Biodiesel Natural gas NG + CO2 Hydrogen LPG**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**1978/modified 2011**	**HHP.1**
HHP2	**Engineering**	**Diesel Biodiesel**	**4500**		**1978**	**HHP.2**
HHP3	**Engineering**	**Diesel Biodiesel LPG Natural gas**	**4500**		**1978**	**HHP3.1 and HHP3.2**
HHP4	**Engineering**	**Diesel Biodiesel LPG Natural gas**	**2200**	**Vent uncontrolled NG or LPG for 24 hrs/yr**	**1978**	**HHP4.1 and HHP4.2**
HHP5	**Engineering**	**Diesel Biodiesel LPG Natural gas**	**2200 2200 600 600**		**1978**	**HHP5.1 and HHP5.2**
HHP6	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr**	**2011**	**HHP6.1**
HHP7	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP7.1**
HHP8	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP8.1**
HHP9	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP9.1**

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
HHP10	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr**	**2011**	**HHP10.1**
HHP11	**Production**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP11.1**
HHP12	**Production**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP12.1**
HHP13	**Production**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP13.1**
HHP14	**Production**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP14.1**
HHP15	**Production**	**Diesel Biodiesel Natural gas**	**9000**	**SCR Catalytic oxidation 5.0 MMBtu Duct Burner**	**2014**	**HHP15.1**
HHP16	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 5.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr**	**2014**	**HHP16.1**
HHP17	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 5.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr**	**2014**	**HHP17.1**

(c) The natural gas-fired boilers described in the table below:

Boiler Group	Identification number	Capacity	Controls	Construction date	Stack

Boiler Group	Identification number	Capacity	Controls	Construction date	Stack
1	EU03C EU03D EU03L EU03M EU03S EU03T EU03U EU03V	2.0 MMBtu/hr each		2011	
	EU03X	4.2 MMBtu/hr		2011	
2	EU03I EU03J	4.0 MMBtu/hr each		2012	
	EU03K	3.2 MMBtu/hr		2012	
3	EU03E EU03F EU03G EU03H EU03R	3.0 MMBtu/hr each	Low-NOx burners	2012	
	EU03N EU03O EU03P EU03Q	3.5 MMBtu/hr each	Low-NOx burners	2012	
4	EU03Y EU03Z	3.0 MMBtu/hr each		2014	

(d) The natural gas-fired combustion sources listed in the table below:

Natural gas-fired equipment Group	Quantity	Type	Capacity	Construction date
Hedgehog expansion natural gas heating units (Group 1)	4	Direct fired air handling unit	0.47 MMBtu/hr each	2012
	1	Direct fired air handling unit	0.80 MMBtu/hr	2012
	1	Direct fired air handling unit	0.67 MMBtu/hr	2012
	2	Direct fired air handling unit	0.30 MMBtu/hr each	2012
	2	Direct fired air handling unit	2.72 MMBtu/hr each	2012
	1	Direct fired air handling unit	2.59 MMBtu/hr	2012
	2	Direct fired air handling unit with Low-NOx burner	3.27 MMBtu/hr each	2012
	8	Unit heaters	0.15 MMBtu/hr each	2012
	9	Unit heaters	0.18 MMBtu/hr each	2012
Hedgehog expansion	2	Drying and curing combustion units	2.4 MMBtu/hr each	2012

Natural gas-fired equipment Group	Quantity	Type	Capacity	Construction date
drying and curing ovens (Group 2)	2	Drying and curing combustion units with Low-NOx burner	1.76 MMBtu/hr each	2012
Natural gas heating units (Group 3)	17	Direct fired air handling units	25.5 MMBtu/hr total	2013
	1	Unit heater	0.40 MMBtu/hr	2013
HHP16/HHP17 expansion combustion units (Group 4)	1	Direct fired air handling unit	0.34 MMBtu/hr	2014
	3	Unit heaters	0.175 MMBtu/hr each	2014
	1	Propane vaporizer	0.50 MMBtu/hr	2014

(e) One (1) Hedgehog Block Line Facility, approved for construction in 2013, and consisting of the following units:

(1) Four (4) engine block boring and machining operations, with a max operation of 3.0 engine blocks per day, using a demister as control, and exhausting indoors.

(2) One (1) engine block washing operation, with a max operation of 3.0 engine blocks per day, using a demister as control, and exhausting to BLW 1.1

(3) One (1) emergency diesel generator, identified as emergency generator, with a rating of 967 hp, and exhausting outdoors;

(4) One (1) emergency diesel fire pump, identified as fire pump, with a rating of 175 hp, and exhausting outdoors;

(5) Fourteen (14) natural gas combustion units, consisting of the following:

(A) Two (2) direct fired roof top units, identified as RTU-1 and RTU-2, each with a heat capacity of 3.00 MMBtu/hr, each using no controls, and each exhausting outdoors;

(B) One (1) Indirect fired air handler unit, identified as AHU-1, with a heat capacity of 0.25 MMBtu/hr, using no controls, and exhausting outdoors;

(C) Six (6) Unit heaters, identified as UH-1 through UH-6, each with a heat capacity of 0.20 MMBtu/hr, each using no controls, and each exhausting outdoors;

(D) Five (5) Dock heaters, identified as DH-1 through DH-5, each with a heat capacity of 1.00 MMBtu/hr, each using no controls, and each exhausting outdoors.

****

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

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

***

(h) One (1) emergency diesel powered fire pump engine constructed in 1994, with maximum output capacity of 208 horse power. [Under 40 CFR 63, Subpart ZZZZ, the fire pump engine is considered an existing affected source.].

****

C.18 ~~Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60, Subpart Kb]~~ **Reserved**

~~The Permittee shall maintain accessible records showing the dimension of the No.2 diesel storage tank and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tank.~~

SECTION D.0 HAP Limits

Emissions Unit Description:

(a) One (1) paint spray line, identified as EU-01, consisting of the following equipment:

(1) Two (2) primer and topcoat spray booths, identified as EU-01G and EU-01H, approved for construction in 2011, each with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S9.1 and S9.2, for EU-01G and stacks S10.1 and S10.2 for EU-01H.

(2) One (1) offline spray booth, identified as EU-01I, approved for construction in 2011, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S11.1 and S11.2.

(3) One (1) primer and topcoat spray booth, identified as EU-01J, approved for construction in 2011, with a maximum capacity of 0.5 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S12.1 and S12.2.

(4) One (1) primer and topcoat spray booth, identified as EU-01K, approved for construction in 2011, with a maximum capacity of 0.5 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S13.1 and S13.2.

(b) Natural Gas Combustion by engines in all test cells under Condition A.2(b).

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

D.0.1 HAPs Minor Limits [40 CFR 63] [326 IAC 20][326 IAC 4.1]

The Permittee shall comply with the following:

(a) Emissions of glycol ethers from the paint spray line shall not exceed six (6) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Natural gas combustion by engines in all the test cells at the plant shall be limited to 265 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The emissions of formaldehyde from the natural gas combustion shall not exceed 52.8 lb per million cubic feet.

Compliance with these limits and the potential to emit of HAPs from all other emission units and for all other HAPs at this source, will limit the source-wide emissions of HAPs to less than ten (10) tons of a single HAP and less than twenty-five (25) tons of a combination of HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1 not applicable to for the HP-16 and HP-17, and make the source an area source of HAPs for the purposes of 40 CFR 63.

D.0.2 Compliance Determination Requirements

(a) To demonstrate compliance with the limits in Condition D.0.1(a), the Permittee shall determine the following for each calendar month:

(1) The amount of each coating applied;
(2) The amount of clean up or dilution solvent used;
(3) The glycol ether content in the coatings applied and solvents used.

(b) To demonstrate compliance with the limit in Condition D.0.1(b), the Permittee shall determine the amount of natural gas burned in the test cells for each calendar month and each 12 consecutive month period.

D.0.3 Record Keeping Requirements

(a) To document compliance with the limit in Condition D.0.1(a), the Permittee maintain records, including purchase orders, invoices, and material safety data sheets, of the following for each calendar month:

(1) The amount of each coating applied;
(2) The amount of clean up or dilution solvent used;
(3) The glycol ether content in the coatings applied and solvents used.

(b) To demonstrate compliance with the limit in Condition D.0.1(b), the Permittee shall maintain records of the amount of natural gas burned in the test cells for each calendar month.

(c) Section C – General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.0.4 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.0.1(a) and D.0.1(b) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

****

SECTION D.1 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

(a) One (1) paint spray line, identified as EU-01, consisting of the following equipment:

***

(b) The test cells described in the table below:

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
HHP1	**Engineering**	**Diesel Biodiesel Natural gas NG + CO2 Hydrogen LPG**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**1978/modified 2011**	**HHP.1**
HHP6	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr**	**2011**	**HHP6.1**
HHP7	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP7.1**
HHP8	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP8.1**
HHP9	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP9.1**
HHP10	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr**	**2011**	**HHP10.1**
HHP11	**Production**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP11.1**

HHP12	**Production**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP12.1**
HHP13	**Production**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP13.1**
HHP14	**Production**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 2.0 MMBtu Duct Burner**	**2011**	**HHP14.1**

(c) The natural gas-fired boilers described in the table below:

Boiler Group	Identification number	Capacity	Controls	Construction date	Stack
1	**EU03C EU03D EU03L EU03M EU03S EU03T EU03U EU03V**	**2.0 MMBtu/hr each**		**2011**	
	EU03X	**4.2 MMBtu/hr**		**2011**	
2	**EU03I EU03J**	**4.0 MMBtu/hr each**		**2012**	
	EU03K	**3.2 MMBtu/hr**		**2012**	
3	**EU03E EU03F EU03G EU03H EU03R**	**3.0 MMBtu/hr each**	**Low-NOx burners**	**2012**	
	EU03N EU03O EU03P EU03Q	**3.5 MMBtu/hr each**	**Low-NOx burners**	**2012**	

(d) The natural gas-fired combustion sources listed in the table below:

Natural gas-fired equipment Group	Quantity	Type	Capacity	Construction date

Hedgehog expansion natural gas heating units (Group 1)	**4**	**Direct fired air handling unit**	**0.47 MMBtu/hr each**	**2012**
	1	**Direct fired air handling unit**	**0.80 MMBtu/hr**	**2012**
	1	**Direct fired air handling unit**	**0.67 MMBtu/hr**	**2012**
	2	**Direct fired air handling unit**	**0.30 MMBtu/hr each**	**2012**
	2	**Direct fired air handling unit**	**2.72 MMBtu/hr each**	**2012**
	1	**Direct fired air handling unit**	**2.59 MMBtu/hr**	**2012**
	2	**Direct fired air handling unit with Low-NOx burner**	**3.27 MMBtu/hr each**	**2012**
	8	**Unit heaters**	**0.15 MMBtu/hr each**	**2012**
	9	**Unit heaters**	**0.18 MMBtu/hr each**	**2012**
Hedgehog expansion drying and curing ovens (Group 2)	**2**	**Drying and curing combustion units**	**2.4 MMBtu/hr each**	**2012**
	2	**Drying and curing combustion units with Low-NOx burner**	**1.76 MMBtu/hr each**	**2012**

(g) One (1) emergency diesel powered generator permitted in 2011, with maximum output capacity of 1490 horse power. [Under 40 CFR 60, Subpart IIII, the emergency generator is considered a new affected source.][Under 40 CFR 63, Subpart ZZZZ, the emergency generator is considered a new affected source.].

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

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

D.1.1 Particulate Emission Limitations Work Practices, and Control Technologies [326 IAC 6-3-2(d)]

***

D.1.2 Particulate Emission Limitations for Sources of Indirect Heating Matter (PM) Limitation [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the boilers known as Boiler Group 1, constructed in 2011, shall each be limited to 0.338 pounds per MMBtu heat input.

(b) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the boilers known as Boiler Group 2 and 3 shall each be limited to 0.374 pounds per MMBtu heat input.

D.1.~~2~~**3** Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

***

D.1.~~3~~**4** Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

***

D.1.5 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

(a) The total CO emissions from the ten (10) test cells HHP1, HHP6, HHP7, HHP8,

HHP9, HHP10, HHP11, HHP12, HHP13, and HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2 shall not exceed 243 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total NOx emissions from the ten (10) test cells HHP1, HHP6, HHP7, HHP8, HHP9, HHP10, HHP11, HHP12, HHP13, and HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2 shall not exceed 243 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total VOC emissions from the paint booths, the ten (10) test cells HHP1, HHP6, HHP7, HHP8, HHP9, HHP10, HHP11, HHP12, HHP13, and HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2 shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit the emissions of CO, NOx, and VOC emissions to less than two hundred and fifty (250) tons per year, each and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the Hedgehog expansion project.

(d) The total CO2e emissions from the ten (10) test cells HHP1, HHP6, HHP7, HHP8, HHP9, HHP10, HHP11, HHP12, HHP13, and HHP14, the twenty-two (22) boilers described in Boiler Groups 1, 2, and 3, the main plant emergency generator, and the natural gas fired equipment in Natural Gas-Fired Equipment Groups 1 and 2 shall not exceed 99,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with this emission limit will limit the potential to emit CO2e to less than 100,000 tons, per year and render the requirements of 326 IAC 2-2, not applicable the Hedgehog expansion project.

~~D.1.4 Hazardous Air Pollutants (HAPs) Minor Limits [40 CFR 63]~~

~~(a) The amount of single HAP delivered to the coating applicators (EU-01G, EU-01H, EU-01I, EU-01J and EU-01K) from coatings, and dilution and cleaning solvents used in the paint spray line identified as EU-01 and the amount of HAP from twenty five (25) engine test cells, identified as 801-808, HHP1-HHP10, 8(PI), 9(PI), 10(PI), EU-02C, and Production lines HHP11 - HHP14 (listed in Section D.2) shall be limited to less than 9.5 tons per twelve (12) consecutive month period for any single HAP with compliance determined at the end of each month period.~~

~~(b) The amount of total HAP delivered to the coating applicators (EU-01G, EU-01H, EU-01I, EU-01J and EU-01K) from coatings, and dilution and cleaning solvents used in the paint spray line identified as EU-01 and the amount of HAP from twenty five (25) engine test cells, identified as 801-808, HHP1-HHP10, 8(PI), 9(PI), 10(PI), EU-02C, and Production lines HHP11 - HHP14 (listed in Section D.2) less than twenty-four (24) tons per twelve (12) consecutive month period for total HAP with compliance determined at the end of each month period.~~

~~Compliance with these limits, the limits in Condition D.2.2, and the potential HAP emissions from the other emission units at this source, will limit the source-wide emissions of HAPs to less than ten (10) tons of a single HAP and less than twenty-five (25) tons of a combination of HAPs per twelve (12) consecutive month period and render the source an area source of HAPs.~~

D.1.~~5~~**6** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

~~A Preventive Maintenance Plan is required for each of the five (5) spray booths, EU-01G, EU-01H, EU-01I, EU-01J and EU-01K, and the dry filters. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to preventive maintenance plans.~~

(a) A Preventive Maintenance Plan is required for each of the five (5) spray booths, EU-01G, EU-01H, EU-01I, EU-01J and EU-01K, and the dry filters.

(b) A Preventive Maintenance Plan is required for the engine test cells HHP1, HHP6-HHP14 and their respective control devices.

(c) Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to preventive maintenance plans.

Compliance Determination Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] [40 CFR 64]

D.1.~~6~~**7** Particulate Control [326 IAC 2-7-6(6)]

***

D.1.~~7~~**8** Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

***

D.1.9 Carbon Monoxide (CO) Control

In order to ensure compliance with Condition D.1.5 (a), the CO emissions from each test cell shall be controlled with an oxidation catalyst. The tests cells may be operated without the DOC control system with emissions reported as specified in D.1.10.

D.1.10 Carbon Monoxide (CO) Emission Limit Determination

To demonstrate compliance with the CO emission limit in Condition D.1.5(a), the Permittee shall determine actual CO emissions as the sum of the following quantities:

(a) Test cells fuel combustion: CO emissions from test cells HHP1 and HHP6-HHP14 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific/temperature zone specific CO emission factor pursuant to this general equation:

Monthly CO emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific CO emission factor in lb CO/unit of fuel

Total monthly CO emissions from the test cells shall be the sum of the individual monthly CO emissions for each fuel burned in the test cell, as illustrated in the table at the end of this condition.

If CO emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific CO emission factor.

(b) Other fuel combustion equipment: CO emissions from combustion of fuel in the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate CO emission factor pursuant to this general equation:

Monthly CO emissions = Monthly fuel usage X emission factor in lb CO/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly CO emissions
HHP1 HHP6 HHP7 HHP8 HHP9 HHP10 HHP11 HHP12 HHP13 HHP14	Diesel fuel (gallons)	CO-TZ1DieselEf	
	Diesel fuel (gallons)	CO-TZ2DieselEf	
	Diesel fuel (gallons)	CO-TZ3DieselEf	
	Diesel fuel (gallons)	CO-DieselEf-uncontrolled	
	Biodiesel fuel (gallons)	CO- TZ1BDieselEf	
	Biodiesel fuel (gallons)	CO- TZ2BDieselEf	
	Biodiesel fuel (gallons)	CO- TZ3BDieselEf	
	Biodiesel fuel (gallons)	CO-BDieselEf-uncontrolled	
	Natural gas (mmcf)	CO-TZ1NatGasEf	
	Natural gas (mmcf)	CO-TZ2NatGasEf	
	Natural gas (mmcf)	CO-TZ3NatGasEf	
	Natural gas (mmcf)	CO-NatGasEf-uncontrolled	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ1LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ2LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ3LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-LPEf-uncontrolled	
HHP1, HHP6-HHP14 duct burners, Boiler Groups 1, 2, and 3, Natural gas heating units (Group 1) and Drying and Curing ovens (Group 2)	Natural gas (mmcf)	CO-EPA-NatGasEf = 84lb/mmcf	
Main plant diesel fired emergency generator	Diesel fuel (gallons)	CO-EPA-DieselEF = 0.95 lb/MMBtu	
		Total Monthly CO emissions	

D.1.11 Nitrogen Oxides (NOx) Control

In order to ensure compliance with Condition D.1.5 (b), the NOx emissions from each test cell shall be controlled with a selective catalytic reduction system (SCR). The tests cells may be operated without the SCR control system with emissions reported as specified in D.1.12.

D.1.12 Nitrogen Oxides (NOx) Emission Limit Determination

To demonstrate compliance with the NOx emission limit in Condition D.1.5(b), the Permittee shall determine actual NOx emissions as the sum of the following quantities:

(a) Test cells fuel combustion: NOx emissions from test cells HHP1 and HHP6-HHP14 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific/temperature zone specific NOx emission factor pursuant to this general equation:

Monthly NOx emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific NOx emission factor in lb NOx/unit of fuel

Total monthly NOx emissions from the test cells shall be the sum of the individual monthly NOx emissions for each fuel burned in the test cell, as illustrated in the table at the end of this condition.

If NOx emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific NOx emission factor.

(b) Other fuel combustion equipment: NOx emissions from combustion of fuel in the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator are determined for each calendar month by a calculation using the monthly fuel usage by the appropriate NOx emission factor pursuant to this general equation:

Monthly NOx emissions = Monthly fuel usage X emission factor in lb NOx/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly NOx emissions
HHP1 HHP6 HHP7 HHP8 HHP9 HHP10 HHP11 HHP12 HHP13 HHP14	Diesel fuel (gallons)	NOx-TZ1DieselEf	
	Diesel fuel (gallons)	NOx-TZ2DieselEf	
	Diesel fuel (gallons)	NOx-TZ3DieselEf	
	Diesel fuel (gallons)	NOx-TZ4DieselEf	
	Diesel fuel (gallons)	NOx-TZ5DieselEf	
	Diesel fuel (gallons)	NOx-TZ6DieselEf	
	Diesel fuel (gallons)	NOx-TZ7DieselEf	
	Diesel fuel (gallons)	NOx-DieselEf-uncontrolled	
	Biodiesel fuel (gallons)	NOx- TZ1BDieselEf	
	Biodiesel fuel (gallons)	NOx- TZ2BDieselEf	
	Biodiesel fuel (gallons)	NOx- TZ3BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ4BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ5BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ6BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ7BDieselEf	
	Biodiesel fuel (gallons)	NOx-BDieselEf-uncontrolled	
	Natural gas (mmcf)	NOx-TZ1NatGasEf	
	Natural gas (mmcf)	NOx-TZ2NatGasEf	
	Natural gas (mmcf)	NOx-TZ3NatGasEf	
	Natural gas (mmcf)	NOx-TZ4NatGasEf	
	Natural gas (mmcf)	NOx-TZ5NatGasEf	
	Natural gas (mmcf)	NOx-TZ6NatGasEf	
	Natural gas (mmcf)	NOx-TZ7NatGasEf	
	Natural gas (mmcf)	NOx-NatGasEf-uncontrolled	

	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ1LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ2LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ3LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ4LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ5LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ6LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ7LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-LPEf-uncontrolled**	
	Hydrogen gas (mass)	**NOx-TZ1HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ2HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ3HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ4HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ5HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ6HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ7HydrogenEf**	
	Hydrogen gas (mass)	**NOx-HydrogenEf-uncontrolled**	
HHP1, HHP6-HHP14 duct burners, Boiler Groups 1, 2, and 3, Natural gas heating units (Group 1) and Drying and Curing ovens (Group 2)	**Natural gas (mmcf)**	**NOx-EPA-NatGasEf = 100 lb/ mmcf**	
Low NOx Boilers, heaters, and drying/curing ovens	**Natural gas**	**LowNOx-EPA-NatGasEf = 50lb/ mmcf**	
Main plant diesel fired emergency generator	**Diesel fuel (gallons)**	**NOx-EPA-DieselEf = 4.41 lb/MMBtu**	
		Total Monthly NOx emissions	

D.1.12a Nitrogen Oxides (NO_X) Emission Limit Determination

As an alternative to the NOx emission determination method in D.1.12, the Permittee may determine actual monthly NOx emissions from test cells HHP1, HHP6, HHP7, HHP8, HHP9, HHP10, HHP11, HHP12, HHP13, or HHP14 pursuant to this section. NOx emissions from other combustion units subject to the NOx emission limits in D.1.5 shall be determined as specified in Section D.1.12.

(a) Continuous Emissions Monitoring Systems

(1) NOx measurement: The Permittee shall continuously measure NOx concentration in the exhaust of with a NOx continuous emission monitoring system (CEMS) installed and operated in accordance with the following requirements:

(A) 40 CFR Part 60, Appendix B, Performance Specification 2;
(B) 40 CFR Part 60, Appendix F, Procedure 1;
(C) 326 IAC 3-5-2 for performance and operating specifications;
(D) 326 IAC 3-5-3 for monitor system certification;
(E) 326 IAC 3-5-4 for standard operating procedures;
(F) 326 IAC 3-5-5 for quality assurance requirements;
(G) 326 IAC 3-5-6 for record keeping requirements;
(H) 326 IAC 3-5-7 for reporting requirements; and
(I) 326 IAC 3-5-8 for operation and maintenance of continuous emission monitoring systems.

Continuous monitoring operation is defined as the collection of at least one measurement for each 15-minute block period while the test cell is in operation.

Emission calculation: The Permittee shall calculate NOx emissions, in tons, each calendar month by using the following data:
(A) NOx CEMS data;
(B) NOx emission rate calculations performed pursuant to 40 CFR Part 60, Appendix A, Method 19;
(C) Fuel heat content; and
(D) Fuel consumption rate.

(3) Data substitution:

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute NOx concentration measurement obtained prior to the calibration in lieu of actual readings.

(B) During periods of CEMS maintenance, malfunction, repair, or other periods of invalid NOx data collection, the Permittee shall determine NOx emissions in accordance with Section D.1.12 of this permit:

D.1.13 Volatile Organic Compound (VOC) Emission Limit Determination

To demonstrate compliance with the VOC emission limit in Condition D.1.5(c), the Permittee shall determine actual VOC emissions as the sum of the following quantities:

(a) Painting operations: VOC emissions from the painting operations are determined each calendar month by measuring and recording:

(1) The amount of each coating applied during the month;
(2) The amount of cleanup or dilution solvent used during the month;
(3) The VOC content in the coatings applied and solvents used.

(b) Test cells fuel combustion: VOC emissions from combustion of fuel in test cells HHP1 and HHP6-HHP14 are determined each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific VOC emission factor pursuant to this general equation:

Monthly VOC emissions per test cell = Monthly Fuel usage x Fuel-specific VOC emission factor in lb VOC/unit of fuel = value

Total monthly VOC emissions from the test cells shall be the sum of the individual monthly VOC emissions for each fuel burned in the test cells, as illustrated in the table at the end of this condition.

(c) Other fuel combustion equipment: VOC emissions from combustion of fuel in the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator are determined each calendar month by a calculation using the monthly fuel usage by the appropriate VOC emission factor pursuant to this general equation:

Monthly VOC emissions = Monthly fuel usage X emission factor in lb VOC/unit of fuel

Total monthly VOC emissions from the other fuel combustion equipment shall be the sum of the individual monthly VOC emissions for each device, as illustrated in the table at the end of this condition.

(d) Unburned natural gas and unburned Liquid Petroleum Gas/Propane: VOC emissions from the release of unburned natural gas and LPG/Propane in test cells HHP6 and HHP10 are equal to 3.5% of the unburned natural gas vented each month and 100% of the unburned LPG/Propane vented each month from the test cells.

Emission unit	Monthly fuel usage and units	Fuel-specific emission factor	Monthly VOC emissions
HHP1 HHP6 HHP7 HHP8 HHP9 HHP10 HHP11 HHP12 HHP13 HHP14	Diesel fuel (gallons)	VOC-DieselEf=0.012 lb/gal	
	Biodiesel fuel (gallons)	VOC-BDieselEf=0.012 lb/gal	
	Natural gas (mmcf)	VOC-NatGasEf=0.118 lb/MMBtu	
	Liquid Petroleum Gas or Propane (gallons)	VOC-LPEf=83 lb/kgal	
HHP1, HHP6-HHP14 duct burners, Boiler Groups 1, 2, and 3, Natural gas heating units (Group 1) and Drying and Curing ovens (Group 2)	Natural gas (mmcf)	VOC-EPA-NatGasEf = 5.50 lb/mmcf	
Main plant diesel fired emergency generator	Diesel fuel (gallons)	VOC-EPA-DieselEF =0.00247lb/bhp-hr	
	Total Monthly combustion related VOC emissions		

D.1.14 Greenhouse Gas (GHG) Emission Limit Determination

To determine compliance with the GHG emission limit in Condition D.1.5(d), the Permittee shall determine actual GHG emissions as the sum of the following quantities:

(a) Unburned natural gas: GHG emissions, expressed as CO2e, from the release of unburned natural gas in test cells HHP6 and HHP10 are equal to 95% of the unburned natural gas vented each month from the test cells multiplied by the global warming potential of methane (25).

(b) GHG emissions from combustion of fuels determined from the following information:

(1) Monthly fuel usage for each fuel combusted in test cells HHP1 and HHP6-HHP14, the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator;
(2) The default fuel-specific higher heating value (HHV) from 40 CFR 98, Subpart C, Table C-1;
(3) The fuel-specific GHG specific emission factor for each GHG from 40 CFR 98, Subpart C, Tables C-1 and C-2; and
(4) The global warming potential (GWP) for each GHG from 40 CFR 98, Subpart A, Table A-1;

And pursuant to this general equation:

Monthly CO2e emissions = (Monthly fuel usage x Part 98 default HHV x Part 98 CO2 emission factor x Global warming potential of CO2)

+

(Monthly fuel usage x Part 98 default HHV x Part 98 CH4 emission factor x Global warming potential of CH4)

+

(Monthly fuel usage x Part 98 default HHV x Part 98 N2O emission factor x Global warming potential of N2O)

Total monthly CO2e emissions from combustion of fuels shall be the sum of the individual monthly CO2e emissions from each combustion unit for each fuel burned in the test cell, as illustrated in the table below.

Emission unit	Monthly fuel usage and units	Higher heating value of fuel from 40 CFR 98, Subpart C, Table C-1	Fuel-specific/GHG-specific emission factor from 40 CFR 98, Subpart C, Tables C-1 or C-2	Global Warming Potential from 40 CFR Part 98, Subpart A, Table A-1	Monthly CO2e emissions
HHP1 HHP6 HHP7 HHP8 HHP9 HHP10 HHP11	Diesel and Biodiesel fuel (gallons)	HHV	CO2-DieselEf=73.96 (kg/mmBtu) CH4-DieselEf =0.009 lb/mmBtu N2O-DieselEf =0.0001 lb/mmBtu	GWP-CO2 GWP-CH4 GWP-N2O	

HHP12 HHP13 HHP14	**Natural gas (mmcf)**	**HHV**	**CO2-NatGasEf=53.06 kg/mmBtu CH4-NatGasEf=0.002 lb/mmBtu N2O-NatGasEf=0.0002 lb/mmBtu**	**GWP-CO2 GWP-CH4 GWP-N2O**	
	Liquid Petroleum Gas or Propane (gallons)	**HHV**	**CO2-LPEf=61.46 kg/mmBtu CH4-LPEf=0.0009 lb/gal N2O-LPEf=0.0001lb/gal**	**GWP-CO2 GWP-CH4 GWP-N2O**	
HHP1, HHP6-HHP14 duct burners, Boiler Groups 1, 2, and 3, Natural gas heating units (Group 1) and Drying and Curing ovens (Group 2)	**Natural gas (mmcf)**	**HHV**	**CO2-NatGasEf =53.06kg/mmBtu CH4-NatGasEf=2.20 lb/mmcf N2O-NatGasEf=0.22 lb/mmcf**	**GWP-CO2 GWP-CH4 GWP-N2O**	
Main plant diesel fired emergency generator	**Diesel fuel (gallons)**	**HHV**	**CO2-DieselEf=73.96 kg/mmBtu CH4-DieselEf= 0.0066lb/MMBtu N2O-DieselEf = 0.0013lb/MMBtu**	**GWP-CO2 GWP-CH4 GWP-N2O**	
Total Monthly GHG emissions, expressed as CO2e					

D.1.15 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to determine compliance with Condition D. 1.5 and to establish the fuel-specific/temperature zone-specific emission factors used to calculate NOx emissions as described in Condition D.1.12, and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the SCR, the Permittee shall conduct NOx emissions stack testing of the emissions controlled by selective catalytic reduction (SCR) on a representative test cell utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.1.12 upon submittal of test results to IDEM.

(b) In order to establish the fuel-specific uncontrolled emission factors used to calculate NOx emissions as described in Condition D.1.12 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after startup of the test cells, the Permittee shall conduct NOx emissions stack testing of the uncontrolled emissions from a representative test cell utilizing methods as approved by the commissioner. This test shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) or NRPD Air-14-NPD. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.1.12 upon submittal of test results to IDEM.

(c) In order to establish the fuel-specific/temperature zone-specific emission factors used to calculate CO emissions as described in Condition D.1.10, and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the catalytic oxidizer, the Permittee shall conduct CO emissions stack testing of the emissions controlled by the catalytic oxidizer on HHP15 utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.1.10 upon submittal of test results to IDEM.

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

D.1.~~8~~**16** Monitoring

***

D.1.17 Visible Emissions Notations

(a) Visible emissions notations for each of the engine test cell stack exhausts shall be performed once per day during normal daylight operations when combusting diesel fuel or biodiesel. A trained employee will 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. Observation of abnormal emissions that do not violate an applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to response to excursions or exceedances.

D.1.18 Oxidation Catalyst Parametric Monitoring [40 CFR 64]

In order to utilize the fuel-specific/temperature zone specific CO emission factors

described in Condition D.1.10, the Permittee shall conduct the following monitoring:

(a) The Permittee shall monitor the Diesel Oxidation Catalyst (DOC) temperature and fuel used by the test cell with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.1.15(c). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour average. If the temperature or fuel monitoring systems fail to operate normally for more than three (3) hours the Permittee shall take reasonable response steps to return the monitoring system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.1.10 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall monitor the CO emissions performance characteristics of the DOC using a portable analyzer in accordance with the compliance monitoring plan described in section D.1.18. If the CO emissions performance characteristics of the DOC as measured by the portable analyzer are not equivalent to or better than those established during the stack test in which the CO emission factor was established, the Permittee shall take reasonable response steps to restore the DOC performance characteristics to normal levels. For each period of time the Permittee is unable to attain the performance characteristics established during the stack test, the Permittee shall use an uncontrolled fuel-specific CO emission factor in the compliance determination provisions of Condition D.1.10.

(c) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conducting monitoring pursuant to this Condition.

(d) Failure to take reasonable response steps as described in (a) or (b) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.1.19 SCR Parametric Monitoring [40 CFR 64]

In order to utilize the fuel-specific/temperature zone specific NOx emission factors described in Condition D.1.12, the Permittee shall conduct the following monitoring except when the Permittee is determining compliance with the NOx emissions limit by using continuous emissions monitoring systems in accordance with Condition D.1.12a:

(a) The Permittee shall monitor the selective catalyst reduction (SCR) temperature and fuel usage with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.1.15(a). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour average. If the temperature or fuel monitoring system fails to operate for more than three consecutive (3) hours the Permittee shall take reasonable response steps to return the system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.1.12 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall continuously monitor the urea flow rate of the SCR system. If the urea flow rate monitoring system fails to operate for more than three (3) continuous hours, the Permittee shall take reasonable response steps to return the

monitoring system to normal operations. If the Permittee is unable to return the urea monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.1.12 for the period of time the monitoring system was not operating normally.

(c) The Permittee shall continuously evaluate the effectiveness of the SCR system by monitoring NOx concentrations with NOx sensors at the SCR inlet and outlet to establish the control device efficiency, and comparing the control efficiency to the control efficiency achieved for the applicable temperature zone during the stack test for which the emission factor was established. If the measured control efficiency is 7% less than the control efficiency achieved during the stack test for which the emission factor was established or lower, the Permittee shall take reasonable response steps. If the Permittee is unable to return the SCR control efficiency to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.1.12 for the period of time the monitoring system was not operating normally.

(d) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conduction monitoring pursuant to this condition.

(e) Failure to take reasonable response steps as described in (a), (b), and (c) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

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

D.1.~~9~~**20** Record Keeping Requirements [40 CFR 64]

(a) To document the compliance status with condition D.1.~~2~~**3**, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limit established in condition D.1.~~2~~**5(c)**.

***

~~(b) To document the compliance status 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 emission limits established in condition D.1.4.~~

~~(1) The amount and 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 coating usage for each month; and~~

~~(3) The cleanup or dilution solvent usage for each month.~~

(~~c~~**b**) To document the compliance status with conditions D.1.~~8~~**16** - Monitoring, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) To document the compliance status with Condition D.1.5, D.1.18, and D.1.19, the Permittee shall maintain the following records:

(1) Actual fuel usage for each type of fuel burned in an emission unit subject to the limits in Condition D.1.5.

(2) Oxidation catalyst temperature and temperature zone.

(3) Selective catalytic reduction temperature and temperature zone.

(4) Selective catalytic reduction urea flow rate.

(5) Selective catalytic reduction control efficiency, as measured by NOx sensors.

(6) An explanation or basis for failure to collect any of the required monitoring data.

(d) To document the compliance status with Condition D.1.17 - Visible Emission Notations, the Permittee shall maintain records of daily visible emission notations of the engine test cell stack exhausts when combusting diesel fuel or biodiesel. 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) To document compliance with Condition D.1.12a, the Permittee shall maintain the following records:

(1) All data recorded by continuous monitoring systems (CMS), including continuous emission monitoring systems (CEMS), required by Conditions D.1.12a.

(2) The Permittee shall maintain records of the continuous monitoring required by Condition D.1.12.a. The records shall include data required by 326 IAC 3-5-6.

(3) Pursuant to 326 IAC 3-5-4, the Permittee shall maintain a complete, written continuous monitoring standard operating procedure (SOP) for the continuous emissions monitors. The CEMS SOP should contain, at a minimum, the items described in 326 IAC 3-5-4(a).

(~~d~~**f**) Section C – General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.1.~~10~~**21** Reporting Requirements

A quarterly summary of the information to document the compliance status with conditions D.1.2 and D.1.~~4~~**5** shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. A summary report of NOx monitor downtime and other information required by 326 IAC 3-5-7(4) shall also be included in the report. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

****

SECTION D.2 EMISSION UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]::

**Sixteen (16) Engine Test cells with the following identification numbers:
801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5
(See Section A.2 for detailed information)**

~~(b) Six (6) production engine test cells, identified as EU-02A, constructed in 1978, consisting of the following equipment:~~

~~(1) Three (3) diesel-powered production engine test cells, identified as 801, 802, and 803, with maximum outputs of 1000, 1000 and 1650 hp respectively, with heat inputs of 6.41, 6.41 and 10.57 MMBtu/hr, respectively and exhausting to stacks 801.1 - 801.2, 802.1 - 802.2, and 803.1 and 803.2, respectively;~~

~~(2) Two (2) diesel-powered production engine test cells, identified as 804 and 805, with maximum outputs of 1650 hp, each, with heat input of 10.57 MMBtu/hr each and exhausting to stacks 804 and 805, respectively; and~~

~~(3) One (1) diesel-powered or natural gas-fired production engine test cell, identified as 808, with maximum output of 1650 hp when combusting diesel fuel or 600hp when combusting natural gas, with heat input of 10.57 MMBtu/hr when combusting diesel fuel or 4.1 MMBtu/hr when combusting natural gas and exhausting to stack 808.~~

~~(c) Ten (10) engineering engine test cells, identified as EU-02B, installed in 1978 and modified in 2009, consisting of the following equipment:~~

~~(1) Two (2) diesel or biodiesel-powered engineering engine test cells, identified as 806 and 807, may be alternatively powered by liquid propane or natural gas with maximum outputs of 1800 hp, each, when combusting diesel or biodiesel, or 1800hp, each, when combusting liquid propane or natural gas and exhausting to stacks 806 and 807, respectively;~~

~~(2) One (1) engineering test cell engine with duct burners, identified as HHP1, modified in 2011 powered by diesel, biodiesel natural gas, natural gas diluted with CO2, hydrogen or liquid propane with maximum output of 9000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMbtu/hr, selective catalytic reduction for the control of NOx emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP1.1;~~

~~(3) One (1) diesel or biodiesel-powered engineering engine test cell, identified as HHP2, with maximum output of 4500 hp when combusting diesel or biodiesel, with heat input of 28.82 MMBtu/hr and exhausting to stack HHP2;~~

~~(4) One (1) diesel or biodiesel powered engineering engine test cell, identified as HHP3, may be alternatively powered by liquid propane or natural gas, with maximum output of 4500 hp when combusting diesel or biodiesel and 4500hp when combusting liquid propane or natural gas, with heat input of 28.82 MMBtu/hr when combusting diesel/biodiesel or liquid propane/natural gas and exhausting to stacks HHP3.1 and HHP3.2;~~

~~(5) One (1) diesel or biodiesel powered engineering test cell, identified as HHP5, may be alternatively powered by liquid propane or natural gas, with output of 2200 hp when combusting diesel or biodiesel or 600 hp when combusting liquid propane or natural gas, with heat input of 14.09 MMBtu/hr when combusting diesel or biodiesel or 4.10 when combusting liquid propane or natural gas and exhausting to stack HHP5.1 - HHP5.2;~~

(6) One (1) diesel or biodiesel-powered engine Test Pad 8 (PI), identified as PI, may be alternatively powered by liquid propane or natural gas, with maximum outputs of 3000 hp when combusting diesel or biodiesel or 2200 hp when combusting liquid propane or natural gas, with heat input of 19.22 MMBtu/hr when combusting diesel or biodiesel and 14.40 MMBtu/hr when combusting liquid propane or natural gas and exhausting to stacks PD8.1 and PD8.2;

(7) Two (2) diesel or biodiesel-powered engine Test Pad 10(PI) and Test Pad 11(PI), identified as PI, may be alternatively powered by liquid propane or natural gas, with maximum outputs of 1850, each, when combusting diesel, or biodiesel, or 1850 hp, each when combusting liquid propane or natural gas, with heat input of 11.85 MMBtu/hr, each, when combusting diesel, or biodiesel or 12.70 MMBtu/hr, each when combusting liquid propane or natural gas and exhausting to stacks PD10.1 and PD11.1; and

(8) One (1) diesel or biodiesel-powered engineering engine test cell, identified as HHP4, may be alternatively powered by liquid propane or natural gas, with a maximum output of 2200 hp when combusting diesel or biodiesel and 2200hp when combusting liquid propane or natural gas and a heat input of 14.09 MMBtu per hour when combusting diesel or biodiesel or 14.40 MMBtu/hr when combusting liquid propane or natural gas and exhausting to stacks HHP4.1 and HHP4.2.

(d) One (1) diesel or biodiesel-powered engineering engine test cell Test Pad 9, identified as EU-02C, installed in 2005, may be alternatively powered by liquid propane or natural gas, with maximum outputs of 4500 hp when combusting diesel or biodiese or 2200 hp when combusting liquid propane or natural gas, exhausting to stacks PD9.1 and PD9.2.

(e) One (1) engineering engine test cell, identified as HHP6, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped to vent uncontrolled natural gas and liquid propane for a maximum time of 24 hours per year and equipped with an in-stack duct burners, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP6.1.

(f) One (1) engineering engine test cell, identified as HHP7, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP7.1.

(g) One (1) engineering engine test cell, identified as HHP8, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP8.1.

(h) One (1) engineering engine test cell, identified as HHP9, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP9.1.

(i) One (1) engineering engine test cell, identified as HHP10, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped to vent uncontrolled natural gas and liquid propane for a maximum time of 24 hours per year and equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_x emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP10.1.

~~(j) One (1) production engine test cell, identified as HHP11, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_X emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP11.1.~~

~~(k) One (1) production engine test cell, identified as HHP12, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_X emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP12.1.~~

~~(l) One (1) production engine test cell, identified as HHP13, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_X emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP13.1.~~

~~(m) One (1) production engine test cell, identified as HHP14, approved for construction in 2011, powered by diesel, biodiesel, natural gas, natural gas diluted with CO2, hydrogen or liquid propane with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 2.0 MMBtu/hr, selective catalytic reduction for the control of NO_X emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP14.1.~~

~~(t) One (1) production engine test cell, identified as HHP15, permitted in 2014, powered by diesel, biodiesel, or natural gas with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 5.0 MMBtu/hr, selective catalytic reduction (SCR) for the control of NOx emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP15.1.~~

~~**Insignificant Activities**~~

~~(q) Natural gas-fired combustion sources, approved for construction in 2012, consisting of the following:~~

~~(1) Four (4) direct fired AHU, rated at 0.47 million British thermal units per hour, each.~~

~~(2) One (1) direct fired AHU, rated at 0.80 million British thermal units per hour.~~

~~(3) One (1) direct fired AHU, rated at 0.67 million British thermal units per hour.~~

~~(4) Two (2) direct fired AHU, rated at 0.30 million British thermal units per hour, each.~~

~~(5) Two (2) direct fired AHU, rated at 2.72 million British thermal units per hour, each.~~

~~(6) One (1) direct fired AHU, rated at 2.59 million British thermal units per hour.~~

~~(7) Two (2) direct fired AHU, rated at 3.27 million British thermal units per hour, each equipped with Low NOx burner.~~

~~(8) Two (2) dry and curing combustion units, rated at 2.40 million British thermal units per hour, each.~~

~~(9) Two (2) dry and curing combustion units, rated at 1.76 million British thermal units per hour, each, equipped with Low NOx burner.~~

~~(10) Eight (8) unit heaters, rated at 0.15 million British thermal units per hour, each.~~

~~(11) Nine (9) unit heaters, rated at 0.18 million British thermal units per hour, each~~

~~(r) Natural gas-fired combustion sources, approved for construction in 2013, consisting of the following:~~

~~(1) Seventeen (17) natural gas direct-fired air handling units, permitted in 2013, with a cumulative total heat input capacity of 25.5 mmBTU/hr.~~

~~(2) One (1) natural gas-fired unit heater, permitted in 2013, with a heat input capacity of 0.4 mmBTU/hr.~~

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

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

D.2.1 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

(a) The total nitrogen oxides (NO_X) emissions from the sixteen (16) engine test cells 801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5 shall not exceed 217.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total volatile organic compound (VOC) emissions from the sixteen (16) engine test cells 801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5 shall not exceed the 163.56 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total carbon monoxide (CO) emissions from the sixteen (16) engine test cells 801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5 shall not exceed 183.62 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) The total Greenhouse Gas (GHG) emissions, expressed as CO2e from sixteen (16) engine test cells 801, 802, 803, 804, 805, 806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5 shall not exceed 99,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit the NO_X, VOC, and CO emissions from the engine test cells to less than two hundred and fifty (250) tons per year and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the 2009 modification and not applicable to the Hedgehog expansion project.

Compliance with these limits shall limit the GHG emissions from the engine test cells to less than one hundred thousand (100,000) tons per year expressed as CO2e and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the Hedgehog expansion project.

~~(a) The total NO_X emissions from the seventeen (17) engine test cells, known as EU-02A, EU-02B excluding HHP1, and EU-02C shall not exceed 217.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The NO_X emissions shall be calculated by the following equation:~~

~~NO_X emissions = (Diesel fuel burned by 801, 802, 803, 804, 805 and 808) x (Ef1 of NO_X /gal of diesel fuel) + (Diesel fuel burned by 806, 807, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C) x (Ef2, of NO_X /gal of diesel fuel)~~

~~+ (Natural gas burned by 806, 807, 808, HHP3 HHP4, HHP5 and PI) x (Ef3 of NO_X /ft3 of natural gas)~~

~~+ (Biodiesel fuel burned by 806, 807, HHP2, HHP3, HHP5, 8(PI) (PI), 11(PI), HHP4 and EU-02C) x (Ef4 of NO_X /gal of biodiesel fuel)~~

~~+ (Propane fuel burned by 806, 807, HHP3, HHP5, 8(PI) 10(PI), 11(PI), HHP4 and EU-02C) x (Ef5 of NO_X /gal of Propane fuel)~~

~~Where:~~

~~(1) Ef1 = Emission Factor in pounds of NO_X per gallon of diesel fuel for 801, 802, 803, 804, 805 and 808;~~

~~(2) Ef2 = Emission Factor in pounds of NO_X per gallon of diesel fuel for 806, 807, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C;~~

~~(3) Ef3 = Emission Factor in pounds of NO_X per MMBtu of natural gas for 806, 807, 808, HHP3 HHP4, HHP5 and PI;~~

~~(4) Ef4 = Emission Factor in pounds of NO_X per gallon of biodiesel fuel for 806, 807, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C; and~~

~~(5) Ef5 = Emission Factor in pounds of NO_X per gallon of propane for 806, 807, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C.~~

~~Compliance with these limits shall limit the NO_X emissions from the engine test cells and other emission units to less than two hundred and fifty (250) tons per year and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this 2009 modification.~~

~~(b) The total VOC emissions from the eleven (11) engine test cells, known as EU-02B, and EU-02C shall not exceed the 163.56 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The VOC emissions shall be calculated by the following equation:~~

~~VOC emissions = (Diesel fuel burned by 801, 802, 803, 804, 805 and 808) x (Ef1 of VOC/gal of diesel fuel) + (Diesel fuel burned by 806, 807, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C) x Ef2, of NO_X /gal of diesel fuel)~~

~~+ (Biodiesel fuel burned by 806, 807, HHP2, HHP3, HHP5, 8(PI) (PI), 11(PI), HHP4 and EU-02C) x (Ef4 of VOC/gal of biodiesel fuel)~~

~~+ (Natural gas burned by 806, 807, 808, HHP4, HHP5 and PI) x (Ef3 of VOC /ft3 of natural gas) at a natural gas heat content of 1,020 MMBtu/ft3~~

~~+ (Propane fuel burned by 806, 807, HHP3, HHP5, 8(PI) 10(PI), 11(PI), HHP4 and EU-02C) x (Ef5 of VOC/gal of Propane fuel)~~

~~Where:~~

~~(1) Ef1 = Emission Factor in pounds of VOC per gallon of diesel fuel for 801, 802, 803, 804, 805 and 808;~~

(2) Ef2 = Emission Factor in pounds of VOC per gallon of diesel fuel for 806, 807, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C;

(3) Ef3 = Emission Factor in pounds of VOC per MMBtu of natural gas for 806, 807, 808, HHP3 HHP4, HHP5 and PI;

(4) Ef4 = Emission Factor in pounds of VOC per gallon of biodiesel fuel for 806, 807, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C; and

(5) Ef5 = Emission Factor in pounds of VOC per gallon of propane for 806, 807, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C.

Compliance with these limits shall limit the VOC emissions from the Engine test cells and other emission units to less than two hundred and fifty (250) tons per year and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this 2009 modification.

(c) The total CO emissions from the eleven (11) engine test cells, known as EU-02B, and EU-02C shall not exceed 183.62 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The CO emissions shall be calculated by the following equation:

CO emissions = (Diesel fuel burned by 801, 802, 803, 804, 805 and 808) x (Ef1 of CO/gal of diesel fuel) + (Diesel fuel burned by 806, 807, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C) x Ef2, of NO_x/gal of diesel fuel)

+ (Biodiesel fuel burned by 806, 807, HHP2, HHP3, HHP5, 8(PI) (PI), 11(PI), HHP4 and EU-02C) x (Ef4 of CO/gal of biodiesel fuel)

+ (Natural gas burned by 806, 807, 808, HHP4, HHP5 and PI) x (Ef3 of CO/ft3 of natural gas)

+ (Propane fuel burned by 806, 807, HHP3, HHP5, 8(PI) 10(PI), 11(PI), HHP4 and EU-02C) x (Ef5 of CO/gal of Propane fuel)

Where:

(1) Ef1 = Emission Factor in pounds of CO per gallon of diesel fuel for 801, 802, 803, 804, 805 and 808;

(2) Ef2 = Emission Factor in pounds of CO per gallon of diesel fuel for 806, 807, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C;

(3) Ef3 = Emission Factor in pounds of CO per MMBtu of natural gas for 806, 807, 808, HHP3 HHP4, HHP5 and PI;

(4) Ef4 = Emission Factor in pounds of CO per gallon of biodiesel fuel for 806, 807, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C; and

(5) Ef5 = Emission Factor in pounds of CO per gallon of propane for 806, 807, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C.

Compliance with these limits shall limit the CO emissions from the engine test cells and other emission units to less than two hundred and fifty (250) tons per year and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this 2009 modification.

~~(d) GHGs as CO2e before Modification for all existing emission units:~~

~~The total CO2e emissions from Test Cells, identified as 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11 shall not exceed 99,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The CO2e emissions shall be calculated by the following equation:~~

~~CO2e emission (metric tons) = (gallons of diesel fuel or biodiesel fuel burned by Test Cells 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11) x HHVdf x EfCO2df x GWP(CO2) x 0.0011023~~

~~+~~

~~(SCF of natural gas burned by Test Cells 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11) x HHVng x EfCO2ng x GWP(CO2) x 0.0011023~~

~~+~~

~~(gallons of liquid propane burned by Test Cells 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11) x HHVlp x EfCO2lp x GWP(CO2) x 0.0011023~~

~~+~~

~~(gallons of diesel fuel , biodiesel fuel burned by Test Cells 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11) x HHVdf x EfCH4pet x GWP(CH4) x 0.0011023~~

~~+~~

~~(gallons of liquid propane burned by Test Cells 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11) x HHVlp x EfCH4pet x GWP(CH4) x 0.0011023~~

~~+~~

~~(SCF of natural gas burned by Test Cells 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11) x HHVng x EfCH4ng x GWP(CH4) x 0.0011023~~

~~+~~

~~(gallons of diesel fuel , biodiesel fuel burned by Test Cells 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11) x HHVdf x EfN2Opet x GWP(N2O) x 0.0011023 +~~

~~(gallons of liquid propane burned by Test Cells 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11) x HHVlp x EfN2Opet x GWP(N2O) x 0.0011023 +~~

~~(SCF of natural gas burned by Test Cells 801, 802, 803, 804, 805, 806, 807, 808, HHP2, HHP3, HHP 4, HHP5, Test Pad 8, Test Pad 9, Test Pad 10, and Test Pad 11) x HHVng x EfN2Ong x GWP(N2O) x 0.0011023~~

~~Where:~~

~~HHVxx is default heat value in Table C-1 to Subpart C of 40 CFR 98 for fuel xx~~

~~Ef XX.xx is the emission factor in Table C-1 or C-2 to Subpart C of 40 CFR 98 for pollutant XX (CO2, CH4 or N2O) for fuel xx~~

~~GWP (XX) is the global warming potential for pollutant XX (CO2, CH4 or N2O) from Table A-1 to Subpart A of 40 CFR 98~~

~~Compliance with this emission limit will limit the potential to emit CO2e from all existing units before this modification to less than 100,000 tons, per year and render the requirements of 326 IAC 2-2 (PSD), not applicable to the source before the addition of the Hedgehog project.~~

~~EMISSION LIMITS FOR THE UNITS; [HHP1, HHP6-HHP14, Boilers, Duct Burners, and Emergency Generators Air Handling Units, Drying and Curing Combustion Equipment and Unit Heaters]~~

~~(e) The total NOx emissions from HHP1, HHP6 – HHP14, the boilers, the emergency generator and air handling units, dry and curing combustion units and unit heaters shall not exceed 243 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The NOx emissions (tons/month) shall be calculated by the following equation:~~

~~NOx emissions= (Diesel fuel burned in tz1 by HHP1, HHP6 – HHP14, x EFtz1df)+ (Diesel fuel burned in tz2 by HHP1, HHP6 – HHP14, x EFtz2df)+ (Diesel fuel burned in tz3 by HHP1, HHP6 – HHP14, x EFtz3df)+ (Diesel fuel burned in tz4 by HHP1, HHP6 – HHP14, x EFtz4df)+ (Diesel fuel burned in tz5 by HHP1, HHP6 – HHP14, x EFtz5df) (Diesel fuel burned in tz6 by HHP1, HHP6 – HHP14, x EFtz6df)+ (Diesel fuel burned in tz7 by HHP1, HHP6 – HHP14, x EFtz7df)~~

~~+~~

~~(Diesel fuel burned in HHP1, HHP6 – HHP14 when SCR is not in operation x EFnocontrol.df)~~

~~+~~

~~(Biodiesel fuel burned in tz1 by HHP1, HHP6 – HHP14, x EFtz1bd)+ (Biodiesel fuel burned in tz2 by HHP1, HHP6 – HHP14, x EFtz2bd)+ (Biodiesel fuel burned in tz3 by HHP1, HHP6 – HHP14, x EFtz3bd)+ (Biodiesel fuel burned in tz4 by HHP1, HHP6 – HHP14, x EFtz4bd)+ (Biodiesel fuel burned in tz5 by HHP1, HHP6 – HHP14, x EFtz5bd) (Biodiesel fuel burned in tz6 by HHP1, HHP6 – HHP14, x EFtz6bd)+ (Biodiesel fuel burned in tz7 by HHP1, HHP6 – HHP14, x EFtz7bd)~~

~~+~~

~~(Biodiesel fuel burned in HHP1, HHP6 – HHP14 when SCR is not in operation x EFnocontrol.bdf)~~

~~+~~

~~(Natural Gas burned in tz1 by HHP1, HHP6 – HHP14, x EFtz1ng)+ (Natural Gas burned in tz2 by HHP1, HHP6 – HHP14, x EFtz2ng)+ (Natural Gas burned in tz3 by HHP1, HHP6 – HHP14, x EFtz3ng)+ (Natural Gas burned in tz4 by HHP1, HHP6 – HHP14, x EFtz4ng)+ (Natural Gas burned in tz5 by HHP1, HHP6 – HHP14, x EFtz5ng) (Natural Gas burned in tz6 by HHP1, HHP6 – HHP14, x EFtz6ng)+ (Natural Gas burned in tz7 by HHP1, HHP6 – HHP14, x EFtz7ng)~~

~~+~~

~~(Natural Gas burned in HHP1, HHP6 – HHP14 when SCR is not in operation x EFnocontrol.ng~~

~~+~~

~~(Hydrogen Gas burned in tz1 by HHP1, HHP6 – HHP14, x EFtz1h2)+ (Hydrogen Gas burned in tz2 by HHP1, HHP6 – HHP14, x EFtz2h2)+ (Hydrogen Gas burned in tz3 by HHP1, HHP6 – HHP14, x EFtz3h2)+ (Hydrogen Gas burned in tz4 by HHP1, HHP6 – HHP14, x EFtz4h2)+ (Hydrogen Gas burned in tz5 by HHP1, HHP6 – HHP14, x EFtz5h2) (Hydrogen Gas burned in tz6 by HHP1, HHP6 – HHP14, x EFtz6h2)+ (Hydrogen Gas burned in tz7 by HHP1, HHP6 – HHP14, x EFtz7h2)~~

~~+~~

~~Hydrogen Gas burned in HHP1, HHP6 – HHP14 when SCR is not in operation x EFnocontrol.h2~~

~~+~~

~~(Liquid Propane burned in tz1 by HHP1, HHP6 – HHP14, x EFtz1lp)+ (Liquid Propane burned in tz2 by HHP1, HHP6 – HHP14, x EFtz2lp)+ (Liquid Propane burned in tz3 by HHP1, HHP6 – HHP14, x EFtz3lp)+ (Liquid Propane burned in tz4 by HHP1, HHP6 – HHP14, x EFtz4lp)+ (Liquid Propane Gas burned in tz5 by HHP1, HHP6 – HHP14, x EFtz5lp) (Liquid Propane burned in tz6 by HHP1, HHP6 – HHP14, x EFtz6lp)+ (Liquid Propane burned in tz7 by HHP1, HHP6 – HHP14, x EFtz7lp)~~

~~+~~

~~Liquid Propane burned in HHP1, HHP6 – HHP14 when SCR is not in operation x EFnocontrol.lp~~

~~+~~

~~Natural Gas burned in uncontrolled natural gas combustion equipments x EFepahi NOx~~

~~+~~

~~Natural Gas burned in lo NOx natural gas combustion equipments x EFepalo NOx~~

~~+~~

~~Diesel Fuel burned in Emergency Generator x EFepaemgen~~

~~Where:~~

~~Uncontrolled natural gas combustion equipment consists of the following:~~

- ~~Four (4) direct fired AHU, rated at 0.47 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 0.80 million British thermal units per hour.~~
- ~~One (1) direct fired AHU, rated at 0.67 million British thermal units per hour.~~
- ~~Two (2) direct fired AHU, rated at 0.30 million British thermal units per hour, each.~~
- ~~Two (2) direct fired AHU, rated at 2.72 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 2.59 million British thermal units per hour.~~
- ~~Two (2) dry and curing combustion units, rated at 2.40 million~~

~~British thermal units per hour, each.~~

- ~~Eight (8) unit heaters, rated at 0.15 million British thermal units per hour, each.~~
- ~~Nine (9) unit heaters, rated at 0.18 million British thermal units per hour, each.~~
- ~~Ten (10) in-stack duct burners associated with HHP1 and HHP6.~~
- ~~Thirteen (13) boilers, identified as EU03C, EU03D, EU03I, through EU03M, EU03S through EU03V, EU03W and EU0X. (Section D.3)~~

~~Low NOx burner equipped natural gas combustion equipment consists of the following:~~

- ~~Two (2) direct fired AHU, rated at 3.27 million British thermal units per hour, each equipped with Low NOx burner.~~
- ~~Two (2) dry and curing combustion units, rated at 1.76 million British thermal units per hour, each, equipped with Low NOx burner.~~
- ~~Nine (9) boilers, identified as EU03E,through EU03H, and EU03N through EU03R. (Section D.3)~~

~~tzx is the temperature range for the emission factor measured at the inlet of the SCR~~

~~EFtzx.xx is the measured NOx emission factor for temperature range x from the most recent valid stack test for fuel xx when SCR is operating~~

~~EFnocontrol.df is the emission factor for test cells operating with no SCR control and burning diesel fuel~~

~~EFnocontrol.bdf is the emission factor for test cells operating with no SCR control and burning biodiesel fuel~~

~~EFnocontrol.ng is the emission factor for test cells operating with no SCR control and burning natural gas~~

~~EFnocontrol.h2 is the emission factor for test cells operating with no SCR control and burning hydrogen gas~~

~~EFnocontrol.lp is the emission factor for test cells operating with no SCR control and burning liquid propane~~

~~EFepahi NOx is the USEPA NOx emission factor for uncontrolled natural gas combustion equipment (AP 42 4-1) from natural gas combustion~~

~~EFepalo NOx is the USEPA NOx emission factor for controlled lo NOx burners (AP 42 4-1) from natural gas combustion~~

~~EFepaemgen is the USEPA NOx emission factor for emergency generators burning Diesel Fuel~~

~~(f) The total CO emissions from HHP1, HHP6 – HHP14, the boilers, the emergency generator and air handling units, dry and curing combustion units and unit heaters shall not exceed 243 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The CO emissions (tons/month) shall be calculated by the following equation:~~

~~CO emission= (Diesel fuel burned in tz1 by HHP1, HHP6 – HHP14), x COEFtz1df)+ (Diesel fuel burned in tz2 by HHP1, HHP6 – HHP14), x COEFtz2df)+~~

~~Diesel fuel burned in tz3 by HHP1, HHP6 – HHP14), x COEFtz3df~~

~~+~~

~~(Diesel fuel burned in HHP1, HHP6 – HHP14) when DOC in not in operation x COEFepatestcells.df~~

~~+~~

~~(Biodiesel fuel burned in tz1 by HHP1, HHP6 – HHP14), x COEFtz1bd)+ (Bioduesel fuel burned in tz2 by HHP1, HHP6 – HHP14), x COEFtz2bd)+ Bioduesel fuel burned in tz3 by HHP1, HHP6 – HHP14), x COEFtz3bd~~

~~+~~

~~(Biodiesel fuel burned in HHP1, HHP6 – HHP14) when DOC is not in operation x COEFepatestcells.bdf~~

~~+~~

~~(Natural Gas burned in tz1 by HHP1, HHP6 – HHP14), x COEFtz1ng)+ (Natural Gas burned in tz2 by HHP1, HHP6 – HHP14), x COEFtz2ng)+ Natural Gas burned in tz3 by HHP1, HHP6 – HHP14), x COEFtz3ng~~

~~+~~

~~(Natural Gas burned in HHP1, HHP6 – HHP14) when DOC is not in operation x COEFepatestcells.ng~~

~~+~~

~~(Hydrogen Gas burned in tz1 by HHP1, HHP6 – HHP14), x COEFtz1h2)+ (Hydrogen Gas burned in tz2 by HHP1, HHP6 – HHP14), x COEFtz2h2g)+ Hydrogen Gas burned in tz3 by HHP1, HHP6 – HHP14), x COEFtz3h2~~

~~+~~

~~(Hydrogen Gas burned in HHP1, HHP6 – HHP14) when DOC is not in operation x COEFepatestcells.h2~~

~~+~~

~~(Liquid Propane burned in tz1 by HHP1, HHP6 – HHP14), x COEFtz1lp)+ (Liquid Propane burned in tz2 by HHP1, HHP6 – HHP14), x COEFtz2lp)+ Liquid Propane burned in tz3 by HHP1, HHP6 – HHP14), x COEFtz3lp~~

~~+~~

~~(Liquid Propane burned in HHP1, HHP6 – HHP14) when DOC is not in operation x COEFepatestcells.lp~~

~~+~~

~~Natural Gas burned in natural gas combustion equipments x COEFepang~~

~~+~~

~~Diesel Fuel burned in Emergency Generator x COEFepaemgen~~

~~Where:~~

~~Uncontrolled natural gas combustion equipment consists of the following:~~

- ~~Four (4) direct fired AHU, rated at 0.47 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 0.80 million British thermal units per hour.~~
- ~~One (1) direct fired AHU, rated at 0.67 million British thermal units per hour.~~

- ~~Two (2) direct fired AHU, rated at 0.30 million British thermal units per hour, each.~~
- ~~Two (2) direct fired AHU, rated at 2.72 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 2.59 million British thermal units per hour.~~
- ~~Two (2) dry and curing combustion units, rated at 2.40 million British thermal units per hour, each.~~
- ~~Eight (8) unit heaters, rated at 0.15 million British thermal units per hour, each.~~
- ~~Nine (9) unit heaters, rated at 0.18 million British thermal units per hour, each.~~
- ~~Ten (10) in-stack duct burners associated with HHP1 and HHP6.~~
- ~~Thirteen (13) boilers, identified as EU03C, EU03D, EU03I, through EU03M, EU03S through EU03V, EU03W and EU0X. (Section D.3)~~

~~Low-NOx burner equipped natural gas combustion equipment consists of the following:~~

- ~~Two (2) direct fired AHU, rated at 3.27 million British thermal units per hour, each equipped with Low-NOx burner.~~
- ~~Two (2) dry and curing combustion units, rated at 1.76 million British thermal units per hour, each, equipped with Low-NOx burner.~~
- ~~Nine (9) boilers, identified as EU03E,through EU03H, and EU03N through EU03R. (Section D.3)~~

~~tzx is the temperature range for the emission factor measured at the inlet of the DOC~~

~~COEFtzx.xx is the measured CO emission factor for temperature range x for fuel xx when DOC is operating~~

~~COEFepatestcells.df is the USEPA emission factor for test cells burning diesel fuels – used when DOC is not operating~~

~~COEFepatestcells.bdf is the USEPA emission factor for test cells burning biodiesel fuel – used when DOC is not operating~~

~~COEFepatestcells.ng is the USEPA emission factor for test cells burning natural gas – used when DOC is not operating~~

~~COEFepatestcells.h2 is the USEPA emission factor for test cells burning hydrogwn gas – used when DOC is not operating~~

~~COEFepatestcells.lp is the USEPA emission factor for test cells burning liquid propane – used when DOC is not operating~~

~~COEFepang is the USEPA CO emission factor for equipment burning natural gas (AP-42 4-1)~~

~~COEFemgen is the USEPA CO emission factor for emergency generators burning Diesel Fuel~~

~~(g) The total VOC emissions from HHP1, HHP6 – HHP14, the new paint booths, the boilers, the ten (10) in-stack duct burners associated with HHP-1 and HHP-6-14, emergency generator and air handling units, dry and curing combustion units and unit heaters shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The VOC emissions (tons/month) shall be calculated by the following equation~~

~~VOC emission = (Diesel fuel burned by HHP1, HHP6 – HHP14 x Ef1v) + (Biodiesel fuel burned by HHP1, HHP6 – HHP14) x Ef2v + (Natural gas burned by HHP1, HHP6 – HHP14) x Ef3v + (Hydrogen Gas burned by HHP1, HHP6 – HHP14) x Ef4v + (Liquid Propane burned by HHP1, HHP6 – HHP14) x Ef5v + The amount of VOC delivered to the coating applicators (5 New paint Booth) from coatings, and dilution and cleaning solvents used in the paint spray line. + Natural Gas burned in all natural gas combustion equipment X Ef6v + ***Diesel Fuel burned in the emergency generator X Ef7v*** + ***Lb of Propane vented in HHP 6 and HHP 10***~~

~~Where:~~

~~Uncontrolled natural gas combustion equipment consists of the following:~~

- ~~Four (4) direct fired AHU, rated at 0.47 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 0.80 million British thermal units per hour.~~
- ~~One (1) direct fired AHU, rated at 0.67 million British thermal units per hour.~~
- ~~Two (2) direct fired AHU, rated at 0.30 million British thermal units per hour, each.~~
- ~~Two (2) direct fired AHU, rated at 2.72 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 2.59 million British thermal units per hour.~~
- ~~Two (2) dry and curing combustion units, rated at 2.40 million British thermal units per hour, each.~~
- ~~Eight (8) unit heaters, rated at 0.15 million British thermal units per hour, each.~~
- ~~Nine (9) unit heaters, rated at 0.18 million British thermal units per hour, each.~~
- ~~Ten (10) in-stack duct burners associated with HHP1 and HHP6.~~
- ~~Thirteen (13) boilers, identified as EU03C, EU03D, EU03I, through EU03M, EU03S through EU03V, EU03W and EU0X. (Section D.3)~~

~~Low NOx burner equipped natural gas combustion equipment consists of the following:~~

- ~~Two (2) direct fired AHU, rated at 3.27 million British thermal units per hour, each equipped with Low NOx burner.~~
- ~~Two (2) dry and curing combustion units, rated at 1.76 million British thermal units per hour, each, equipped with Low NOx burner.~~

- ~~Nine (9) boilers, identified as EU03E,through EU03H, and EU03N through EU03R. (Section D.3)~~

~~Ef1v = Emission Factor for VOC for diesel fuel for HHP1, HHP6 – HHP14;~~

~~Ef2v = Emission Factor for VOC for Biodiesel fuel for HHP1, HHP6 – HHP14;~~

~~Ef3v = Emission Factor for VOC for natural gas for HHP1, HHP6 – HHP14;~~

~~Ef4v= Emission Factor for VOC for hydrogen gas for HHP1, HHP6 – HHP14;~~
~~Ef5v= Emission Factor for VOC for liquid propane gas for HHP1, HHP6 – HHP14;~~
~~Ef6v = Emission factor from AP- 42 Chapter 1.4 Table 1.4-2 July 1998 **for natural** gas burned in combustion equipment~~
~~Ef7v = Emission factor for diesel fuel burned in the emergency generator~~

~~Compliance with these limits in combination with the potential to emit of NOx, CO and VOC from all other units from all other emission units shall limit the emissions of NOx, CO and VOC emissions to less than two hundred and fifty (250) tons per year, each and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the 2012 revision. After this revision the limited PTE from PM, PM_{10}, SO_2, NO_x, CO and VOC for the entire source will be greater than 250 tons per year. Therefore, due to the addition of new production lines and test cells, and air handling units, dry and curing combustion units and unit heaters the entire source will become major source under PSD after 2011.~~

~~(h) The total CO2e emissions from the Test Cells, identified as HHP1, HHP 6-14, the ten (10) in-stack duct burners associated with HHP-1 and HHP 6-14, emergency generator boilers and air handling units, dry and curing combustion units and unit heaters shall not exceed 99,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The CO2e emissions shall be calculated by the following equation:~~

~~CO2e emission (metric tons) = (gallons of diesel fuel or biodiesel fuel burned by Test Cells HHP 6-14, HHP 1, and the emergency generator) x HHVdf x EfCO2df x GWP (CO2) x 0.0011023~~
~~+~~
~~(SCF of natural gas burned by Test Cells HHP 6-14, HHP1, duct burners, and natural gas combustion equipment) x HHVng x EfCO2ng x GWP(CO2) x 0.0011023~~
~~+~~
~~(gallons of diesel fuel and biodiesel fuel burned by Test Cells HHP 6-14, HHP 1, and the emergency generator) x HHVdf x EfCH4pet x GWP(CH4) x 0.0011023~~
~~+~~
~~(SCF of natural gas burned by Test Cells HHP 6-14, HHP 1, duct burners, and natural gas combustion equipment) x HHVng x EfCH4ng x GWP(CH4) x 0.0011023~~
~~+~~
~~(gallons of diesel fuel and biodiesel fuel burned by Test Cells HHP 6-14, HHP 1, and the emergency generator) x HHVdf x EfN2Opet x GWP(N2O) x 0.0011023~~
~~+~~
~~(SCF of natural gas burned by Test Cells HHP 6-14, HHP1, duct burners, and natural gas combustion equipment) x HHVng x EfN2Ong x GWP(N2O) x 0.0011023~~
~~+~~
~~(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfCO2lp x GWP(CO2) x 0.0011023~~
~~+~~

~~(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfCH4pet x GWP(CH4) x 0.0011023~~

~~+~~

~~(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfN2Opet x GWP(N2O) x 0.0011023~~

~~+~~

~~(mass of hydrogen gas burned by Test Cells HHP 6-14, HHP 1) X EfCO2eh2~~

~~+~~

~~Tons of CO2 used as diluent in Test Cells HHP 1, HHP 6-14~~

~~+~~

~~Tons of Methane vented from HHP 6 and HHP 10 X GWP (CH4)~~

~~Where:~~

~~Uncontrolled natural gas combustion equipment consists of the following:~~

- ~~Four (4) direct fired AHU, rated at 0.47 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 0.80 million British thermal units per hour.~~
- ~~One (1) direct fired AHU, rated at 0.67 million British thermal units per hour.~~
- ~~Two (2) direct fired AHU, rated at 0.30 million British thermal units per hour, each.~~
- ~~Two (2) direct fired AHU, rated at 2.72 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 2.59 million British thermal units per hour.~~
- ~~Two (2) dry and curing combustion units, rated at 2.40 million British thermal units per hour, each.~~
- ~~Eight (8) unit heaters, rated at 0.15 million British thermal units per hour, each.~~
- ~~Nine (9) unit heaters, rated at 0.18 million British thermal units per hour, each.~~
- ~~In-Stack duct burners associated with HHP1 and HHP6.~~
- ~~Thirteen (13) boilers, identified as EU03C, EU03D, EU03I, through EU03M, EU03S through EU03V, EU03W and EU0X. (Section D.3)~~

~~Low NOx burner equipped natural gas combustion equipment consists of the following:~~

- ~~Two (2) direct fired AHU, rated at 3.27 million British thermal units per hour, each equipped with Low NOx burner.~~
- ~~Two (2) dry and curing combustion units, rated at 1.76 million British thermal units per hour, each, equipped with Low NOx burner.~~
- ~~Nine (9) boilers, identified as EU03E,through EU03H, and EU03N through EU03R. (Section D.3)~~

~~HHVxx is default heat value in Table C-1 to Subpart C of 40 CFR 98 for fuel xx~~

~~Ef XX.xx is the emission factor in Table C-1 or C-2 to Subpart C of 40 CFR 98 for pollutant XX (CO2, CH4 or N2O) for fuel xx~~

~~GWP (XX) is the global warming potential for pollutant XX (CO2, CH4 or N2O) from Table A-1 to Subpart A of 40 CFR 98~~

~~EfCO2eh2 is the emission factor for CO2e for hydrogen gas~~

~~Compliance with this emission limit will limit the potential to emit CO2e from the Test Cells, identified as HHP1, HHP 6-14, duct burners, emergency generator and air handling units, dry and curing combustion units and unit heaters to less than 100,000 tons, per year and render the requirements of 326 IAC 2-2, not applicable to the source before the 2012 revision.~~

~~D.2.2 HAPs Minor Limits [40 CFR 63]~~

~~The Permittee shall comply with the following:~~

~~(a) The single HAP from the paint spray line booth, identified as EU-01, twenty-seven (27) engine test cells, identified as 801-808, HHP1-HHP15, 8(PI), 9(PI), 10(PI), 11(PI), the eleven (11) in-stack duct burners associated with HHP-1 and HHP 6-15, the 1490 hp emergency generator, and the natural gas combustion equipments shall be less than 9.5 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The single HAP emissions shall be calculated by the following equation:~~

~~HAP emissions = The amount of single HAP (worst case) delivered to the coating applicators (EU-01G - EU-01K) from coatings, and dilution and cleaning solvents used in the paint spray line identified as EU-01~~

~~+ (Diesel fuel and biodiesel fuel burned by all test cells and the 1490 hp emergency generator) x Ef1hs~~

~~+ (Natural gas burned by all test cells and natural gas combustion equipment) x Ef2hs~~

~~+~~

~~(Liquid Propane burned by engines in all test cells) X Ef3hs)~~

~~Where:~~

~~Uncontrolled natural gas combustion equipment consists of the following:~~

- ~~Four (4) direct fired AHU, rated at 0.47 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 0.80 million British thermal units per hour.~~
- ~~One (1) direct fired AHU, rated at 0.67 million British thermal units per hour.~~
- ~~Two (2) direct fired AHU, rated at 0.30 million British thermal units per hour, each.~~
- ~~Two (2) direct fired AHU, rated at 2.72 million British thermal units per hour, each.~~
- ~~One (1) direct fired AHU, rated at 2.59 million British thermal units per hour.~~
- ~~Two (2) dry and curing combustion units, rated at 2.40 million British thermal units per hour, each.~~
- ~~Eight (8) unit heaters, rated at 0.15 million British thermal units per hour, each.~~
- ~~Nine (9) unit heaters, rated at 0.18 million British thermal units per hour, each.~~
- ~~Seventeen (17) air handling units rated at 25.5 mmBTU/hr total.~~
- ~~One (1) unit heater rated at 0.4 mmBTU/hr.~~
- ~~Thirteen (13) boilers, identified as EU03C, EU03D, EU03I,~~

through EU03M, EU03S through EU03V, EU03W and EU0X.

- Eleven (11) duct burners associated with engine test cells HHP1 and HHP6 through HHP15

Low NOx burner equipped natural gas combustion equipment consists of the following:

- Two (2) direct fired AHU, rated at 3.27 million British thermal units per hour, each equipped with Low NOx burner.
- Two (2) dry and curing combustion units, rated at 1.76 million British thermal units per hour, each, equipped with Low NOx burner.
- Nine (9) boilers, identified as EU03E,through EU03H, and EU03N through EU03R.

Ef1hs = Emission Factor is the emission factor for diesel and biodiesel fuel burned in test cells and the 1490 hp emergency generator for single HAP

Ef2hs = Emission Factor is the emission factor for natural gas burned in test cells and natural gas combustion equipment for single HAP;

Ef3hs= Emission Factor is the emission factor for liquid propane fuel burned in test cells for single HAPs

(b) The total HAP from the paint spray line booth, identified as EU-01, twenty-seven (27) engine test cells, identified as 801-808, HHP1-HHP15, 8(PI), 9(PI), 10(PI), 11(PI), the eleven (11) in-stack duct burners associated with HHP-1 and HHP 6-15, the 1490 hp emergency generator, and natural gas combustion equipments shall be less than 24.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The total HAP emissions shall be calculated by the following equation:

HAP emissions = The amount of total HAP delivered to the coating applicators (EU-01G - EU-01K) from coatings, and dilution and cleaning solvents used in the paint spray line identified as EU-01

+ (Diesel fuel and biodiesel fuel burned by engines in all test cells and the 1490 hp emergency generator) x Ef1ht,

+ (Natural gas burned by engines in all test cells and natural gas combustion equipment) x Ef2ht

+

(Liquid Propane burned by engines in all test cells) X Ef3ht

Where:

Uncontrolled natural gas combustion equipment consists of the following:

- Four (4) direct fired AHU, rated at 0.47 million British thermal units per hour, each.
- One (1) direct fired AHU, rated at 0.80 million British thermal units per hour.
- One (1) direct fired AHU, rated at 0.67 million British thermal units per hour.
- Two (2) direct fired AHU, rated at 0.30 million British thermal units per hour, each.
- Two (2) direct fired AHU, rated at 2.72 million British thermal units per hour, each.
- One (1) direct fired AHU, rated at 2.59 million British thermal units per hour.

- ~~Two (2) dry and curing combustion units, rated at 2.40 million British thermal units per hour, each.~~
- ~~Eight (8) unit heaters, rated at 0.15 million British thermal units per hour, each.~~
- ~~Nine (9) unit heaters, rated at 0.18 million British thermal units per hour, each.~~
- ~~Seventeen (17) air handling units rated at 25.5 mmBTU/hr total.~~
- ~~One (1) unit heater rated at 0.4 mmBTU/hr.~~
- ~~Thirteen (13) boilers, identified as EU03C, EU03D, EU03I, through EU03M, EU03S through EU03V, EU03W and EU0X.~~
- ~~Eleven (11) duct burners associated with engine test cells HHP1 and HHP6 through HHP15~~

~~Low NOx burner equipped natural gas combustion equipment consists of the following:~~

- ~~Two (2) direct fired AHU, rated at 3.27 million British thermal units per hour, each equipped with Low NOx burner.~~
- ~~Two (2) dry and curing combustion units, rated at 1.76 million British thermal units per hour, each, equipped with Low NOx burner.~~
- ~~Nine (9) boilers, identified as EU03E,through EU03H, and EU03N through EU03R.~~

~~Natural gas combustion equipment includes boilers, air handling units, drying and curing combustion equipment and unit heaters~~

~~Ef1ht = Emission Factor for diesel and biodiesel fuel burned in test cells and the 1490 hp emergency generator for total HAPs~~

~~Ef2ht = Emission Factor for natural gas burned in test cells and natural gas combustion equipment for total HAPs~~

~~Ef3ht= Emission Factor for liquid propane fuel burned in test cells for total HAPs~~

~~Compliance with these limits, the limit in Condition D.1.2, and the potential HAP emissions from the other emission units at this source, will limit the source-wide emissions of HAPs to less than ten (10) tons of a single HAP and less than twenty-five (25) tons of a combination of HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1, not applicable to this source and make the source an area source of HAPs.~~

D.2.~~3~~**2** Sulfur Dioxide (SO_2) Operational Limits

***

D.2.~~4~~**3** Preventive Maintenance Plan [326 IAC 2-7-5(12)]

***

Compliance Determination Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] [40 CFR 64]

D.2.~~5~~**4** Nitrogen Oxide (NOx) Emission Limitation Determination

~~In order to ensure compliance with Condition D.2.1(e), the NOx emissions from each test cell shall be controlled with selective catalytic reduction. The tests cells may be operated without the SCR control system with emissions reported as specified in 2.1 (e).~~

To determine compliance with the NOx emissions limit in Condition D.2.1(a), the Permittee shall determine actual NOx emissions for each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific NOx emission factor pursuant to this general equation:

Monthly NOx emissions per test cell = Monthly Fuel usage x Fuel-specific NOx emission factor in lb NOx/unit of fuel

Total monthly NOx emissions from the sixteen test cells shall be the sum of the individual monthly NOx emissions from each test cell for each fuel burned in the test cell, as illustrated in the table below.

Test cell(s)	Monthly fuel usage and units	Fuel-specific NOx emission factor	Monthly NOx emissions
801, 802, 803, 804, 805 and 808	Diesel fuel (gallons)	NOx-DieselEf1= 0.427 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Diesel fuel (gallons)	NOx-DieselEf2=0.155 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Biodiesel fuel (gallons)	NOx-BDieselEf = 1.64E-01 lb/gal	
806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Natural gas (mmcf)	NOx-NatGasEf = 4.08 lb/MMBtu	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Liquid Petroleum Gas / Propane (gallons)	NOx-LPGEf = 0.139 lb/gal	
		Total monthly NOx emissions	

D.2.5 Volatile Organic Compound (VOC) Emission Limitation Determination

To determine compliance with the VOC emission limit in Condition D.2.1(b), the Permittee shall determine actual VOC emissions for each calendar month as the sum of the following quantities:

(a) Test cells fuel combustion: VOC emissions from the test cells are determined each month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific VOC emission factor pursuant to this general equation:

Monthly VOC emissions per test cell = Monthly Fuel usage x Fuel-specific VOC emission factor in lb VOC/unit of fuel

Total monthly VOC emissions from the sixteen test cells shall be the sum of the individual monthly VOC emissions from each test cell for each fuel burned in the test cell, as illustrated in the table below.

(b) Unburned natural gas and unburned Liquid Petroleum Gas/Propane: VOC emissions from the release of unburned natural gas and LPG/Propane in test cell HHP4 are equal to 3.5% of the unburned natural gas vented each month and 100% of the unburned LPG/Propane vented each month from the test cell.

Test cell(s)	Monthly fuel usage and units	Fuel-specific emission factor	Monthly VOC emissions
801, 802, 803, 804, 805 and 808	**Diesel fuel (gallons)**	**VOC-DieselEf1 = 0.0493 lb/gal**	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	**Diesel fuel (gallons)**	**VOC-DieselEf2 =0.0493 lb/gal**	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	**Biodiesel fuel (gallons)**	**VOC-BDieselEf = 0.0493 lb/gal**	
806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	**Natural gas (mmcf)**	**VOC-NatGasEf =0.118 lb/MMBtu**	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	**Liquid Petroleum Gas / Propane (gallons)**	**VOC-LPGEf = 8.30E-02 lb/gal**	
		Total Monthly VOC emissions	

D.2.6 Carbon Monoxide (CO) Control

~~In order to ensure compliance with Condition D.2.1(f), the CO emissions from each test cell shall be controlled with an oxidation catalyst. The tests cells may be operated without the DOC control system with emissions reported as specified in 2.1 (f).~~

To determine compliance with the CO emission limit in Condition D.2.1(c), the Permittee shall determine actual CO emissions from the test cells for each calendar month by a calculation using the monthly fuel usage for each fuel in each test cell and the fuel-specific CO emission factor pursuant to this general equation:

Monthly CO emissions per test cell = Monthly Fuel usage x Fuel-specific CO emission factor in lb CO/unit of fuel

Total monthly CO emissions from the sixteen test cells shall be the sum of the individual monthly CO emissions from each test cell for each fuel burned in the test cell, as illustrated in the table below.

Test cell(s)	Monthly fuel usage and units	Fuel-specific emission factor	Monthly CO emissions
801, 802, 803, 804, 805 and 808	Diesel fuel (gallons)	CO-DieselEf1 = 0.13 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Diesel fuel (gallons)	CO-DieselEf2 = 0.13 lb/gal	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Biodiesel fuel (gallons)	CO-BDieselEf = 0.13 lb/gal	
806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Natural gas (mmcf)	CO-NatGasEf = 0.317 lb/MMBtu	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Liquid Petroleum Gas / Propane (gallons)	CO-LPGEf = 0.129 lb/gal	
		Total Monthly CO emissions	

D.2.7 Greenhouse Gas (GHG) Emission Limitation Determination

To determine compliance with the GHG emission limit in Condition D.2.1(d), the Permittee shall determine actual GHG emissions as the sum of the following quantities:

(a) Unburned natural gas: GHG emissions, expressed as CO2e, from the release of unburned natural gas in test cell HHP4 are equal to 95% of the unburned natural gas vented each month from the test cells multiplied by the global warming potential of methane (25).

(b) GHG emissions from combustion of fuels determined from the following information:

(1) Monthly fuel usage for each fuel combusted in the sixteen test cells;
(2) The default fuel-specific higher heating value (HHV) from 40 CFR 98, Subpart C, Table C-1;
(3) The fuel-specific GHG specific emission factor for each GHG from 40 CFR 98, Subpart C, Tables C-1 and C-2; and
(4) The global warming potential (GWP) for each GHG from 40 CFR 98, Subpart A, Table A-1;

And pursuant to this general equation:

Monthly CO2e emissions = (Monthly fuel usage x Part 98 default HHV x Part 98 CO2 emission factor x Global warming potential of CO2)

+

(Monthly fuel usage x Part 98 default HHV x Part 98 CH4 emission factor x Global warming potential of CH4)

+

(Monthly fuel usage x

**Part 98 default HHV x
Part 98 N2O emission factor x
Global warming potential of N2O)**

Total monthly CO2e emissions from combustion of fuels shall be the sum of the individual monthly CO2e emissions from each combustion unit for each fuel burned in the test cell, as illustrated in the table below.

Test cell(s)	Monthly fuel usage and units	Higher heating value of fuel from 40 CFR 98, Subpart C, Table C-1	Fuel-specific emission factors from 40 CFR 98, Subpart C, Tables C-1 or C-2	Global warming potential from 40 CFR 98, Subpart A, Table A-1	Monthly CO2e emissions
801, 802, 803, 804, 805 and 808 806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP2, HHP3, HHP4, and HHP5	Diesel and biodiesel fuel (gallons)	HHV	CO2-DieselEf= 165 lb/MMBtu	GWP-CO2	
			CH4-DieselEf = 8.10E-03 lb/MMBtu	GWP-CH4	
			N2O-DieselEf = 1.32E-03 lb/MMBtu	GWP-N2O	
806, 807, 808, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Natural gas (mmcf)	HHV	CO2-NatGasEf = 120000 lb/MMBtu	GWP-CO2	
			CH4-NatGasEf = 2.3 lb/MMBtu	GWP-CH4	
			N2O-NatGasEf = 2.2 lb/MMBtu	GWP-N2O	
806, 807, Test Pad 8, Test Pad 9, Test Pad 10, Test Pad 11, HHP3, HHP4, and HHP5	Liquid Petroleum Gas / Propane (gallons)	HHV	CO2-LPGEf = 125000 lb/kgal	GWP-CO2	
			CH4-LPGEf = 0.2 lb/kgal	GWP-CH4	
			N2O-LPGEf = 0.9 lb/kgal	GWP-N2O	
				Total Monthly CO2e emissions	

D.2.8 Fuel-specific emission factors

(a) The Permittee may use fuel-specific emission factors for NOx, VOC, and CO based on the following:

(1) USEPA emission factors from USEPA Compilation of Emission Factors AP-42, Chapter 3, Sections 2, 3, or 4, as applicable based on fuel and engine size.

(2) Emission factors developed by conducting a stack test in a manner that would reflect representative engine size, operating mode, and other factors present in the test cells. The stack test must be conducted using methods approved by the commissioner and in accordance with 326 IAC 3-6.

(3) For test cells that perform testing on USEPA certified engine families for purposes of distribution into commerce, the emission rate that supported the USEPA certification, as found on the USEPA web site http://www.epa.gov/otaq/certdata.htm.

(b) The Permittee shall identify the type of each fuel-specific emission factor used in each reporting period in the period report required by Condition D.2.11.

~~D.2.7 Testing Requirements [326 IAC 2-1.1-11]~~

~~(a) In order to demonstrate compliance with Condition D.2.1(e) and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the SCR, the Permittee shall conduct NOx emissions stack testing of the emissions from selective catalytic reduction (SCR) on a representative test cell utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

~~(b) In order to demonstrate compliance with Condition D.2.1(e) and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after startup of the test cells, the Permittee shall conduct NOx emissions stack testing of the uncontrolled emissions from a representative test cell utilizing methods as approved by the commissioner. This test shall be performed once. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) or NRPD Air-14-NPD. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

~~(c) In order to demonstrate compliance with Condition D.2.1(f) and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the catalytic oxidizer, the Permittee shall conduct CO emissions stack testing of the emissions from the catalytic oxidizer on a representative test cell utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

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

D.2.~~8~~**9** Visible Emissions Notations

(a) ~~Visible emissions notations of the engine test cell stack exhausts (801.1 -801.2, 802.1 -802.2, 803.1-803.2, 804 through 808, HHP1.1, HHP2, HHP3.1 -HHP3.2, HHP4.1-HHP4.2, HHP5.1-~~

~~HHP5.2, PD8.1-PD8.2, PD9.1 PD9.2, PD10.1, PD11.1, HHP6.1 through HHP10.1, HHP11.1, HHP12.1, HHP13.1 and HHP14.1) shall be performed once per day during normal daylight operations when combusting diesel fuel or biodiesel. A trained employee will record whether emissions are normal or abnormal.~~ **Visible emissions notations for each of the engine test cell stack exhausts shall be performed once per day during normal daylight operations when combusting diesel fuel or biodiesel. A trained employee will record whether emissions are normal or abnormal.**

****

~~D.2.9 SCR Parametric Monitoring~~

~~(a) In order to demonstrate compliance status with Conditions D.2.1(e), the Permittee shall monitor the selective catalyst reduction (SCR) temperature and fuel used with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in section 2.7 (a). The Permittee shall comply with the following:~~

~~(i) The test cells and the SCR shall operated such that the temperature and fuel consumption will be monitored continuously. Failure of either the temperature or fuel monitoring system for more than three (3) hours will require reasonable response steps to be taken to return the system to normal operation. Failure to take response steps shall be considered as a deviation from the permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.~~

~~(ii) In order to demonstrate compliance status with Conditions D.2.1(e), the Permittee shall continuously monitor the urea flow rate used in conjunction with the test cell SCR. The urea flow rate will be compared to the corresponding inlet NO and NO_2 load and the SCR temperature based performance characteristics. If the urea flow rate does not correlate with that of the most recent stack test specified in section 2.7(a), the Permittee shall take reasonable response steps. Failure to take response steps shall be considered as a deviation from the permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.~~

~~(b) The permittee will submit a compliance monitoring plan within 60 days after the permit is issued demonstrating compliance with section 2.9 (a).~~

~~D.2.10 Oxidation Catalyst Parametric Monitoring~~

~~(a) In order to demonstrate the compliance status with Conditions D.2.1(f), the Permittee shall monitor the Diesel Oxidation Catalyst (DOC) temperature and fuel used by the test cells with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in section 2.7 (a). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour average.The Permittee shall comply with the following:~~

~~(i) The test cells and the DOC shall be operated such that the temperature will be monitored continuously. Failure of either the temperature or fuel monitoring system for more than three (3) hours will require reasonable response steps to be taken to return the system to normal operation. Failure to take response steps shall be considered as a deviation from the permit. Section C - Response to Excursions or Exceedences contains the Permittee's obligation with regard to the reasonable response steps required by this condition.~~

~~(ii) In order to demonstrate compliance status with Conditions D.2.1(f), the Permittee shall monitor performance characteristics of the DOC using a portable analyzer in accordance with an approved compliance monitoring plan identified in section D.2.10 (b). If the performance characteristics of the DOC as measured by the portable analyzer do not correlate with those established during the most recent stack test specified in section 2.7(a), the Permittee shall take reasonable response steps. Failure to take response steps shall be considered as a deviation from the permit. Section C - Response to Excursions or Exceedences contains the Permittee's obligation with regard to the reasonable response steps required by this condition.~~

~~(b) The permittee will submit a compliance monitoring plan within 60 days after the permit is issued outlining the permittees approach for demonstrating compliance with section 2.10 (a).~~

~~(c) Section C - Response to Excursions or Exceedences contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Excursions defined in Sections 2.9 (a) and 2.10 (a) require reasonable response steps. Failure to take response steps shall be considered a deviation from this permit.~~

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

D.2.1~~1~~**0** Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1 ~~and D.2.2~~, the Permittee shall maintain records in accordance with (1) and (2) below:

***

(b) To document the compliance status with Condition D.2.3(~~1~~**a**) , the Permittee shall maintain records in accordance with (1) through (5) below.

****

(c) To document compliance with Condition D.2.3~~2~~(~~2~~**b**), the Permittee shall keep a log record of High Sulfur Testing conducted at the facility. The log record will include the following:

****

(d) ~~To document the compliance status with Condition D.2.8 - Visible Emission Notation, the Permittee shall maintain records of daily visible emission notations of the engine test cell stack exhausts (801.1 -801.2, 802.1 -802.2, 803.1-803.2, 804 through 808, HHP1, HHP2, HHP3.1 -HHP3.2, HHP4.1-HHP4.2, HHP5.1-HHP5.2, PD8.1-PD8.2, PD9.1 and PD9.2, PD10.1, PD11.1, HHP6.1 through HHP10.1, HHP11.1, HHP12.1, HHP13.1 and HHP14.1) when combusting diesel fuel or biodiesel. 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).~~ **To document the compliance status with Condition D.2.9 - Visible Emission Notation, the Permittee shall maintain records of daily visible emission notations of the engine test cell stack exhausts when combusting diesel fuel or biodiesel. 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) In order to document the compliance status with Condition D.2.9, the Permittee shall maintain records of the urea flow rate and the SCR temperature used in conjunction with the test cells. The Permittee shall include in its daily record when a flow rate and~~

~~temperature reading are not taken and the reason for the lack of a flow rate and temperature reading (e.g. the process did not operate that day).~~

~~(f) In order to document the compliance status with Condition D.2.10, the Permittee shall maintain continuous temperature records (on a three (3) hourly average basis) for each oxidation catalyst to demonstrate compliance.~~

(~~g~~**e**) Section C – General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.2.1~~2~~**1** Reporting Requirements

A quarterly summary of the information to document the compliance status with conditions D.2.1, ~~and D.2.2~~ shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

****

SECTION D.3 Reserved ~~EMISSION UNIT OPERATION CONDITIONS~~

~~**Emission Unit Description [326 IAC 2-7-5(14)]:**~~

~~(n) Nine (9) natural gas fired boilers, identified as EU03C-EU03D, EU03L-EU03M, EU03S-EU0V, approved for construction in 2011, each having a maximum capacity of 2.0 MMBtu/hr and EU03X having a maximum capacity of 4.2 MMBtu/h.~~

~~(o) Four (4) natural gas fired boilers, approved for construction in 2012,consisting of the following:~~

~~(1) Two (2) boilers, identified as EU03I, and EU03J, each with a maximum heat input capacity of 4.0 MMBtu/hr.~~

~~(2) One (1) boiler, identified as EU03K, each with a maximum heat input capacity of 3.2 MMBtu/hr.~~

~~(3) One (1) boiler, identified as EU03W, each with a maximum heat input capacity of 5 MMBtu/hr.~~

~~(p) Nine (9) natural gas fired boilers, approved for construction in 2012, each equipped with Low NOx burners for NOx reduction, consisting of the following:~~

~~(1) Five (5) boilers, identified as EU03E, EU03F, EU03G, EU03H, and EU03R, each rated at a maximum heat input capacity of 3.0 MMBtu/hr.~~

~~(2) Four (4) boilers, identified as EU03N, EU03O, EU03P, and EU03Q, each rated at a maximum heat input capacity of 3.5 MMBtu/hr.~~

~~(w) Two (2) natural gas fired boilers, identified as EU-03Y and EU-03Z, constructed in 2014, with a maximum heat input rate of 3.0 MMBtu/hr each, with no emission controls, and exhausting to stack EU-03Y.1 and EU-03Z.1, respectively.~~

~~(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 Emission Limitations for Sources of Indirect Heating Matter (PM) Limitation [326 IAC 6-2-4]~~

~~(a) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from boilers, EU03C-EU03D, EU03L-EU03M and EU03S-EU03X, shall each be limited to 0.338 pounds per MMBtu heat input.~~

~~(b) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from boilers, EU-03E - EU-03K, EU-03N - EU-03R and EU-03W, shall each be limited to 0.374 pounds per MMBtu heat input.~~

~~(c) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from boilers EU-03Y and EU-03Z shall each be limited to 0.357 pounds per MMBtu heat input.~~

***

SECTION D.5 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

(b) The test cells described in the table below:

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
HHP15	**Production**	**Diesel Biodiesel Natural gas**	**9000**	**SCR Catalytic oxidation 5.0 MMBtu Duct Burner**	**2014**	**HHP15.1**

~~(t) One (1) production engine test cell, identified as HHP15, permitted in 2014, powered by diesel, biodiesel, or natural gas with a maximum output of 9,000 hp, equipped with an in-stack duct burner, with maximum capacity of 5.0 MMBtu/hr, selective catalytic reduction (SCR) for the control of NOx emissions, an oxidation catalyst for the control of CO emissions, and exhausting to stack HHP15.1.~~

(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.5.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

****

Compliance with these limits shall limit the CO emissions from the engine test cell ~~(~~HHP15~~)~~ to less than one hundred (100) tons per year, limit the NOx emissions from the engine test cell ~~(~~HHP15~~)~~ to less than forty (40) tons per year, and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to this 2014 modification.

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

***

Compliance Determination Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)][40 CFR 64]

D.5.3 Carbon Monoxide (CO) Control

***

D.5.4 Carbon Monoxide (CO) Emission Limit Determination

~~The Permittee shall determine actual CO emissions from HHP15 for each calendar month using the following equation:~~

~~CO emissions = (Diesel fuel burned in tz1 by HHP15 x COEFtz1df) +~~
~~(Diesel fuel burned in tz2 by HHP15 x COEFtz2df) +~~
~~(Diesel fuel burned in tz3 by HHP15 x COEFtz3df)~~

~~+~~

~~(Diesel fuel burned in HHP15 when DOC is not in operation x COEFepatestcells.df)~~

~~+~~

~~(Biodiesel fuel burned in tz1 by HHP15 x COEFtz1bd) +~~
~~(Biodiesel fuel burned in tz2 by HHP15 x COEFtz2bd) +~~
~~(Biodiesel fuel burned in tz3 by HHP15 x COEFtz3bd)~~

~~+~~

~~(Biodiesel fuel burned in HHP15 when DOC is not in operation x COEFepatestcells.bdf)~~

~~+~~

~~(Natural Gas burned in tz1 by HHP15 x COEFtz1ng) +~~
~~(Natural Gas burned in tz2 by HHP15 x COEFtz2ng) +~~
~~(Natural Gas burned in tz3 by HHP15 x COEFtz3ng)~~

~~+~~

~~(Natural Gas burned in HHP15 when DOC is not in operation x COEFepatestcells.ng)~~

~~+~~

~~(Natural Gas burned in the HHP15 duct burner x COEFepang)~~

~~Where:~~
~~tzx is the temperature range for the emission factor measured at the inlet of the DOC and will be the same ranges for test engines HHP1, HHP6 through HHP14~~

~~COEFtzx.xx is the measured CO emission factor determined from the most recent valid stack test for the temperature range x for fuel xx when DOC is operating~~

~~COEFepatestcells.df is the USEPA emission factor for the test cells burning diesel fuels - used when DOC is not operating~~

~~COEFepatestcelss.bdf is the USEPA emission factor for test cells burning biodiesel fuel - used when DOC is not operating~~

~~COEFepatestcells.ng is the USEPA emission factor for test cells burning natural gas - used when DOC is not operating~~

~~COEFepang is the USEPA CO emission factor for the duct burner burning natural gas (AP-42 4-1)~~

To determine compliance with the CO emission limit in Condition D.5.1(a), the Permittee shall determine actual CO emissions from test cell HHP15 for each calendar month as the sum of the following quantities:

(a) HHP15 Test cell fuel combustion: CO emissions from test cell HHP15 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific/temperature zone specific CO emission factor pursuant to this general equation:

Monthly CO emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific CO emission factor in lb CO/unit of fuel

Total monthly CO emissions from HHP15 shall be the sum of the individual monthly CO emissions for each fuel burned in the test cell, as illustrated in the table below.

If CO emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific CO emission factor.

(b) HHP15 duct burner: CO emissions from combustion of natural gas in the duct burner are determined for each calendar month by a calculation using the monthly fuel usage and the default EPA CO emission factor for natural gas combustion pursuant to this general equation:

Monthly CO emissions = Monthly fuel usage X emission factor in lb CO/unit of fuel

Monthly fuel usage and units	Fuel-specific emission factor	Monthly CO emissions
Diesel fuel (gallons)	CO-TZ1DieselEf	
Diesel fuel (gallons)	CO-TZ2DieselEf	
Diesel fuel (gallons)	CO-TZ3DieselEf	
Diesel fuel (gallons)	CO-DieselEf-uncontrolled	
Biodiesel fuel (gallons)	CO- TZ1BDieselEf	
Biodiesel fuel (gallons)	CO- TZ2BDieselEf	
Biodiesel fuel (gallons)	CO- TZ3BDieselEf	
Biodiesel fuel (gallons)	CO-BDieselEf-uncontrolled	
Natural gas (mmcf)	CO-TZ1NatGasEf	
Natural gas (mmcf)	CO-TZ2NatGasEf	
Natural gas (mmcf)	CO-TZ3NatGasEf	
Natural gas (mmcf)	CO-NatGasEf-uncontrolled	
Duct burner natural gas (mmcf)	CO-EPA-NatGasEf = 84 lb/mmcf	
	Total Monthly CO emissions	

D.5.5 Nitrogen Oxide (NOx) Control

***

D.5.6 Nitrogen Oxide (NOx) Emission Limit Determination

~~The Permittee shall determine actual NOx emissions from HHP15 for each calendar month using the following equation:~~

~~NOx emissions = (Diesel fuel burned in tz1 by HHP15 x EFtz1df) +~~
~~(Diesel fuel burned in tz2 by HHP15 x EFtz2df) +~~
~~(Diesel fuel burned in tz3 by HHP15 x EFtz3df) +~~
~~(Diesel fuel burned in tz4 by HHP15 x EFtz4df) +~~
~~(Diesel fuel burned in tz5 by HHP15 x EFtz5df)+~~
~~(Diesel fuel burned in tz6 by HHP15 x EFtz6df) +~~
~~(Diesel fuel burned in tz7 by HHP15 x EFtz7df)~~

~~+~~

~~(Diesel fuel burned in HHP15 when SCR is not in operation x EFnocontrol.df)~~

~~+~~

~~(Biodiesel fuel burned in tz1 by HHP15 x EFtz1bd) +~~
~~(Biodiesel fuel burned in tz2 by HHP15 x EFtz2bd) +~~
~~(Biodiesel fuel burned in tz3 by HHP15 x EFtz3bd) +~~
~~(Biodiesel fuel burned in tz4 by HHP15 x EFtz4bd) +~~
~~(Biodiesel fuel burned in tz5 by HHP15 x EFtz5bd)+~~
~~(Biodiesel fuel burned in tz6 by HHP15 x EFtz6bd) +~~
~~(Biodiesel fuel burned in tz7 by HHP15 x EFtz7bd)~~

~~+~~

~~(Biodiesel fuel burned in HHP15 when SCR is not in operation x EFnocontrol.bdf)~~

~~+~~

~~(Natural Gas burned in tz1 by HHP15 x EFtz1ng) +~~
~~(Natural Gas burned in tz2 by HHP15 x EFtz2ng) +~~
~~(Natural Gas burned in tz3 by HHP15 x EFtz3ng) +~~
~~(Natural Gas burned in tz4 by HHP15 x EFtz4ng) +~~
~~(Natural Gas burned in tz5 by HHP15 x EFtz5ng)+~~
~~(Natural Gas burned in tz6 by HHP15 x EFtz6ng) +~~
~~(Natural Gas burned in tz7 by HHP15 x EFtz7ng)~~

~~+~~

~~(Natural Gas burned in HHP15 when SCR is not in operation x EFnocontrol.ng)~~

~~+~~

~~(Natural Gas burned in the HHP15 duct burner x EFepahiNOx)~~

~~Where:~~
~~tzx is the temperature range for the emission factor measured at the inlet of the SCR~~

~~EFtzx.xx is the measured NOx emission factor determined from the most recent valid stack test for the temperature range x for fuel xx when SCR is operating~~

~~EFnocontrol.df is the emission factor for the test cells operating with no SCR control and burning diesel fuel~~

~~EFnocontrol.bdf is the emission factor for test cells operating with no SCR control and burning biodiesel fuel~~

~~EFnocontrol.ng is the emission factor for test cells operating with no SCR control and burning natural gas~~

~~EFepahi NOx is the USEPA NOx emission factor for uncontrolled natural gas duct burner (AP-42 4-1)~~

To determine compliance with the NOx emission limit in Condition D.5.1(b), the Permittee shall determine actual NOx emissions from test cell HHP15 for each calendar month as the sum of the following quantities:

(a) HHP15 Test cell fuel combustion: NOx emissions from test cell HHP15 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific/temperature zone specific NOx emission factor pursuant to this general equation:

Monthly NOx emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific NOx emission factor in lb NOx/unit of fuel

Total monthly NOx emissions from HHP15 shall be the sum of the individual monthly NOx emissions for each fuel burned in the test cell, as illustrated in the table below.

If NOx emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific NOx emission factor.

(b) HHP15 duct burner: NOx emissions from combustion of natural gas in the duct burner are determined for each calendar month by a calculation using the monthly fuel usage and the default EPA NOx emission factor for natural gas combustion pursuant to this general equation:

Monthly NOx emissions = Monthly fuel usage X emission factor in lb NOx/unit of fuel

Monthly fuel usage and units	Fuel-specific emission factor	Monthly NOx emissions
Diesel fuel (gallons)	NOx-TZ1DieselEf	
Diesel fuel (gallons)	NOx-TZ2DieselEf	
Diesel fuel (gallons)	NOx-TZ3DieselEf	
Diesel fuel (gallons)	NOx-TZ4DieselEf	
Diesel fuel (gallons)	NOx-TZ5DieselEf	
Diesel fuel (gallons)	NOx-TZ6DieselEf	
Diesel fuel (gallons)	NOx-TZ7DieselEf	
Diesel fuel (gallons)	NOx-DieselEf-uncontrolled	
Biodiesel fuel (gallons)	NOx-TZ1BDieselEf	
Biodiesel fuel (gallons)	NOx-TZ2BDieselEf	
Biodiesel fuel (gallons)	NOx-TZ3BDieselEf	

Biodiesel fuel (gallons)	**NOx-TZ4BDieselEf**	
Biodiesel fuel (gallons)	**NOx-TZ5BDieselEf**	
Biodiesel fuel (gallons)	**NOx-TZ6BDieselEf**	
Biodiesel fuel (gallons)	**NOx-TZ7BDieselEf**	
Biodiesel fuel (gallons)	**NOx-BDieselEf-uncontrolled**	
Natural gas (mmcf)	**NOx-TZ1NatGasEf**	
Natural gas (mmcf)	**NOx-TZ2NatGasEf**	
Natural gas (mmcf)	**NOx-TZ3NatGasEf**	
Natural gas (mmcf)	**NOx-TZ4NatGasEf**	
Natural gas (mmcf)	**NOx-TZ5NatGasEf**	
Natural gas (mmcf)	**NOx-TZ6NatGasEf**	
Natural gas (mmcf)	**NOx-TZ7NatGasEf**	
Natural gas (mmcf)	**NOx-NatGasEf-uncontrolled**	
Duct burner natural gas (mmcf)	**NOx-EPA-NatGasEf =100 lb/mmcf**	
	Total Monthly NOx emissions	

D.5.6a Nitrogen Oxides (NO_X) Emission Limit Determination

As an alternative to the NOx emission determination method in D.5.6, the Permittee may determine actual monthly NOx emissions from test cells HHP15 pursuant to this section.

(a) Continuous Emissions Monitoring Systems

(1) NOx measurement: The Permittee shall continuously measure NOx concentration in the exhaust of with a NOx continuous emission monitoring system (CEMS) installed and operated in accordance with the following requirements:

(A) 40 CFR Part 60, Appendix B, Performance Specification 2;
(B) 40 CFR Part 60, Appendix F, Procedure 1;
(C) 326 IAC 3-5-2 for performance and operating specifications;
(D) 326 IAC 3-5-3 for monitor system certification;
(E) 326 IAC 3-5-4 for standard operating procedures;
(F) 326 IAC 3-5-5 for quality assurance requirements;
(G) 326 IAC 3-5-6 for record keeping requirements;
(H) 326 IAC 3-5-7 for reporting requirements; and
(I) 326 IAC 3-5-8 for operation and maintenance of continuous emission monitoring systems.

Continuous monitoring operation is defined as the collection of at least one measurement for each 15-minute block period while the test cell is in operation.

(2) Emission calculation: The Permittee shall calculate NOx emissions, in tons, each calendar month by using the following data:
(A) NOx CEMS data;
(B) NOx emission rate calculations performed pursuant to 40 CFR Part 60, Appendix A, Method 19;
(C) Fuel heat content; and
(D) Fuel consumption rate.

(3) Data substitution:

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute NOx concentration measurement obtained prior to the calibration in lieu of actual readings.

(B) During periods of CEMS maintenance, malfunction, repair, or other periods of invalid NOx data collection, the Permittee shall determine NOx emission in accordance with Section D.5.6 of this permit.

D.5.7 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to **establish the fuel-specific/temperature zone-specific emission factors used to calculate NOx emissions as described in Condition D.5.6**, ~~demonstrate compliance with Condition D.5.1(b)~~ and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the SCR, the Permittee shall conduct NOx emissions stack testing of the emissions ~~from~~ **controlled by** selective catalytic reduction (SCR) on ~~HHP15 utilizing methods as approved by the commissioner~~. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. **In lieu of these tests, the Permittee may use emission factors developed by the tests performed in Condition D.15(a).** Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. **The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.5.6 upon submittal of test results to IDEM.**

(b) In order to **establish the fuel-specific uncontrolled emission factors used to calculate NOx emissions as described in Condition D.5.6** ~~demonstrate compliance with Condition D.5.1(b)~~ and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after startup of the test cells, the Permittee shall conduct NOx emissions stack testing of the uncontrolled emissions from ~~HHP15~~ utilizing methods as approved by the commissioner. This test shall be performed once. **In lieu of this test, the Permittee may use emission factors developed by the test performed in Condition D.1.15(b).** Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) or NRPD Air-14-NPD. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. **The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.5.6 upon submittal of test results to IDEM.**

.

(c) In order to **establish the fuel-specific/temperature zone-specific emission factors used to calculate CO emissions as described in Condition D.5.4**, ~~demonstrate compliance with Condition D.5.1(a)~~ and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the catalytic oxidizer, the Permittee shall conduct CO emissions stack testing of the emissions ~~from~~ **controlled by** the catalytic oxidizer on ~~HHP15~~ utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. **In lieu of these tests, the Permittee may use emission factors developed by the tests performed in Condition D.1.5(c).** Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. **The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.5.6 upon submittal of test results to IDEM.**

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

D.5.8 Visible Emission Notations

***

D.5.9 SCR Parametric Monitoring

~~(a) In order to demonstrate compliance status with Condition D.5.1(b), the Permittee shall monitor the selective catalyst reduction (SCR) temperature and fuel used with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.5.7(a). The Permittee shall comply with the following~~ **In order to utilize the fuel-specific/temperature zone specific NOx emission factors described in Condition D.5.6, the Permittee shall conduct the following monitoring except when the Permittee is determining compliance with the NOx emissions limit by using continuous emissions monitoring systems in accordance with Condition D.5.6a:**

(a) The Permittee shall monitor the selective catalyst reduction (SCR) temperature and fuel usage with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.5.7(a). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour average. If the temperature or fuel monitoring system fails to operate for more than three consecutive (3) hours the Permittee shall take reasonable response steps to return the system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.5.6 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall continuously monitor the urea flow rate of the SCR. If the urea flow rate monitoring system fails to operate for more than three (3) continuous hours, the Permittee shall take reasonable response steps to return the monitoring system to normal operations. If the Permittee is unable to return the urea monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.5.6 for the period of time the monitoring system was not operating normally.

(c) The Permittee shall continuously evaluate the effectiveness of the SCR system by monitoring NOx concentrations with NOx sensors at the SCR inlet and outlet to establish the control device efficiency, and comparing the control efficiency to the control efficiency achieved for the applicable temperature zone during the stack test for which the emission factor was established. If the measured control

efficiency is 7% less than the control efficiency achieved during the stack test for which the emission factor was established or lower, the Permittee shall take reasonable response steps. If the Permittee is unable to return the SCR control efficiency to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.5.6 for the period of time the monitoring system was not operating normally.

(d) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conduction monitoring pursuant to this condition.

(e) Failure to take reasonable response steps as described in (a), (b), and (c) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

***

D.5.10 Oxidation Catalyst Parametric Monitoring

In order to utilize the fuel-specific/temperature zone specific CO emission factors described in Condition D.5.4, the Permittee shall conduct the following monitoring:

(a) The Permittee shall monitor the Diesel Oxidation Catalyst (DOC) temperature and fuel used by the test cell with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.5.7(c). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour average. If the temperature or fuel monitoring systems fail to operate normally for more than three (3) hours the Permittee shall take reasonable response steps to return the monitoring system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.5.4 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall monitor the CO emissions performance characteristics of the DOC using a portable analyzer in accordance with the compliance monitoring plan described in section D.5.10(c). If the CO emissions performance characteristics of the DOC as measured by the portable analyzer are not equivalent to or better than those established during the stack test in which the CO emission factor was established, the Permittee shall take reasonable response steps to restore the DOC performance characteristics to normal levels. For each period of time the Permittee is unable to attain the performance characteristics established during the stack test, the Permittee shall use an uncontrolled fuel-specific CO emission factor in the compliance determination provisions of Condition D.5.4.

(c) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conducting monitoring pursuant to this Condition.

(d) Failure to take reasonable response steps as described in (a) or (b) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

***

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

D.5.11 Record Keeping Requirements

***

(e) To document compliance with Condition D.5.6a, the Permittee shall maintain the following records:

(1) All data recorded by continuous monitoring systems (CMS), including continuous emission monitoring systems (CEMS), required by Conditions D.5.6a.

(2) The Permittee shall maintain records of the continuous monitoring required by Condition D.5.6.a. The records shall include data required by 326 IAC 3-5-6.

(3) Pursuant to 326 IAC 3-5-4, the Permittee shall maintain a complete, written continuous monitoring standard operating procedure (SOP) for the continuous emissions monitors. The CEMS SOP should contain, at a minimum, the items described in 326 IAC 3-5-4(a).

(~~e~~**f**) Section C -- General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.5.12 Reporting Requirements

A quarterly summary of the information to document the compliance status with condition D.5.1 shall be submitted using the reporting form located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. **A summary report of NOx monitor downtime and other information required by 326 IAC 3-5-7(4) shall also be included in the report.** The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined in 326 IAC 2-7-1(34). Section C -- General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.***

SECTION D.6 EMISSION UNIT OPERATION CONDITIONS

Emission Unit Description [326 IAC 2-7-5(14)]:

(b) The test cells described in the table below:

Test cell	Cell type	Fuel type	Maximum hp	Controls	Construction date	Stack
HHP16	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 5.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr**	**2014**	**HHP16.1**
HHP17	**Engineering**	**Diesel Biodiesel LPG Natural gas NG + CO2 Hydrogen**	**9000**	**SCR Catalytic oxidation 5.0 MMBtu Duct Burner Vent uncontrolled NG or LPG for 24 hrs/yr**	**2014**	**HHP17.1**

(c) The natural gas-fired boilers described in the table below:

Boiler Group	Identification number	Capacity	Controls	Construction date	Stack
4	EU03Y EU03Z	3.0 MMBtu/hr each		2014	

(d) The natural gas-fired combustion sources listed in the table below:

Natural gas-fired equipment Group	Quantity	Type	Capacity	Construction date
HHP16/HHP17 expansion combustion units (Group 4)	1	Direct fired air handling unit	0.34 MMBtu/hr	2014
	3	Unit heaters	0.175 MMBtu/hr each	2014
	1	Propane vaporizer	0.50 MMBtu/hr	2014

(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.6.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] and VOC BACT [326 IAC 8-1-6]

(a) The total CO emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall not exceed 95 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The total GHG emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall not exceed 70,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total NOx emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall not exceed 37 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) The total PM2.5 emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall not exceed 9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(e) The total VOC emissions from the engine test cells HHP16 and HHP17, their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer, shall not exceed 39 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(f) The total VOC emissions from the engine test cells HHP16 and HHP17, their respective duct burners, shall not exceed 24 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit the CO, GHGs, NOx, PM2.5, and VOC emissions from the engine test cells (HHP16 and HHP17), their respective duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling unit, the three unit heaters, and the propane vaporizer to less than one hundred (100) tons per year of CO, to less than seventy thousand (70,000) tons per year of GHGs, to less than forty (40) tons per year of NOx, to less than ten (10) tons per year of PM2.5, and to less than forty (40) tons per year of VOC, and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the 2014 modification.

D.6.2 Particulate Emission Limitations for Sources of Indirect Heating Matter (PM) Limitation [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the boilers known as Boiler Group 4 shall each be limited to 0.359 pounds per MMBtu heat input.

D.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for the engine test cell HHP16 and HHP17 and control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to preventive maintenance plans.

Compliance Determination Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)][40 CFR 64]

D.6.4 Carbon Monoxide (CO) Control

In order to ensure compliance with Condition D.6.1(a), the CO emissions from each test cell shall be controlled with an oxidation catalyst. The test cells may be operated without the DOC control system with emissions reported as specified in D.6.5.

D.6.5 Carbon Monoxide (CO) Emission Limit Determination

To determine compliance with the CO emission limit in Condition D.6.1(a), the Permittee shall determine actual CO emissions from from test cell HHP16 and HHP17 and their respective duct burners, Boiler Group 4, and Natural gas combustion unit Group 4 for each calendar month as the sum of the following quantities:

(a) HHP16 and HHP17 Test cell fuel combustion: CO emissions from test cell HHP16 and HHP17 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific/temperature zone specific CO emission factor pursuant to this general equation:

Monthly CO emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific CO emission factor in lb CO/unit of fuel

Total monthly CO emissions from HHP16 and HHP17 shall be the sum of the individual monthly CO emissions for each fuel burned in the test cell, as illustrated in the table below.

If CO emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific CO emission factor.

(b) Other fuel combustion equipment: CO emissions from combustion of fuel in the duct burners for HHP16 and HHP17, Boiler Group 4, and Natural Gas emission unit Group 4, are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate CO emission factor pursuant to this general equation:

Monthly CO emissions = Monthly fuel usage X emission factor in lb CO/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly CO emissions
HHP16 HHP17	Diesel fuel (gallons)	CO-TZ1DieselEf	
	Diesel fuel (gallons)	CO-TZ2DieselEf	
	Diesel fuel (gallons)	CO-TZ3DieselEf	
	Diesel fuel (gallons)	CO-DieselEf-uncontrolled	
	Biodiesel fuel (gallons)	CO- TZ1BDieselEf	
	Biodiesel fuel (gallons)	CO- TZ2BDieselEf	
	Biodiesel fuel (gallons)	CO- TZ3BDieselEf	
	Biodiesel fuel (gallons)	CO-BDieselEf-uncontrolled	
	Natural gas (mmcf)	CO-TZ1NatGasEf	
	Natural gas (mmcf)	CO-TZ2NatGasEf	
	Natural gas (mmcf)	CO-TZ3NatGasEf	
	Natural gas (mmcf)	CO-NatGasEf-uncontrolled	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ1LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ2LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-TZ3LPEf	
	Liquid Petroleum Gas or Propane (gallons)	CO-LPEf-uncontrolled	
HHP16 & HHP17 duct burners Boiler Group 4 Natural gas combustion Group 4	Natural gas (mmcf)	CO-EPA-NatGasEf = 84lb/mmcf	
Propane vaporizer	Propane (gallons)	CO-EPA-LPEf = 0.0075 lb/gal	
		Total Monthly CO emissions	

D.6.6 Greenhouse Gas (GHG) Emission Limit Determination

To determine compliance with the GHG emission limit in Condition D.6.1(b), the Permittee shall determine actual GHG emissions as the sum of the following quantities:

(a) Unburned natural gas: GHG emissions, expressed as CO2e, from the release of unburned natural gas in test cells HHP16 and HHP17 are equal to 95% of the unburned natural gas vented each month from the test cells multiplied by the global warming potential of methane (25).

(b) GHG emissions from combustion of fuels determined from the following information:

(1) Monthly fuel usage for each fuel combusted in test cells HHP1 and HHP6-HHP14, the duct burners for HHP1 and HHP6-HHP14, Boiler Groups 1, 2, and 3, Natural Gas emission unit Groups 1 and 2, and the emergency generator;
(2) The default fuel-specific higher heating value (HHV) from 40 CFR 98, Subpart C, Table C-1;
(3) The fuel-specific GHG specific emission factor for each GHG from 40 CFR 98, Subpart C, Tables C-1 and C-2; and
(4) The global warming potential (GWP) for each GHG from 40 CFR 98, Subpart A, Table A-1;

And pursuant to this general equation:

Monthly CO2e emissions = (Monthly fuel usage x Part 98 default HHV x Part 98 CO2 emission factor x Global warming potential of CO2)

+

(Monthly fuel usage x Part 98 default HHV x Part 98 CH4 emission factor x Global warming potential of CH4)

+

(Monthly fuel usage x Part 98 default HHV x Part 98 N2O emission factor x Global warming potential of N2O)

Total monthly CO2e emissions from combustion of fuels shall be the sum of the individual monthly CO2e emissions from each combustion unit for each fuel burned in the test cell, as illustrated in the table below.

Emission unit	Monthly fuel usage and units	Higher heating value of fuel from 40 CFR 98, Subpart C, Table C-1	Fuel-specific/GHG-specific emission factor from 40 CFR 98, Subpart C, Tables C-1 or C-2	Global Warming Potential from 40 CFR Part 98, Subpart A, Table A-1	Monthly CO2e emissions
HHP16 HHP17	Diesel and Biodiesel fuel (gallons)	HHV	CO2-DieselEf = 22.50 lb/MMBtu CH4-DieselEf = 0.000913 lb/MMBtu N2O-DieselEf = 0.000183 lb/MMBtu	GWP-CO2 GWP-CH4 GWP-N2O	

	Natural gas (mmcf)	**HHV**	**CO2-NatGasEf = 116.89 lb/MMBtu CH4-NatGasEf = 0.0022 lb/MMBtu N2O-NatGasEf = 0.00022 lb/MMBtu**	**GWP-CO2 GWP-CH4 GWP-N2O**	
	Liquid Petroleum Gas or Propane (gallons)	**HHV**	**CO2-LPEf = 22.50 lb/gal CH4-LPEf = 0.000913 lb/gal N2O-LPEf = 0.000183 lbl/gal**	**GWP-CO2 GWP-CH4 GWP-N2O**	
HHP16 and HHP17 duct burners, Boiler Group 4, Natural gas combustion units (Group 4)	**Natural gas (mmcf)**	**HHV**	**CO2-NatGasEf = 116890 lb/mmcf CH4-NatGasEf = 2.20 lb/mmcf N2O-NatGasEf = 0.22 lb/mmcf**	**GWP-CO2 GWP-CH4 GWP-N2O**	
Propane vaporizer	**LPG/Propane**	**HHV**	**CO2-LPEf = 12.50 lb/gal CH4-LPEf = 0.0002 lb/gal N2O-LPEf = 0.009 lb/gal**	**GWP-CO2 GWP-CH4 GWP-N2O**	
Total Monthly GHG emissions, expressed as CO2e					

D.6.7 Nitrogen Oxide (NOx) Control

In order to ensure compliance with Condition D.6.1(c), the NOx emissions from HHP16 and HHP17 shall be controlled with selective catalytic reduction (SCR). HHP16 and HHP17 may be operated without SCR control system with emissions reported as specified in D.6.8 or D.6.8a.

D.6.8 Nitrogen Oxide (NOx) Emission Limit Determination

To determine compliance with the NOx emission limit in Condition D.6.1(c), the Permittee shall determine actual NOx emissions from test cell HHP16 and HHP17 and their respective duct burners, Boiler Group 4, and Natural gas combustion unit Group 4 for each calendar month as the sum of the following quantities:

(a) HHP16 and HHP17 Test cell fuel combustion: NOx emissions from test cell HHP16 and HHP17 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific/temperature zone specific NOx emission factor pursuant to this general equation:

Monthly NOx emissions per test cell = Monthly Fuel usage x Fuel-specific/temperature zone specific NOx emission factor in lb NOx/unit of fuel

Total monthly NOx emissions from HHP16 and HHP17 shall be the sum of the individual monthly NOx emissions for each fuel burned in the test cell, as illustrated in the table below.

If NOx emission controls are not employed, the Permittee shall use a fuel-specific uncontrolled emission factor in lieu of the fuel-specific/temperature zone specific NOx emission factor.

(b) Other fuel combustion equipment: NOx emissions from combustion of fuel in the duct burners for HHP16 and HHP17, Boiler Group 4, and Natural Gas emission unit Group 4, are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate NOx emission factor pursuant to this general equation:

Monthly NOx emissions = Monthly fuel usage x emission factor in lb NOx/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly NOx emissions
HHP16 HHP17	Diesel fuel (gallons)	NOx-TZ1DieselEf	
	Diesel fuel (gallons)	NOx-TZ2DieselEf	
	Diesel fuel (gallons)	NOx-TZ3DieselEf	
	Diesel fuel (gallons)	NOx-TZ4DieselEf	
	Diesel fuel (gallons)	NOx-TZ5DieselEf	
	Diesel fuel (gallons)	NOx-TZ6DieselEf	
	Diesel fuel (gallons)	NOx-TZ7DieselEf	
	Diesel fuel (gallons)	NOx-DieselEf-uncontrolled	
	Biodiesel fuel (gallons)	NOx- TZ1BDieselEf	
	Biodiesel fuel (gallons)	NOx- TZ2BDieselEf	
	Biodiesel fuel (gallons)	NOx- TZ3BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ4BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ5BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ6BDieselEf	
	Biodiesel fuel (gallons)	NOx-TZ7BDieselEf	
	Biodiesel fuel (gallons)	NOx-BDieselEf-uncontrolled	
	Natural gas (mmcf)	NOx-TZ1NatGasEf	
	Natural gas (mmcf)	NOx-TZ2NatGasEf	

	Natural gas (mmcf)	**NOx-TZ3NatGasEf**	
	Natural gas (mmcf)	**NOx-TZ4NatGasEf**	
	Natural gas (mmcf)	**NOx-TZ5NatGasEf**	
	Natural gas (mmcf)	**NOx-TZ6NatGasEf**	
	Natural gas (mmcf)	**NOx-TZ7NatGasEf**	
	Natural gas (mmcf)	**NOx-NatGasEf-uncontrolled**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ1LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ2LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ3LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ4LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ5LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ6LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-TZ7LPEf**	
	Liquid Petroleum Gas or Propane (gallons)	**NOx-LPEf-uncontrolled**	
	Hydrogen gas (mass)	**NOx-TZ1HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ2HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ3HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ4HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ5HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ6HydrogenEf**	
	Hydrogen gas (mass)	**NOx-TZ7HydrogenEf**	
	Hydrogen gas (mass)	**NOx-HydrogenEf-uncontrolled**	
HHP16 and HHP17 duct burners, Boiler Group 4, Natural gas combustion units Group 4	**Natural gas (mmcf)**	**NOx-EPA-NatGasEf = 100 lb/mmcf**	
Propane vaporizer	**LPG/Propane (gallons)**	**NOx-EPA-LPEf =0.013 lb/gal**	

	Total Monthly NOx emissions	

D.6.8a Nitrogen Oxides (NO_X) Emission Limit Determination

As an alternative to the NOx emission determination method in D.6.8, the Permittee may determine actual monthly NOx emissions from test cells HHP16 or HHP17 pursuant to this section. NOx emissions from other combustion units subject to the NOx emission limits in D.6.1 shall be determined as specified in Section D.6.8.

(a) Continuous Emissions Monitoring Systems

(1) NOx measurement: The Permittee shall continuously measure NOx concentration in the exhaust of with a NOx continuous emission monitoring system (CEMS) installed and operated in accordance with the following requirements:

(A) 40 CFR Part 60, Appendix B, Performance Specification 2;
(B) 40 CFR Part 60, Appendix F, Procedure 1;
(C) 326 IAC 3-5-2 for performance and operating specifications;
(D) 326 IAC 3-5-3 for monitor system certification;
(E) 326 IAC 3-5-4 for standard operating procedures;
(F) 326 IAC 3-5-5 for quality assurance requirements;
(G) 326 IAC 3-5-6 for record keeping requirements;
(H) 326 IAC 3-5-7 for reporting requirements; and
(I) 326 IAC 3-5-8 for operation and maintenance of continuous emission monitoring systems.

Continuous monitoring operation is defined as the collection of at least one measurement for each 15-minute block period while the test cell is in operation.

(2) Emission calculation: The Permittee shall calculate NOx emissions, in tons, each calendar month by using the following data:
(A) NOx CEMS data;
(B) NOx emission rate calculations performed pursuant to 40 CFR Part 60, Appendix A, Method 19;
(C) Fuel heat content; and
(D) Fuel consumption rate.

(3) Data substitution:

(A) During periods of CEMS calibration, the Permittee shall substitute, in one-minute increments, the last valid one-minute NOx concentration measurement obtained prior to the calibration in lieu of actual readings.

(B) During periods of CEMS maintenance, malfunction, repair, or other periods of invalid NOx data collection, the Permittee shall determine NOx emissions in accordance with Section 6.8 of this permit.

D.6.9 PM2.5 Emission Limit Determination

To determine compliance with the PM2.5 emission limit in Condition D.6.1(d), the Permittee shall determine actual PM2.5 emissions from test cell HHP16 and HHP17 and their respective duct burners, Boiler Group 4, and Natural gas combustion unit Group 4 for each calendar month as the sum of the following quantities:

(a) HHP16 and HHP17 Test cell fuel combustion: PM2.5 emissions from test cell HHP16 and HHP17 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific PM2.5 emission factor pursuant to this general equation:

Monthly PM2.5 emissions per test cell = Monthly Fuel usage x Fuel-specific PM2.5 emission factor in lb PM2.5/unit of fuel

Total monthly PM2.5 emissions from HHP16 and HHP17 shall be the sum of the individual monthly PM2.5 emissions for each fuel burned in the test cell, as illustrated in the table below.

(b) Other fuel combustion equipment: PM2.5 emissions from combustion of fuel in the duct burners for HHP16 and HHP17, Boiler Group 4, and Natural Gas emission unit Group 4, are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate PM2.5 emission factor pursuant to this general equation:

Monthly PM2.5 emissions = Monthly fuel usage X emission factor in lb PM2.5/unit of fuel

Emission unit	Monthly fuel usage and units	Fuel-specific emission factor	Monthly PM2.5 emissions
HHP16 HHP17	Diesel fuel (gallons)	PM2.5-DieselEf = 0.0076 lb/MMBtu	
	Biodiesel fuel (gallons)	PM2.5-BDieselEf = 0.0076 lb/MMBtu	
	Natural gas (mmcf)	PM2.5-NatGasEf = 0.009987 lb/MMBtu	
	Liquid Petroleum Gas or Propane (gallons)	PM2.5-LPEf = 0.005 lb/gal	
HHP16 & HHP17 duct burners Boiler Group 4 Natural gas combustion Group 4	Natural gas (mmcf)	PM2.5-EPA-NatGasEf = 7.60 lb/mmcf	
Propane vaporizer	Propane (gallons)	PM2.5-EPA-LPEf = 0.0007 lb/gal	
		Total Monthly PM2.5 emissions	

D.6.10 VOC Emission Limit Determination

To determine compliance with the VOC emission limit in Conditions D.6.1(e) and D.6.1(f), the Permittee shall determine actual VOC emissions from test cell HHP16 and HHP17 and their respective duct burners, Boiler Group 4, and Natural gas combustion unit Group 4 for each calendar month as the sum of the following quantities:

(a) HHP16 and HHP17 Test cell fuel combustion: VOC emissions from test cell HHP16 and HHP17 are determined for each calendar month by a calculation using the monthly fuel usage for each fuel in the test cell and the fuel-specific VOC emission factor pursuant to this general equation:

Monthly VOC emissions per test cell = Monthly Fuel usage x Fuel-specific VOC emission factor in lb VOC/unit of fuel

Total monthly VOC emissions from HHP16 and HHP17 shall be the sum of the individual monthly VOC emissions for each fuel burned in the test cell, as illustrated in the table below.

(b) Other fuel combustion equipment: VOC emissions from combustion of fuel in the duct burners for HHP16 and HHP17, Boiler Group 4, and Natural Gas emission unit Group 4, are determined for each calendar month by a calculation using the monthly fuel usage and the appropriate VOC emission factor pursuant to this general equation:

Monthly VOC emissions = Monthly fuel usage X emission factor in lb VOC/unit of fuel

(c) Unburned natural gas and unburned Liquid Petroleum Gas/Propane: VOC emissions from the release of unburned natural gas and LPG/Propane in test cells HHP16 and HHP17 are equal to 3.5% of the unburned natural gas vented each month and 100% of the unburned LPG/Propane vented each month from the test cells.

Emission unit	Monthly fuel usage and units	Fuel-specific/temperature zone-specific emission factor	Monthly VOC emissions
HHP16 HHP17	Diesel fuel (gallons)	VOC-DieselEf = 0.0123 lb/MMBtu	
	Biodiesel fuel (gallons)	VOC-BDieselEf = 0.0123 lb/MMBtu	
	Natural gas (mmcf)	VOC-NatGasEf = 0.118 lb/MMBtu	
	Liquid Petroleum Gas or Propane (gallons)	VOC-LPEf = 0.083 lb/gal	
HHP16 & HHP17 duct burners Boiler Group 4 Natural gas combustion Group 4	Natural gas (mmcf)	VOC-EPA-NatGasEf = 5.50 lb/mmcf	
Propane vaporizer	Propane (gallons)	VOC-EPA-LPEf = 0.001 lb/gal	
		Total Monthly VOC emissions	

D.6.11 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to establish the fuel-specific/temperature zone-specific emission factors used to calculate NOx emission as described in Condition D.6.8 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the SCR, the Permittee shall conduct NOx emissions stack testing of the emissions controlled by selective catalytic reduction (SCR) utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. In lieu of these tests, the Permittee may use emission factors developed by the tests performed in Condition D.1.15(a). Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.6.8 upon submittal of test results to IDEM.

(b) In order to establish the fuel-specific uncontrolled emission factors used to calculate NOx emissions as described in Condition D.6.8 and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after startup of the test cells, the Permittee shall conduct NOx emissions stack testing of the uncontrolled emissions utilizing methods as approved by the commissioner. This test shall be performed once. In lieu of this test, the Permittee may use emission factors developed by the test performed in Condition D.1.15(b). Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures) or NRPD Air-14-NPD. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.6.8 upon submittal of test results to IDEM.

(c) In order to establish the fuel-specific/temperature zone-specific emission factors used to calculate CO emissions as described in D.6.5, and within sixty (60) days of reaching maximum capacity but no later than one hundred and eighty (180) days after initial startup of the catalytic oxidizer, the Permittee shall conduct CO emissions stack testing of the emissions controlled by the catalytic oxidizer utilizing methods as approved by the commissioner. These tests shall be repeated at least once every five years from the date of the most recent valid compliance demonstration on a representative test cell. In lieu of these test, the Permittee may use emission factors develped by the tests performed in Condition D.1.15(c). Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. The Permittee may begin using the emission factors derived from this testing in the emission calculations described in Condition D.6.8 upon submittal of test results to IDEM.

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

D.6.12 Visible Emission Notations

(a) Visible emissions notations of the engine test cell stack exhausts HHP16.1 and HHP17.1 shall be performed once per day during normal daylight operations when combusting diesel fuel or biodiesel. A trained employee will 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 a reasonable response. Observation of abnormal emissions that do not violate and applicable opacity limit is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to response to excursions or exceedances.

D.6.13 SCR Parametric Monitoring

In order to utilize the fuel-specific/temperature zone specific NOx emission factors described in Condition D.6.8, the Permittee shall conduct the following monitoring except when the Permittee is determining compliance with the NOx emissions limit by using continuous emissions monitoring systems in accordance with Condition D.6.8a:

(a) The Permittee shall monitor the selective catalyst reduction (SCR) temperature and fuel usage with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.6.11(a). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour average. If the temperature or fuel monitoring system fails to operate for more than three consecutive (3) hours the Permittee shall take reasonable response steps to return the system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.6.8 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall continuously monitor the urea flow rate of the SCR. If the urea flow rate monitoring system fails to operate for more than three (3) continuous hours, the Permittee shall take reasonable response steps to return the monitoring system to normal operations. If the Permittee is unable to return the urea monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.6.8 for the period of time the monitoring system was not operating normally.

(c) The Permittee shall continuously evaluate the effectiveness of the SCR system by monitoring NOx concentrations with NOx sensors at the SCR inlet and outlet to establish the control device efficiency, and comparing the control efficiency to the control efficiency achieved for the applicable temperature zone during the stack test for which the emission factor was established. If the measured control efficiency is 7% less than the control efficiency achieved during the stack test for which the emission factor was established or lower, the Permittee shall take reasonable response steps. If the Permittee is unable to return the SCR control efficiency to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.6.8 for the period of time the monitoring system was not operating normally.

(d) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conduction monitoring pursuant to

this condition.

(e) Failure to take reasonable response steps as described in (a), (b), and (c) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.6.14 Oxidation Catalyst Parametric Monitoring

In order to utilize the fuel-specific/temperature zone specific CO emission factors described in Condition D.6.5, the Permittee shall conduct the following monitoring:

(a) The Permittee shall monitor the Diesel Oxidation Catalyst (DOC) temperature and fuel used by the test cell with a continuous fuel and temperature monitoring system. Fuel consumption will be recorded for each temperature zone tested in Condition D.6.11(c). For the purposes of this condition, continuous monitoring means recording the temperature no less often than every 15 minutes. The output of this system shall be recorded as a three (3) hour average. If the temperature or fuel monitoring systems fail to operate normally for more than three (3) hours the Permittee shall take reasonable response steps to return the monitoring system to normal operation. If the Permittee is unable to return the monitoring system to normal operation for more than three hours, the Permittee shall use an uncontrolled fuel-specific emission factor in the compliance determination provisions of Condition D.6.5 for the period of time the monitoring system was not operating normally.

(b) The Permittee shall monitor the CO emissions performance characteristics of the DOC using a portable analyzer in accordance with the compliance monitoring plan described in section D.6.14(c). If the CO emissions performance characteristics of the DOC as measured by the portable analyzer are not equivalent to or better than those established during the stack test in which the CO emission factor was established, the Permittee shall take reasonable response steps to restore the DOC performance characteristics to normal levels. For each period of time the Permittee is unable to attain the performance characteristics established during the stack test, the Permittee shall use an uncontrolled fuel-specific CO emission factor in the compliance determination provisions of Condition D.6.5.

(c) The Permittee shall submit a compliance monitoring plan within 60 days after the permit is issued describing the approach for conducting monitoring pursuant to this Condition.

(d) Failure to take reasonable response steps as described in (a) or (b) shall be considered as a deviation from the permit. Section C -- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

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

D.6.15 Record Keeping Requirements

(a) To document the compliance status with Condition D.6.1, the Permittee shall maintain the following records:

(1) Actual fuel usage for each type of fuel burned in an emission unit subject to the limits in Condition D.6.1.

(2) Oxidation catalyst temperature and temperature zone.

(3) Selective catalytic reduction temperature and temperature zone.

(4) Selective catalytic reduction urea flow rate.

(5) Selective catalytic reduction control efficiency, as measured by NOx sensors.

(6) An explanation or basis for failure to collect any of the required monitoring data.

(b) To document the compliance status with Condition D.6.12 - Visible Emission Notation, the Permittee shall maintain records of daily visible emission notations of the engine test cell stack exhausts HHP16 and HHP17.1 when combusting diesel fuel or biodiesel. 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).

(c) To document compliance with Condition D.6.8a, the Permittee shall maintain the following records:

(1) All data recorded by continuous monitoring systems (CMS), including continuous emission monitoring systems (CEMS), required by Conditions D.6.8a.

(2) The Permittee shall maintain records of the continuous monitoring required by Condition D.6.8.a. The records shall include data required by 326 IAC 3-5-6.

(3) Pursuant to 326 IAC 3-5-4, the Permittee shall maintain a complete, written continuous monitoring standard operating procedure (SOP) for the continuous emissions monitors. The CEMS SOP should contain, at a minimum, the items described in 326 IAC 3-5-4(a).

(d) Section C -- General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.6.16 Reporting Requirements

A quarterly summary of the information to document the compliance status with condition D.6.1 shall be submitted using the reporting form located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. A summary report of NOx monitor downtime and other information required by 326 IAC 3-5-7(4) shall also be included in the report. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined in 326 IAC 2-7-1(34). Section C -- General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

****

SECTION E.2 National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Emissions Unit Description: Insignificant Activities:

(e) One (1) emergency diesel powered generator, permitted in 2012, with maximum capacity of 1,490 horse power.

(s) One (1) Hedgehog Block Line, approved for construction in 2013, and consisting of the following units:

(3) One (1) emergency diesel generator, identified as emergency generator, with a rating of

967 hp, and exhausting outdoors;

(4) One (1) emergency diesel fire pump, identified as fire pump, with a rating of 175 hp, and exhausting outdoors;

(h) One (1) emergency diesel powered fire pump engine constructed in 1994, with maximum output capacity of 208 horse power.

Under 40 CFR 63, Subpart ZZZZ, the **1490 horsepower and the 967 horsepower** emergency generator**s and the 175 horsepower emergency diesel fire pump**~~is~~ **are**~~a~~ new affected source**s**.

Under 40 CFR 63, Subpart ZZZZ, the 208 horsepower fire pump engine is an existing affected source.

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

National Emissions Standard for Hazardous Air Pollutants (NESHAP) [40 CFR Part 63]

E.2.1 General Provisions Relating to NESHAP [326 IAC 20] [40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 20, apply to the emergency generator**s and fire pump engines** described in this section except when otherwise specified in Table 8 to 40 CFR Part 63, Subpart ZZZZ.

E.2.2 National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Pursuant to 40 CFR 63.6595, the Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ (National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines), which are included as Attachment C and incorporated by reference as 326 IAC 20-82 as specified as follows:

(a) The engine plant emergency generator, the Hedgehog block line facility emergency generator and the Hedgehog block line facility fire pump are new affected sources and must comply with the following portions of Subpart ZZZZ, upon start-up.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590, (a)(2)(iii) and (c)
(4) 40 CFR 63.6595(a)(7)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675
(8) Table 8 to Subpart ZZZZ

(b) The 208 horsepower fire pump engine is an existing affected source and must comply with the following portions of Subpart ZZZZ.

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625 (e)(3), (f), (h), and (i)
(8) 40 CFR 63.6640(a), (b), (e), and (f)
(9) 40 CFR 63.6645(a)(5)

(10) 40 CFR 63.6655(a), (d), (e), and (f)
(11) 40 CFR 63.6660
(12) 40 CFR 63.6665
(13) 40 CFR 63.6670
(14) 40 CFR 63.6675
(15) Table 2d (item 1)
(16) Table 6 (item 9)
(17) Table 8

****

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY - COMPLIANCE BRANCH

Part 70 Quarterly Report for Fuel Usage Limit

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facilities: Sixteen (16) engine test cells, known as ~~EU-02A, EU-02B and EU-02C~~801, **802, 803, 804, 805, 808, 806, 807, HHP2, HHP3, HHP5, Test Pad 8, Test Pad 10, Test Pad 11, HHP4, and Test Pad 9**

Parameter: NO_X Emissions
Limit: NO_X emissions shall not exceed 217.9 tons of NO_X per twelve (12) consecutive month period

YEAR: _____

Month	NOx Emissions for This Month (tons)	NOx Emissions for Previous 11 Months (tons)	NOx Emissions for 12-Month Period (tons)

****

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274

Part 70 Permit Renewal No.: T 071-30358-00015
Facility: ~~EU-02B and EU-02C~~ **808, 806, 807, HHP2, HHP3, HHP5, Test Pad 8, Test Pad 10, Test Pad 11, HHP4, and Test Pad 9**

Parameter: VOC Emissions
Limit: Less than 163.56 tons per twelve (12) consecutive month period

****

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: ~~EU-02B and EU-02C~~ **808, 806, 807, HHP2, HHP3, HHP5, Test Pad 8, Test Pad 10,Test Pad 11, HHP4, and Test Pad 9**

Parameter: CO Emissions
Limit: Less than 183.62 tons per twelve (12) consecutive month period

****

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Two (2) engine test cells HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters
Parameter: NOx Emissions
Limit: Shall be less than 37 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total NOx Emissions for This Month (tons)	Total NOx Emissions for Previous 11 Months (tons)	Total NOx Emissions for 12-Month Period (tons)

☐ **No deviation occurred in this quarter.**

☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters

Parameter: CO Emissions
Limit: Shall be less than 95 tons per twelve (12) consecutive month period.

YEAR: _____

Month	CO Emissions for This Month (tons)	CO Emissions for Previous 11 Months(tons)	CO Emissions for 12-Month Period (tons)

☐ **No deviation occurred in this quarter.**

☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters

Parameter: VOC Emissions
Limit: Shall be less than 39 tons per twelve (12) consecutive month period.

YEAR: _____

Month	VOC Emissions for This Month (tons)	VOC Emissions for Previous 11 Months(tons)	VOC Emissions for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: ~~Twenty seven~~ **Twenty-nine** test cells, Paint spray line booth, 1490 hp emergency generator and natural gas combustion equipments
Parameter: Glycol Ether (Single HAP) Emissions
Limit: Shall not exceed six (6) tons per twelve (12) consecutive month period

YEAR: _____

Month	**Single HAP Emissions for This Month** (tons)	**Single HAP Emissions for Previous 11 Months** (tons)	**Single HAP Emissions for 12-Month Period** (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: ~~Twenty-seven test cells, Paint spray line booth, 1490 hp emergency generator and~~ natural gas combustion ~~equipments~~ **by engines in all test cells under Condition A.2(b)**
Parameter: ~~Total HAP Emissions~~ **Formaldehyde (Single HAP) Emissions**
Limit: ~~Less than 24 tons per year for total HAPs~~ **52.80 lb/mmcf** per twelve (12) consecutive month period

YEAR: _____

Month	**Total HAP Emissions for This Month** (tons)	**Total HAP Emissions for Previous 11 Months** (tons)	**Total HAP Emissions for 12-Month Period** (tons)

☐ No deviation occurred in this quarter.

☐ Deviations occurred in this quarter.
Deviation has been reported on: _____

Submitted By: _____
Title/Position: _____
Signature: _____
Date: _____
Phone: _____

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: **Cummins Inc., Seymour Engine Plant (SEP)**
Source Address: **800 East Third Street, Seymour, Indiana 47274**
Part 70 Permit Renewal No.: **T 071-30358-00015**
Facility: **HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters**
Parameter: **PM2.5 Emissions**
Limit: **Shall be less than 9 tons per twelve (12) consecutive month period.**

YEAR: _____

Month	Total PM2.5 Emissions for This Month (tons)	Total PM2.5 Emissions for Previous 11 Months (tons)	Total PM2.5 Emissions for 12-Month Period (tons)

☐ **No deviation occurred in this quarter.**
☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____
Title/Position: _____

Signature: _____

Date: _____

Phone: _____

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: **Cummins Inc., Seymour Engine Plant (SEP)**
Source Address: **800 East Third Street, Seymour, Indiana 47274**
Part 70 Permit Renewal No.: **T 071-30358-00015**
Facility: **HHP16**
Parameter: **VOC Emissions**
Limit: **Shall be less than 25 tons per twelve (12) consecutive month period.**

YEAR: _____

Month	Total VOC Emissions	Total VOC Emissions for	Total VOC Emissions

	for This Month (tons)	Previous 11 Months (tons)	for 12-Month Period (tons)

☐ **No deviation occurred in this quarter.**

☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Inc., Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: HHP17
Parameter: VOC Emissions
Limit: Shall be less than 25 tons per twelve (12) consecutive month period.

YEAR: _____

Month	Total VOC Emissions for This Month (tons)	Total VOC Emissions for Previous 11 Months (tons)	Total VOC Emissions for 12-Month Period (tons)

☐ **No deviation occurred in this quarter.**

☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

***

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: **Cummins Inc., Seymour Engine Plant (SEP)**
Source Address: **800 East Third Street, Seymour, Indiana 47274**
Part 70 Permit Renewal No.: **T 071-30358-00015**
Facility: **HHP16 and HHP17, two (2) duct burners, Boilers EU-03Y and EU-03Z, the direct fired air handling units, the three (3) unit heaters**
Parameter: **CO2e Emissions**
Limit: **Less than 70,000 tons per twelve (12) consecutive month period.**

YEAR: _____

Month	Total CO2e Emissions for This Month (tons)	Total CO2e Emissions for Previous 11 Months (tons)	Total CO2e Emissions for 12-Month Period (tons)

☐ **No deviation occurred in this quarter.**

☐ **Deviations occurred in this quarter.**
Deviation has been reported on: _____

Submitted By: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

***

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 071-34061-00015 and Significant Permit Modification No. 071-34122-00015. The staff recommends to the Commissioner that this Part 70 Significant Source and Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Deena Patton at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5400 or toll free at 1-800-451-6027 extension 4-5400.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm

Appendix A: Emission Calculations
Potential to Emit Summary

Company Name: Cummins Inc. (Seymour Engine Plant)
Address City IN Zip: 800 E. Third Street
Operating Permit Number: 071-30358-00015
Significant Source Mod. No: 071-34061-00015
Significant Permit Mod. No: 071-34122-00015
Reviewer: Deena Patton

Uncontrolled Potential to Emit (ton/yr)											
Emission Unit/ID	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_x**	**VOC**	**CO**	**GHGs**	**HAPs**	**Worst Single HAP**	
Test Cell HHP16 and HHP17/ Duct Burners	15.10	14.50	13.98	0.96	1483.68	226.17	348.23	80754.87	19.68	12.74	Formaldehyde
Small Combustion Units	0.06	0.26	0.26	0.02	3.32	0.17	2.69	3821.13	0.04	0.04	Hexane
Fuel Venting	-	-	-	-	-	5.80	-	102.90	4.90	4.90	Methane
Test Cell HHP15 and SCR Duct Burner	7.52	7.12	6.86	0.20	494.18	14.35	104.36	22427.34	9.82	6.37	Formaldehyde
Engine Test Cells	69.36	64.47	62.02	323.97	2451.82	514.37	1060.87	72551183.56	9.01	9.01	Formaldehyde
Paint Spray Line (EU-01)	191.01	191.01	191.01	-	-	159.42	-	-	116.77	116.53	Glycol Ethers
Test Cell HHP1, HHP6 through HHP14	74.76	69.10	67.05	4.64	7379.89	1099.85	1709.41	358530.51	1.76	0.94	Formaldehyde
N.G. Combustion associated with D.2	0.33	1.31	1.31	0.10	17.20	0.95	14.45	20768.31	0.32	0.31	Hexane
Boilers	0.30	1.19	1.19	0.09	15.63	0.86	13.13	18870.86	0.29	0.28	Hexane
Low Nox Boilers	0.24	0.95	0.95	0.07	6.23	0.68	10.46	15034.47	0.24	0.22	Hexane
Emergency Generator 1490 HP	0.26	0.15	0.15	1.51	8.94	0.26	2.05	433.67	0.00	0.00	Benzene
Duct Burners (HHP1, HHP6 through HHP14)	0.16	0.65	0.65	0.05	8.59	0.47	7.21	10368.60	0.16	0.15	Hexane
HH Block Maching & Washing	4.19	4.19	4.19	-	-	5.83	-	-	-	-	-
Fire Pump and HH Block Line Emergency Generator	0.09	0.09	0.09	0.13	3.70	0.16	0.54	441.59	0.00	0.00	-
Natural Gas Combustion	0.15	0.58	0.58	0.05	7.68	0.42	6.45	9274.71	0.14	0.14	Hexane
208 HP Fire Pump	0.11	0.11	0.11	0.11	1.61	0.13	0.35	89.22	0.00	0.00	Formaldehyde
Paved Roads	0.19	0.04	0.01	-	-	-	-	-	-	-	-
Total	363.82	355.70	350.40	331.91	11882.47	2029.91	3280.21	73092101.75	163.14	116.53	**Glycol Ethers**

Limited Potential to Emit (ton/yr)											
Emission Unit/ID	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_x**	**VOC**	**CO**	**GHGs**	**HAPs**	**Worst Single HAP**	
Test Cell HHP16 and HHP17/ Duct Burners	15.10	14.50	<10	0.96	<40	<40	<100	70000.00	23.99	9.5	Formaldehyde
Test Cell HHP15 and SCR Duct Burner	7.52	7.12	6.86	0.20	39	14.35	99	22,427.34			Formaldehyde
Engine Test Cells	69.36	64.47	62.02	323.97	217.9	163.56	183.62	99,000.00			Glycol Ethers
Paint Spray Line (EU-01)	1.65	1.65	1.65	-	-	248	-	-			
Test Cell HHP1, HHP6 through HHP14	74.76	69.10	67.05	4.64	243		243	89,999.00			
N.G. Combustion associated with D.2	0.33	1.31	1.31	0.10							Hexane
Boilers	0.04	0.14	0.14	0.01							Hexane
Low Nox Boilers	0.03	0.11	0.11	0.01							Hexane
Emergency Generator 1490 HP	0.26	0.15	0.15	1.51							Benzene
Duct Burners (HHP1, HHP6 through HHP14)	0.16	0.65	0.65	0.05			7.21				Hexane
HH Block Maching & Washing	0.11	0.11	0.11	-	-	5.83	-	-	-	-	-
Fire Pump & HH Block Line Emergency Generator	0.09	0.09	0.09	0.13	3.70	0.16	0.54	4.42E+02	0.00	0.00	-
Natural Gas Combustion	0.15	0.58	0.58	0.00	7.68	0.42	6.45	9,275	0.14	0.14	Hexane
Small Combustion Units	0.06	0.26	0.26	0.02	3.32	0.17	2.69	3,821	0.04	0.04	Hexane
Fuel Venting	0.00	0.00	0.00	0.00	0.00	5.80	0.00	103	4.90	4.90	Methane
208 HP Fire Pump	0.11	0.11	0.11	0.11	1.61	0.13	0.35	89	0.00	0.00	Formaldehyde
Paved Roads	0.17	0.03	0.01	-	-	-	-	-	-	-	-
Total	**169.90**	**160.38**	**141.10**	**331.71**	**516.21**	**438.42**	**542.86**	**295,156.59**	**29.07**	**9.5**	**Glycol Ethers**

Controlled Potential to Emit (ton/yr)											
Emission Unit/ID	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_x**	**VOC**	**CO**	**GHGs**	**HAPs**	**Worst Single HAP**	
Test Cell HHP16 and HHP17/ Duct Burners	15.10	14.50	10	0.96	37.00	39	95.00	70000.00	23.99	9.5	Formaldehyde
Test Cell HHP15 and SCR Duct Burner	7.52	7.12	6.86	0.20	39	14.35	99	22,427.34			Formaldehyde
Engine Test Cells	69.36	64.47	62.02	323.97	217.9	163.56	183.62	99,000.00			Glycol Ethers
Paint Spray Line (EU-01)	1.65	1.65	1.65	-	-	248	-	-			
Test Cell HHP1, HHP6 through HHP14	74.76	69.10	67.05	4.64	243		243	89,999.00			Hexane
N.G. Combustion associated with D.2	0.33	1.31	1.31	0.10							Hexane
Boilers	0.04	0.14	0.14	0.01							Hexane
Low Nox Boilers	0.03	0.11	0.11	0.01							Benzene
Emergency Generator 1490 HP	0.26	0.15	0.15	1.51							Hexane
Duct Burners (HHP1, HHP6 through HHP14)	0.16	0.65	0.65	0.05			7.21				-
HH Block Maching & Washing	0.11	0.11	0.11	-	-	5.83	-	-	-	-	-
Fire Pump & HH Block Line Emergency Generator	0.09	0.09	0.09	0.13	3.70	0.16	0.54	4.42E+02	0.00	0.00	-
Natural Gas Combustion	0.15	0.58	0.58	0.00	7.68	0.42	6.45	9,275	0.14	0.14	Hexane
Small Combustion Units	0.06	0.26	0.26	0.02	3.32	0.17	2.69	3,821	0.04	0.04	Hexane
Fuel Venting	0.00	0.00	0.00	0.00	0.00	5.80	0.00	103	4.90	4.90	Methane
208 HP Fire Pump	0.11	0.11	0.11	0.11	1.61	0.13	0.35	89	0.00	0.00	Formaldehyde
Paved Roads	0.17	0.03	0.01	-	-	-	-	-	-	-	-
Total	**169.90**	**160.38**	**151.10**	**331.71**	**553.21**	**477.42**	**637.86**	**295,156.59**	**29.07**	**9.5**	**Glycol Ethers**

Appendix A: Emission Calculations
Potential to Emit Summary for HHP16 and HHP17/Duct Burners

Company Name: **Cummins Inc. (Seymour Engine Plant)**
Address City IN Zip: **800 E. Third Street**
Operating Permit Number: **071-30358-00015**
Significant Source Mod. No: **071-34061-00015**
Significant Permit Mod. No: **071-34122-00015**
Reviewer: **Deena Patton**

Calculations provided by source and approved by IDEM.

Test Cell HHP16 and HHP17/Duct Burner Emission Estimates - Summary

Pollutant	Test Cell HHP16 & HHP17 Fuel Alternatives (Excludes Duct Burner emissions)							Unburned NG and LPG from fuel venting (ton/yr)	Duct Burners unlimited PTE (ton/yr)	Small combustion units (ton/yr)	Total project unlimited PTE (ton/yr)	Limited PTE (ton/yr)
	Natural gas	Diesel	Biodiesel	Propane	Hydrogen	Nat gas/CO2	Highest					
Pollutants												
CO	134.34	205.04	205.04	***341.86***	0.00	134.34	341.86	0.00	3.68	2.69	348.23	95
NOx	983.98	563.20	563.20	368.36	***1475.98***	983.98	1475.98	0.00	4.38	3.32	1483.68	37
PM	0.02	***14.96***	***14.96***	13.26	0.00	0.02	14.96	0.00	0.08	0.06	15.10	0
PM10	2.40	***13.90***	***13.90***	13.26	0.00	2.40	13.90	0.00	0.34	0.26	14.50	0
PM2.5	2.40	***13.38***	***13.38***	13.26	0.00	2.40	13.38	0.00	0.34	0.26	13.98	10
SO2	0.02	0.38	0.38	***0.92***	0.00	0.02	0.92	0.00	0.02	0.02	0.96	0
VOC	28.46	21.64	21.64	***219.96***	0.00	28.46	219.96	5.80	0.24	0.17	226.17	39
Hazardous Air Pollutants												
Organic HAPs												
Acetaldehyde	***2.08***	0.00	0.00	0.00	0.00	***2.08***	2.08	0.00	0.00	0.00	2.08	0
Acrolein	***1.24***	0.00	0.00	0.00	0.00	***1.24***	1.24	0.00	0.00	0.00	1.24	0
Benzene	0.10	***0.18***	0.18	0.00	0.00	0.10	0.18	0.00	0.00	0.00	0.18	0
Dichlorbenzene	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Formaldehyde	***12.74***	0.02	0.02	0.00	0.00	***12.74***	12.74	0.00	0.00	0.00	12.74	9
Hexane	***2.66***	0.00	0.00	0.00	0.00	***2.66***	2.66	0.00	0.08	0.04	2.78	0
Methanol	***0.60***	0.04	0.04	0.00	0.00	***0.60***	0.60	0.00	0.00	0.00	0.60	0
Toluene	***0.10***	0.06	0.06	0.00	0.00	***0.10***	0.10	0.00	0.00	0.00	0.10	0
Xylene	***0.04***	0.04	0.04	0.00	0.00	***0.04***	0.04	0.00	0.00	0.00	0.04	0
Metal HAPs												
Cadmium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Chromium	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Nickel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Manganese	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Total HAPs	***19.56***	0.34	0.34	0.00	0.00	***19.56***	19.56	0.00	0.08	0.04	19.68	**24**
Greenhouse Gases												
CO2	28,190.72	39,600.00	39,600.00	59,625.00	0.00	71,679.02	71,679.02	0.00	5,119.78	3813.67	80612.47	
N2O	0.06	0.32	0.32	0.48	0.06	0.06	0.48	0.00	0.00	0.02	0.50	
CH4	0.54	1.60	1.60	2.42	0.00	0.54	2.42	4.90	0.10	0.06	7.48	
Total GHGs as CO2e	28,220.66	39,732.80	39,732.80	59,824.62	18.60	***71,708.96***	71,708.96	102.90	5,121.88	3821.13	80754.87	**70,000**

Appendix A: Emission Calculations
Potential to Emit Summary for HHP16 and HHP17/Duct Burners

Company Name: **Cummins Inc. (Seymour Engine Plant)**
Address City IN Zip: **800 E. Third Street**
Operating Permit Number: **071-30358-00015**
Significant Source Mod. No: **071-34061-00015**
Significant Permit Mod. No: **071-34122-00015**
Reviewer: **Deena Patton**

Maximum engine capacity	9,000	hp
Maximum heat input	241,173	MMBtu/yr
Duct burner capacity	5	MMBtu/hr
Maximum natural gas usage	0.005	mmcf/hr

Calculations provided by source and approved by IDEM.

Pollutant	Test Cells HHP 16 & 17			Duct Burners			Total Unlimited PTE (ton/yr)	Limited PTE (ton/yr)
	Emission factor (lb/MMBtu)	HHP16 Unlimited PTE (ton/yr)	HHP17 Unlimited PTE (ton/yr)	Emission factor (lb/mmcf)	HHP16 Burner Unlimited PTE (ton/yr)	HHP17 Burner Unlimited PTE (ton/yr)		
Pollutants								
CO	0.557	67.17	67.17	84	1.84	1.84	138.02	95
NOx	4.08	491.99	491.99	100	2.19	2.19	988.36	37
PM	0.000077	0.01	0.01	1.9	0.04	0.04	0.10	0.1
PM10	0.009987	1.20	1.20	7.60	0.17	0.17	2.74	2.74
PM2.5	0.009987	1.20	1.20	7.60	0.17	0.17	2.74	2.74
SO2	0.0000588	0.01	0.01	0.60	0.01	0.01	0.04	0.04
VOC	0.118	14.23	14.23	5.50	0.12	0.12	28.70	28.7
Hazardous Air Pollutants								
Organic HAPs								
Acetaldehyde	0.0086	1.04	1.04	n/a	0.00	0.00	2.08	2.08
Acrolein	0.00514	0.62	0.62	n/a	0.00	0.00	1.24	1.24
Benzene	0.00044	0.05	0.05	0.00210	0.00	0.00	0.10	0.1
Dichlorbenzene	n/a	0.00	0.00	0.00120	0.00	0.00	0.00	0
Formaldehyde	0.0528	6.37	6.37	0.07500	0.00	0.00	12.74	9
Hexane	0.011	1.33	1.33	1.80000	0.04	0.04	2.74	2.74
Methanol	0.0025	0.30	0.30	n/a	0.00	0.00	0.60	0.6
Toluene	0.000408	0.05	0.05	0.00340	0.00	0.00	0.10	0.1
Xylene	0.00018	0.02	0.02	n/a	0.00	0.00	0.04	0.04
Metal HAPs								
Cadmium	n/a	0.00	0.00	0.00130	0.00	0.00	0.00	0
Chromium	n/a	0.00	0.00	0.00140	0.00	0.00	0.00	0
Nickel	n/a	0.00	0.00	0.00210	0.00	0.00	0.00	0
Manganese	n/a	0.00	0.00	0.00038	0.00	0.00	0.00	0
Lead	n/a	0.00	0.00	0.00050	0.00	0.00	0.00	0
Total HAPs		**9.78**	**9.78**		**0.04**	**0.04**	**19.64**	**24**
Greenhouse Gases								
CO2	116.89	14,095.36	14,095.36	116,890.00	2,559.89	2,559.89	33,310.50	
N2O	0.000220	0.03	0.03	0.22	0.00	0.00	0.06	
CH4	0.002200	0.27	0.27	2.20	0.05	0.05	0.64	
Total GHGs as CO2e based on 11/29/2013 Federal GWP		**14,111.05**	**14,111.05**		**2,561.14**	**2,561.14**	**33,344.38**	**33,344.38**
Total GHGs as CO2e based on 10/30/2009 Federal GWP		**14,110.33**	**14,110.33**		**2,560.94**	**2,560.94**	**33,342.54**	**33,342.54**

Assumptions and references for Test Cell HHP16 and 17 emissions
Assumed fuel usage greatly exceeds fuel usage for a production test cell based on historical utilization of test cells
Heat input rate based on equivalent to diesel fuel usage converted to heat input - 1,760,000 gal/yr * .13703 MMBtu/gal = 241,173 MMBtu/yr
Criteria pollutant emissions from AP-42 Chapter 3, Section 2, Table 3.2-2 - uncontrolled emission factors for 4-stroke-lean burn engines
NOx emission factor based on preliminary design and expected testing regiment; actual emissions will be lower due to SCR controls
PM, PM10, and PM2.5 emission factors from AP-42, Chapter 3, Section 2, Table 3.2-2
PM factor is filterable particulate, PM10 factor is <10u filterable + condensable, and PM2.5 factor is <2.5u filterable + condensable
HAP emission factors from AP-42, Chapter 3, Section 2, Table 3.4-2 and 3.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98 Subpart C (Tables C-1, C-2)
Methodology: Maximum heat input (MMBtu/yr) * emission factor (lb/MMBtu) * ton/2000 lb = ton/yr

Assumptions and references for Duct burner emissions
Criteria pollutant emission factors from AP-42, Chapter 1, Section 4, Tables 1.4-1 and 1.4-2
Organic HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-3 (top 5 compounds to napthalene)
Metal HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98.33
Methodology: 0.005 mmcf/hr fuel capacity * emission factor (lb/mmcf) * 8760 hr/yr * ton/2000 lb = ton/yr

Appendix A: Emission Calculations
Potential to Emit Summary for HHP16 and HHP17/Duct Burners

Company Name: **Cummins Inc. (Seymour Engine Plant)**
Address City IN Zip: **800 E. Third Street**
Operating Permit Number: **071-30358-00015**
Significant Source Mod. No: **071-34061-00015**
Significant Permit Mod. No: **071-34122-00015**
Reviewer: **Deena Patton**

Maximum engine capacity 9,000 hp
Maximum fuel usage 1,760,000 gallon/yr
Duct burner capacity 5 MMBtu/hr
Maximum natural gas usage 0.005 mmcf/hr
Calculations provided by source and approved by IDEM.

Pollutant	Test Cells HHP 16 & 17			Duct Burners			Total Unlimited PTE (ton/yr)	Limited PTE (ton/yr)
	Emission factor (lb/MMBtu)	HHP16 Unlimited PTE (ton/yr)	HHP17 Unlimited PTE (ton/yr)	Emission factor (lb/mmcf)	HHP16 Burner Unlimited PTE (ton/yr)	HHP17 Burner Unlimited PTE (ton/yr)		
Pollutants								
CO	0.1165	102.52	102.52	84	1.84	1.84	208.72	95
NOx	0.32	281.6	281.60	100	2.19	2.19	567.58	37
PM	0.0085	7.48	7.48	1.9	0.04	0.04	15.04	15.04
PM10	0.0079	6.95	6.95	7.60	0.17	0.17	14.24	14.24
PM2.5	0.0076	6.69	6.69	7.60	0.17	0.17	13.72	9
SO2	0.000213	0.19	0.19	0.60	0.01	0.01	0.40	0.4
VOC	0.0123	10.82	10.82	5.50	0.12	0.12	21.88	21.88
Hazardous Air Pollutants								
Organic HAPs								
Acetaldehyde	n/a	0.00	0.00	n/a	0.00	0.00	0.00	0
Acrolein	n/a	0.00	0.00	n/a	0.00	0.00	0.00	0
Benzene	0.000106	0.09	0.09	0.00210	0.00	0.00	0.18	0.18
Dichlorbenzene	n/a	0.00	0.00	0.00120	0.00	0.00	0.00	0
Formaldehyde	0.000011	0.01	0.01	0.07500	0.00	0.00	0.02	0.02
Hexane	n/a	0.00	0.00	1.80000	0.04	0.04	0.08	0.08
Napthalene	0.000018	0.02	0.02	n/a	0.00	0.00	0.04	0.04
Toluene	0.000039	0.03	0.03	0.00340	0.00	0.00	0.06	0.06
Xylene	0.000026	0.02	0.02	n/a	0.00	0.00	0.04	0.04
Metal HAPs								
Cadmium	n/a	0.00	0.00	0.00130	0.00	0.00	0.00	0
Chromium	n/a	0.00	0.00	0.00140	0.00	0.00	0.00	0
Nickel	n/a	0.00	0.00	0.00210	0.00	0.00	0.00	0
Manganese	n/a	0.00	0.00	0.00038	0.00	0.00	0.00	0
Lead	n/a	0.00	0.00	0.00050	0.00	0.00	0.00	0
Total HAPs			**0.17**		**0.04**	**0.04**	**0.25**	**0.25**
Greenhouse Gases								
CO2	22.50	19,800.00	19,800.00	116,890.00	2,559.89	2,559.89	44,719.78	
N2O	0.000183	0.16	0.16	0.22	0.00	0.00	0.32	
CH4	0.000913	0.80	0.80	2.20	0.05	0.05	1.70	
Total GHGs as CO2e based on 11/29/2013 Federal GWP		**19,867.68**	**19,867.68**		**2,561.14**	**2,561.14**	**44,857.64**	**44,857.64**
Total GHGs as CO2e based on 10/30/2009 Federal GWP		**19,866.40**	**19,866.40**		**2,560.94**	**2,560.94**	**44,854.68**	**44,854.68**

Assumptions and references for Test Cell HHP16 and 17 emissions
Assumed fuel usage greatly exceeds fuel usage for a production test cell based on historical utilization of test cells
CO and VOC emission factors from AP-42, Chapter 3, Section 4, Table 3.4-1
NOx emission factor based on preliminary design and expected testing regiment; actual emissions will be lower due to SCR controls
PM, PM10, and PM2.5 emission factors from AP-42, Chapter 3, Section 4, Table 3.4-2
PM factor is total filterable particulate, PM10 factor is <10u filterable + condensable, and PM2.5 factor is <3u filterable + condensable
SO2 emission factor based on 15 ppm sulfur content in diesel fuel and 100% conversion to SO2
HAP emission factors from AP-42, Chapter 3, Section 4, Tables 3.4-3 and 3.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98 Subpart C (Tables C-1, C-2)
Emission factors converted from lb/MMBtu to lb/gallon by assuming heating value of 137,030 Btu/gallon
Methodology: Maximum fuel usage (gal/yr) * emission factor (lb/gal) * ton/2000 lb = ton/yr

Assumptions and references for Duct burner emissions
Criteria pollutant emission factors from AP-42, Chapter 1, Section 4, Tables 1.4-1 and 1.4-2
Organic HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-3 (top 5 compounds to napthalene)
Metal HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98.33
Methodology: 0.005 mmcf/hr fuel capacity * emission factor (lb/mmcf) * 8760 hr/yr * ton/2000 lb = ton/yr

Appendix A: Emission Calculations
Potential to Emit Summary for HHP16 and HHP17/Duct Burners

Company Name: **Cummins Inc. (Seymour Engine Plant)**
Address City IN Zip: **800 E. Third Street**
Operating Permit Number: **071-30358-00015**
Significant Source Mod. No: **071-34061-00015**
Significant Permit Mod. No: **071-34122-00015**
Reviewer: **Deena Patton**

Maximum engine capacity 9,000 hp
Maximum fuel usage 1,760,000 gallon/yr
Duct burner capacity 5 MMBtu/hr
Maximum natural gas usage 0.005 mmcf/hr
Calculations provided by source and approved by IDEM.

Pollutant	Test Cells HHP 16 & 17			Duct Burners			Total Unlimited PTE (ton/yr)	Limited PTE (ton/yr)
	Emission factor (lb/MMBtu)	HHP16 Unlimited PTE (ton/yr)	HHP17 Unlimited PTE (ton/yr)	Emission factor (lb/mmcf)	HHP16 Burner Unlimited PTE (ton/yr)	HHP17 Burner Unlimited PTE (ton/yr)		
Pollutants								
CO	0.1165	102.52	102.52	84	1.84	1.84	208.72	95
NOx	0.32	281.6	281.60	100	2.19	2.19	567.58	37
PM	0.0085	7.48	7.48	1.9	0.04	0.04	15.04	15.04
PM10	0.0079	6.95	6.95	7.60	0.17	0.17	14.24	14.24
PM2.5	0.0076	6.69	6.69	7.60	0.17	0.17	13.72	9
SO2	0.000213	0.19	0.19	0.60	0.01	0.01	0.40	0.4
VOC	0.0123	10.82	10.82	5.50	0.12	0.12	21.88	21.88
Hazardous Air Pollutants								
Organic HAPs								
Acetaldehyde	n/a	0.00	0.00	n/a	0.00	0.00	0.00	0
Acrolein	n/a	0.00	0.00	n/a	0.00	0.00	0.00	0
Benzene	0.000106	0.09	0.09	0.00210	0.00	0.00	0.18	0.18
Dichlorbenzene	n/a	0.00	0.00	0.00120	0.00	0.00	0.00	0
Formaldehyde	0.000011	0.01	0.01	0.07500	0.00	0.00	0.02	0.02
Hexane	n/a	0.00	0.00	1.80000	0.04	0.04	0.08	0.08
Napthalene	0.000018	0.02	0.02	n/a	0.00	0.00	0.04	0.04
Toluene	0.000039	0.03	0.03	0.00340	0.00	0.00	0.06	0.06
Xylene	0.000026	0.02	0.02	n/a	0.00	0.00	0.04	0.04
Metal HAPs								
Cadmium	n/a	0.00	0.00	0.00130	0.00	0.00	0.00	0
Chromium	n/a	0.00	0.00	0.00140	0.00	0.00	0.00	0
Nickel	n/a	0.00	0.00	0.00210	0.00	0.00	0.00	0
Manganese	n/a	0.00	0.00	0.00038	0.00	0.00	0.00	0
Lead	n/a	0.00	0.00	0.00050	0.00	0.00	0.00	0
Total HAPs			**0.17**		**0.04**	**0.04**	**0.25**	**0.25**
Greenhouse Gases								
CO2	22.50	19,800.00	19,800.00	116,890.00	2,559.89	2,559.89	44,719.78	
N2O	0.000183	0.16	0.16	0.22	0.00	0.00	0.32	
CH4	0.000913	0.80	0.80	2.20	0.05	0.05	1.70	
Total GHGs as CO2e based on 11/29/2013 Federal GWP		**19,867.68**	**19,867.68**		**2,561.14**	**2,561.14**	**44,857.64**	**44,857.64**
Total GHGs as CO2e based on 10*30/2009 Federal GWP		**19,866.40**	**19,866.40**		**2,560.94**	**2,560.94**	**44,854.68**	**44,854.68**

Assumptions and references for Test Cell HHP16 and 17 emissions
Assumed fuel usage greatly exceeds fuel usage for a production test cell based on historical utilization of test cells
CO and VOC emission factors from AP-42, Chapter 3, Section 4, Table 3.4-1
NOx emission factor based on preliminary design and expected testing regiment; actual emissions will be lower due to SCR controls
PM, PM10, and PM2.5 emission factors from AP-42, Chapter 3, Section 4, Table 3.4-2
PM factor is total filterable particulate, PM10 factor is <10u filterable + condensable, and PM2.5 factor is <3u filterable + condensable
SO2 emission factor based on 15 ppm sulfur content in diesel fuel and 100% conversion to SO2
HAP emission factors from AP-42, Chapter 3, Section 4, Tables 3.4-3 and 3.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98 Subpart C (Tables C-1, C-2)
Emission factors converted from lb/MMBtu to lb/gallon by assuming heating value of 137,030 Btu/gallon
Methodology: Maximum fuel usage (gal/yr) * emission factor (lb/gal) * ton/2000 lb = ton/yr

Assumptions and references for Duct burner emissions
Criteria pollutant emission factors from AP-42, Chapter 1, Section 4, Tables 1.4-1 and 1.4-2
Organic HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-3 (top 5 compounds to napthalene)
Metal HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98.33
Methodology: 0.005 mmcf/hr fuel capacity * emission factor (lb/mmcf) * 8760 hr/yr * ton/2000 lb = ton/yr

Appendix A: Emission Calculations
Potential to Emit Summary for HHP16 and HHP17/Duct Burners

Company Name: **Cummins Inc. (Seymour Engine Plant)**
Address City IN Zip: **800 E. Third Street**
Operating Permit Number: **071-30358-00015**
Significant Source Mod. No: **071-34061-00015**
Significant Permit Mod. No: **071-34122-00015**
Reviewer: **Deena Patton**

Maximum engine capacity	9,000	hp
Maximum fuel usage	2,650,000	gallon/yr
Duct burner capacity	5	MMBtu/hr
Maximum natural gas usage	0.005	mmcf/hr

Calculations provided by source and approved by IDEM.

Pollutant	Test Cells HHP 16 & 17			Duct Burners			Total Unlimited PTE (ton/yr)	Limited PTE (ton/yr)
	Emission factor (lb/gal)	HHP16 Unlimited PTE (ton/yr)	HHP17 Unlimited PTE (ton/yr)	Emission factor (lb/mmcf)	HHP16 Burner Unlimited PTE (ton/yr)	HHP17 Burner Unlimited PTE (ton/yr)		
Pollutants								
CO	0.129	170.93	170.93	84	1.84	1.84	345.54	95
NOx	0.139	184.18	184.18	100	2.19	2.19	372.74	37
PM	0.005	6.63	6.63	1.9	0.04	0.04	13.34	13.34
PM10	0.005	6.63	6.63	7.60	0.17	0.17	13.60	13.6
PM2.5	0.005	6.63	6.63	7.60	0.17	0.17	13.60	9
SO2	0.00035	0.46	0.46	0.60	0.01	0.01	0.94	0.94
VOC	0.083	109.98	109.98	5.50	0.12	0.12	220.20	39
Hazardous Air Pollutants								
Organic HAPs								
Acetaldehyde	n/a	0.00	0.00	n/a	0.00	0.00	0.00	0
Acrolein	n/a	0.00	0.00	n/a	0.00	0.00	0.00	0
Benzene	n/a	0.00	0.00	0.00210	0.00	0.00	0.00	0
Dichlorbenzene	n/a	0.00	0.00	0.00120	0.00	0.00	0.00	0
Formaldehyde	n/a	0.00	0.00	0.07500	0.00	0.00	0.00	0
Hexane	n/a	0.00	0.00	1.80000	0.04	0.04	0.08	0.08
Napthalene	n/a	0.00	0.00	n/a	0.00	0.00	0.00	0
Toluene	n/a	0.00	0.00	0.00340	0.00	0.00	0.00	0
Xylene	n/a	0.00	0.00	n/a	0.00	0.00	0.00	0
Metal HAPs								
Cadmium	n/a	0.00	0.00	0.00130	0.00	0.00	0.00	0
Chromium	n/a	0.00	0.00	0.00140	0.00	0.00	0.00	0
Nickel	n/a	0.00	0.00	0.00210	0.00	0.00	0.00	0
Manganese	n/a	0.00	0.00	0.00038	0.00	0.00	0.00	0
Lead	n/a	0.00	0.00	0.00050	0.00	0.00	0.00	0
Total HAPs		**0.00**	**0.00**		**0.04**	**0.04**	**0.08**	**0.08**
Greenhouse Gases								
CO2	22.50	29,812.50	29,812.50	116,890.00	2,559.89	2,559.89	64,744.78	
N2O	0.000183	0.24	0.24	0.22	0.00	0.00	0.48	
CH4	0.000913	1.21	1.21	2.20	0.05	0.05	2.52	
Total GHGs as CO2e based on 11/29/2013 Federal GWP		**29,914.27**	**29,914.27**		**2,561.14**	**2,561.14**	**64,950.82**	**64,950.82**
Total GHGs as CO2e based on 10/30/2009 Federal GWP		**29,912.31**	**29,912.31**		**2,560.94**	**2,560.94**	**64,946.50**	**64,946.50**

Assumptions and references for Test Cell HHP16 and 17 emissions

Fuel Usage (kgal/yr) = Max Diesel Usage (gal/yr) * 7.1 (lb/gal)diesel * 19,300 (Btu/lb)diesel / 1,000,000 (Btu/MMBtu) / (0.091 MMBtu/gal propane)
Emission factors from Cummins CTC - Plant 5 engine test cell emission factors for LPG from TSD to permit T005-7466-00002, unless otherwise noted.
No known HAP emission factors for propane combustion; for purposes of this application, assume diesel or natural gas have higher emissions
GHG emission factors from 40 CFR 98 Subpart C (Tables C-1, C-2)
Methodology: Maximum fuel usage (gal/yr) * emission factor (lb/gal) * ton/2000 lb = ton/yr

Assumptions and references for Duct burner emissions

Criteria pollutant emission factors from AP-42, Chapter 1, Section 4, Tables 1.4-1 and 1.4-2
Organic HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-3 (top 5 compounds to napthalene)
Metal HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98.33
Methodology: 0.005 mmcf/hr fuel capacity * emission factor (lb/mmcf) * 8760 hr/yr * ton/2000 lb = ton/yr

Appendix A: Emission Calculations
Potential to Emit Summary for HHP16 and HHP17/Duct Burners

Company Name: **Cummins Inc. (Seymour Engine Plant)**
Address City IN Zip: **800 E. Third Street**
Operating Permit Number: **071-30358-00015**
Significant Source Mod. No: **071-34061-00015**
Significant Permit Mod. No: **071-34122-00015**
Reviewer: **Deena Patton**

Maximum engine capacity 9,000 hp
Maximum heat input 241,173 MMBtu/yr
Duct burner capacity 5 MMBtu/hr
Maximum natural gas usage 0.005 mmcf/hr
Calculations provided by source and approved by IDEM.

Pollutant	Test Cells HHP 16 & 17			Duct Burners			Total Unlimited PTE (ton/yr)	Limited PTE (ton/yr)
	Emission factor (lb/MMBtu)	HHP16 Unlimited PTE (ton/yr)	HHP17 Unlimited PTE (ton/yr)	Emission factor (lb/mmcf)	HHP16 Burner Unlimited PTE (ton/yr)	HHP17 Burner Unlimited PTE (ton/yr)		
Pollutants								
CO	0	0.00	0.00	84	1.84	1.84	3.68	3.68
NOx	6.12	737.99	737.99	100	2.19	2.19	1480.36	37
PM	0	0.00	0.00	1.9	0.04	0.04	0.08	0.08
PM10	0	0.00	0.00	7.60	0.17	0.17	0.34	0.34
PM2.5	0	0.00	0.00	7.60	0.17	0.17	0.34	0.34
SO2	0	0.00	0.00	0.60	0.01	0.01	0.02	0.02
VOC	0	0.00	0.00	5.50	0.12	0.12	0.24	0.24
Hazardous Air Pollutants								
Organic HAPs								
Acetaldehyde	0	0.00	0.00	n/a	0.00	0.00	0.00	0
Acrolein	0	0.00	0.00	n/a	0.00	0.00	0.00	0
Benzene	0	0.00	0.00	0.00210	0.00	0.00	0.00	0
Dichlorbenzene	0	0.00	0.00	0.00120	0.00	0.00	0.00	0
Formaldehyde	0	0.00	0.00	0.07500	0.00	0.00	0.00	0
Hexane	0	0.00	0.00	1.80000	0.04	0.04	0.08	0.08
Methanol	0	0.00	0.00	n/a	0.00	0.00	0.00	0
Toluene	0	0.00	0.00	0.00340	0.00	0.00	0.00	0
Xylene	0	0.00	0.00	n/a	0.00	0.00	0.00	0
Metal HAPs								
Cadmium	0	0.00	0.00	0.00130	0.00	0.00	0.00	0
Chromium	0	0.00	0.00	0.00140	0.00	0.00	0.00	0
Nickel	0	0.00	0.00	0.00210	0.00	0.00	0.00	0
Manganese	0	0.00	0.00	0.00038	0.00	0.00	0.00	0
Lead	0	0.00	0.00	0.00050	0.00	0.00	0.00	0
Total HAPs		**0.00**	**0.00**		**0.04**	**0.04**	**0.08**	**0.08**
Greenhouse Gases								
CO2	0	0.00	0.00	116,890.00	2,559.89	2,559.89	5,119.78	
N2O	0.000220	0.03	0.03	0.22	0.00	0.00	0.06	
CH4	0	0.00	0.00	2.20	0.05	0.05	0.10	
Total GHGs as CO2e based on 11/29/2013 Federal GWP		**8.94**	**8.94**		**2,561.14**	**2,561.14**	**5,140.16**	**5,140.16**
Total GHGs as CO2e based on 11/29/2013 Federal GWP		**9.30**	**9.30**		**2,560.94**	**2,560.94**	**5,140.48**	**5,140.48**

Assumptions and references for Test Cell HHP16 and 17 emissions
Assumed fuel usage greatly exceeds fuel usage for a production test cell based on historical utilization of test cells
Heat input rate based on equivalent to diesel fuel usage converted to heat input - 1,760,000 gal/yr * .13703 MMBtu/gal = 241,173 MMBtu/yr
NOx only criteria pollutant expected to be emitted from burning hydrogen
NOx emission factor based on natural gas engine emission factor with a 50% upward adjustment to account for higher temperatures
HAPs not expected to be emitted when burning hydrogen fuel
GHG emission factors from 40 CFR 98 Subpart C (Tables C-1, C-2) - CO2 and methane will not be emitted when burning hydrogen
Methodology: Maximum heat input (MMBtu/yr) * emission factor (lb/MMBtu) * ton/2000 lb = ton/yr

Assumptions and references for Duct burner emissions
Criteria pollutant emission factors from AP-42, Chapter 1, Section 4, Tables 1.4-1 and 1.4-2
Organic HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-3 (top 5 compounds to napthalene)
Metal HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98.33
Methodology: 0.005 mmcf/hr fuel capacity * emission factor (lb/mmcf) * 8760 hr/yr * ton/2000 lb = ton/yr

Appendix A: Emission Calculations
Potential to Emit Summary for HHP16 and HHP17/Duct Burners

Company Name: **Cummins Inc. (Seymour Engine Plant)**
Address City IN Zip: **800 E. Third Street**
Operating Permit Number: **071-30358-00015**
Significant Source Mod. No: **071-34061-00015**
Significant Permit Mod. No: **071-34122-00015**
Reviewer: **Deena Patton**

Maximum engine capacity	9,000	hp
Maximum heat input	241,173	MMBtu/yr
Duct burner capacity	5	MMBtu/hr
Maximum natural gas usage	0.005	mmcf/hr

Calculations provided by source and approved by IDEM.

Pollutant	Test Cells HHP 16 & 17			Duct Burners			Total Unlimited PTE (ton/yr)	Limited PTE (ton/yr)
	Emission factor (lb/MMBtu)	HHP16 Unlimited PTE (ton/yr)	HHP17 Unlimited PTE (ton/yr)	Emission factor (lb/mmcf)	HHP16 Burner Unlimited PTE (ton/yr)	HHP17 Burner Unlimited PTE (ton/yr)		
Pollutants								
CO	0.557	67.17	67.17	84	1.84	1.84	138.02	95
NOx	4.08	491.99	491.99	100	2.19	2.19	988.36	37
PM	0.000077	0.01	0.01	1.9	0.04	0.04	0.10	0.1
PM10	0.009987	1.20	1.20	7.60	0.17	0.17	2.74	2.74
PM2.5	0.009987	1.20	1.20	7.60	0.17	0.17	2.74	2.74
SO2	0.0000588	0.01	0.01	0.60	0.01	0.01	0.04	0.04
VOC	0.118	14.23	14.23	5.50	0.12	0.12	28.70	28.7
Hazardous Air Pollutants								
Organic HAPs								
Acetaldehyde	0.0086	1.04	1.04	n/a	0.00	0.00	2.08	2.08
Acrolein	0.00514	0.62	0.62	n/a	0.00	0.00	1.24	1.24
Benzene	0.00044	0.05	0.05	0.00210	0.00	0.00	0.10	0.1
Dichlorbenzene	n/a	0.00	0.00	0.00120	0.00	0.00	0.00	0
Formaldehyde	0.0528	6.37	6.37	0.07500	0.00	0.00	12.74	9
Hexane	0.011	1.33	1.33	1.80000	0.04	0.04	2.74	2.74
Methanol	0.0025	0.30	0.30	n/a	0.00	0.00	0.60	0.6
Toluene	0.000408	0.05	0.05	0.00340	0.00	0.00	0.10	0.1
Xylene	0.00018	0.02	0.02	n/a	0.00	0.00	0.04	0.04
Metal HAPs								
Cadmium	n/a	0.00	0.00	0.00130	0.00	0.00	0.00	0
Chromium	n/a	0.00	0.00	0.00140	0.00	0.00	0.00	0
Nickel	n/a	0.00	0.00	0.00210	0.00	0.00	0.00	0
Manganese	n/a	0.00	0.00	0.00038	0.00	0.00	0.00	0
Lead	n/a	0.00	0.00	0.00050	0.00	0.00	0.00	0
Total HAPs		**9.78**	**9.78**		**0.04**	**0.04**	**19.64**	**24**
Greenhouse Gases								
CO2	297.21	35,839.51	35,839.51	116,890.00	2,559.89	2,559.89	76,798.80	
N2O	0.000220	0.03	0.03	0.22	0.00	0.00	0.06	
CH4	0.002200	0.27	0.27	2.20	0.05	0.05	0.64	
Total GHGs as CO2e based on 11/29/2013 Federal GWP		**35,855.20**	**35,855.20**		**2,561.14**	**2,561.14**	**76,832.68**	**70,000**
Total GHGs as CO2e based on 10/30/2009 Federal GWP		**35,854.48**	**35,854.48**		**2,560.94**	**2,560.94**	**76,830.84**	**70,000**

Assumptions and references for Test Cell HHP16 and 17 emissions
Assumed fuel usage greatly exceeds fuel usage for a production test cell based on historical utilization of test cells
Heat input rate based on equivalent to diesel fuel usage converted to heat input - 1,760,000 gal/yr * .13703 MMBtu/gal = 241,173 MMBtu/yr
Fuel burned is a 60%/40% Natural gas/CO2 mixture. Emissions are conservatively based on 100% natural gas except CO2
Criteria pollutant emissions from AP-42 Chapter 3, Section 2, Table 3.2-2 - uncontrolled emission factors for 4-stroke-lean burn engines
NOx emission factor based on preliminary design and expected testing regiment; actual emissions will be lower due to SCR controls
PM, PM10, and PM2.5 emission factors from AP-42, Chapter 3, Section 2, Table 3.2-2
PM factor is filterable particulate, PM10 factor is <10u filterable + condensable, and PM2.5 factor is <2.5u filterable + condensable
HAP emission factors from AP-42, Chapter 3, Section 2, Table 3.4-2 and 3.4-4 (top 5 compounds)
CO2 emission factor based on 60% natural gas/40% CO2 mixture
GHG emission factors from 40 CFR 98 Subpart C (Tables C-1, C-2)
Methodology: Maximum heat input (MMBtu/yr) * emission factor (lb/MMBtu) * ton/2000 lb = ton/yr

Assumptions and references for Duct burner emissions
Criteria pollutant emission factors from AP-42, Chapter 1, Section 4, Tables 1.4-1 and 1.4-2
Organic HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-3 (top 5 compounds to napthalene)
Metal HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98.33
Methodology: 0.005 mmcf/hr fuel capacity * emission factor (lb/mmcf) * 8760 hr/yr * ton/2000 lb = ton/yr

Appendix A: Emission Calculations
Potential to Emit Summary for Small Combustion Units

Company Name: **Cummins Inc. (Seymour Engine Plant)**
Address City IN Zip: **800 E. Third Street**
Operating Permit Number: **071-30358-00015**
Significant Source Mod. No: **071-34061-00015**
Significant Permit Mod. No: **071-34122-00015**
Reviewer: **Deena Patton**

Calculations provided by source and approved by IDEM.

	Natural gas fired units						Propane fired units		Total
	Boiler EU-03Y	Boiler EU-03Z	Direct fired air handler	Unit heater	Unit heater	Unit heater		Propane vaporizer	
Heat input (mmBtu/hr)	3	3	0.34	0.175	0.175	0.175	Heat input (mmBtu/hr)	0.5	
Max nat gas usage (mmcf/hr)	0.003	0.003	0.00034	0.000175	0.000175	0.000175	Max propane usage (gal/hr)	5.46	
	Emission factor (lb/mmcf)	Potential to emit (ton/yr)	Potential to emit (ton/yr)	Potential to emit (ton/yr)	Potential to emit (ton/yr)	Potential to emit (ton/yr)	Potential to emit (ton/yr)	Emission factor (lb/gal)	Potential to emit (ton/yr)	Potential to emit (ton/yr)
Pollutants										
CO	84	1.10	1.10	0.13	0.06	0.06	0.06	0.0075	0.18	2.69
NOx	100	1.31	1.31	0.15	0.08	0.08	0.08	0.013	0.31	3.32
PM	1.9	0.02	0.02	0.00	0.00	0.00	0.00	0.0007	0.02	0.06
PM10	7.60	0.10	0.10	0.01	0.01	0.01	0.01	0.0007	0.02	0.26
PM2.5	7.60	0.10	0.10	0.01	0.01	0.01	0.01	0.0007	0.02	0.26
SO2	0.60	0.01	0.01	0.00	0.00	0.00	0.00	0.000016	0.00	0.02
VOC	5.50	0.07	0.07	0.01	0.00	0.00	0.00	0.001	0.02	0.17
Hazardous Air Pollutants										
Organic HAPs										
Acetaldehyde	n/a	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Acrolein	n/a	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Benzene	0.00210	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Dichlorbenzene	0.00120	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Formaldehyde	0.07500	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Hexane	1.80000	0.02	0.02	0.00	0.00	0.00	0.00	n/a	0.00	0.04
Methanol	n/a	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Toluene	0.00340	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Xylene	n/a	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Metal HAPs		0.00	0.00	0.00	0.00	0.00	0.00			
Cadmium	0.00130	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Chromium	0.00140	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Nickel	0.00210	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Manganese	0.00038	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Lead	0.00050	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Total HAPs		**0.02**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.04**
Greenhouse Gases										
CO2	116,890.00	1535.93	1535.93	174.07	89.6	89.6	89.6	12.50	298.94	3,813.67
N2O	0.22	0	0	0	0	0	0	0.0009	0.02	0.0200
CH4	2.20	0.03	0.03	0	0	0	0	0.0002	0.00	0.0600
Total GHGs as CO2e based on 11/29/2013 Federal GWP		**1,536.68**	**1,536.68**	**174.07**	**89.60**	**89.60**	**89.60**		**304.90**	**3,821.13**
Total GHGs as CO2e based on 10/30/2009 Federal GWP		**1,536.56**	**1,536.56**	**174.07**	**89.60**	**89.60**	**89.60**		**305.14**	**3,821.13**

Assumptions and references for natural gas fired units
Criteria pollutant emission factors from AP-42, Chapter 1, Section 4, Tables 1.4-1 and 1.4-2
Organic HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-3 (top 5 compounds to napthalene)
Metal HAP emission factors from AP-42, Chapter 1, Section 4, Table 1.4-4 (top 5 compounds)
GHG emission factors from 40 CFR 98.33
Methodology: mmcf/hr fuel capacity * emission factor (lb/mmcf) * 8760 hr/yr * ton/2000 lb = ton/yr

Assumptions and references for propane vaporizer
Criteria and GHG pollutant emission factors from AP-42, Chapter 1, Section 5, Table 1.5-1
No HAP emission factors for propane combustion
Methodology: gal/hr fuel capacity * emission factor (lb/gal) * 8760 hr/yr * ton/2000 lb = ton/yr
Emission factors converted from lb/1000 gal to lb/gal

Appendix A: Emission Calculations
Potential to Emit Summary for Fuel Venting

Company Name: Cummins Inc. (Seymour Engine Plant)
Address City IN Zip: 800 E. Third Street
Operating Permit Number: 071-30358-00015
Significant Source Mod. No: 071-34061-00015
Significant Permit Mod. No: 071-34122-00015
Reviewer: Deena Patton

Unburned natural gas/LP emissions
Calculations provided by source and approved by IDEM.

	HHP16		HHP17		
	Natural gas	Liquid Propane	Natural gas	Liquid Propane	Total emissions emissions (ton/yr)
Hours vented per year	24	24	24	24	
SCFM	80	31	80	31	
SCFM/yr	115200	44640	115200	44640	
Density (lb/CF)	0.0447	0.126	0.0447	0.126	
% VOC content	3.50%	100%	3.50%	100%	
% CH4 (GHG) content	95%	0%	95%	0%	
VOC emitted (ton/yr)	0.09	2.81	0.09	2.81	5.80
CH4 emitted (ton/yr)	2.45	0	2.45	0	4.90
Total GHGs as CO2e based on 10/30/2009 Federal GWP (ton/yr)	51.45	0	51.45	0	102.90
Total GHGs as CO2e based on 11/29/2013 Federal GWP (ton/yr)	61.25	0	61.25	0	122.5

Company Name: **Cummins Inc. (Seymour Engine Plant)**
Address City IN Zip: **800 E. Third Street**
Operating Permit Number: **071-30358-00015**
Significant Source Mod. No: **071-34061-00015**
Significant Permit Mod. No: **071-34122-00015**
Reviewer: **Deena Patton**

Unit ID	Cummins, Inc. SEP Main Plant Fire Pump			Permit threshold (ton/yr)
	Capacity (hp)		208	
	Capacity fuel (gal/hr)		10.66	
	Capacity heat input (MMBtu/hr)		1.46	
Criteria pollutants	Emission factor		PTE (ton/yr)	
CO	0.00668	lb/bhp-hr	0.35	25
NOx	0.031	lb/bhp-hr	1.61	10
PM	0.0022	lb/bhp-hr	0.11	5
PM10	0.0022	lb/bhp-hr	0.11	5
PM2.5	0.0022	lb/bhp-hr	0.11	5
SO_2	0.00205	lb/bhp-hr	0.11	10
VOC	0.00247	lb/bhp-hr	0.13	10
HAPs	Emission factor		PTE (ton/yr)	
Organic HAPs				
Benzene	0.000933	lb/MMBtu	0.00E+00	10
Toluene	0.000409	lb/MMBtu	0.00E+00	10
Xylene	0.000285	lb/MMBtu	0.00E+00	10
Formaldehyde	0.00118	lb/MMBtu	0.00E+00	10
Acetaldehyde	0.000767	lb/MMBtu	0.00E+00	10
Total PAH	0.000168	lb/MMBtu	0.00E+00	10
Total HAPs			0.00E+00	25
Greenhouse gases	Emission factor		PTE (ton/yr)	
CO_2	164	lb/MMBtu	59.86	
CH_4	0.0066	lb/MMBtu	0.34	
N_20	0.0013	lb/MMBtu	0.07	
CO_2e			89.22	100,000

Assumptions and Methodology for Emergency Fire Pump Engine
Hours of operation for emergency generator = 500/year per EPA guidance for emergency devices
1 MMBtu/hr heat input = 142 hp-hr output (based on ratio of AP-42 emission factors)
Fuel heat value = 0.137 MMBtu/gal
Emissions based on the following:
CO, NOx, PM, PM10, PM2.5, SO2, VOC, and CO2 emissions are based AP-42 emission factors, AP-42 Chapter 3, Section 3, Table 3.3-1
HAP Emission factors are from AP-42, Chapter 3, Section 3, Table 3.3-2
CH4 and N2O emission factors from 40 CFR 98.33

Emission calculation with lb/bhp-hr emission factors
  Emission factor * horsepower * 500 hours * ton/2000 lb
Emission calculation with lb/MMBtu emission factors
  Emission factor * MMBtu/hr * 500 hours/2000 lb/ton
$CO_2e = CO_2 + (25 * CH_4) + (298 * N_2O)$

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: David Wehrkamp
Cummins Incorporated Seymour Engine Plant
800 E Third St
Seymour, IN 47274

DATE: October 7, 2014

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

SUBJECT: Final Decision
Title V
071-34122-00015

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Darren Wildman Plant Mgr
Bernard Paul (B Paul Consulting, LLC)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

October 7, 2014

TO: Jackson County Public Library

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

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

Applicant Name: Cummins, Inc. Seymour Engine Plant
Permit Number: 071-34122-00015

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	CDENNY 10/7/2014 Cummins Incorporated Seymour Engine Plant 071-34122-00015 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		David Wehrkamp Cummins Incorporated Seymour Engine Plant 800 E Third St Seymour IN 47274 (Source CAATS)									
2		Darren Wildman Plant Mgr Cummins Incorporated Seymour Engine Plant 800 E Third St Seymour IN 47274 *(RO CAATS)*									
3		Jackson County Commissioner Jackson County Courthouse Brownstown IN 47220 *(Local Official)*									
4		Mr. Tome Earnhart 3960 N. CR 300 W. North Vernon IN 47265 *(Affected Party)*									
5		Seymour City Council and Mayors Office 301 North Chestnut Street Seymour IN 47274 *(Local Official)*									
6		Jackson County Health Department 801 West 2nd Street Seymour IN 47274-2711 *(Health Department)*									
7		Jackson Co Public Library 303 W 2nd Street Seymour IN 47274-2184 *(Library)*									
8		Bernard Paul B Paul Consulting, LLC 285 Spring Drive Zionsville IN 46077 *(Consultant)*									
9											
10											
11											
12											
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877