INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: March 8, 2012

RE: Seymour Engine Plant / 071 - 30962 - 00015

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

Notice of Decision: Approval – Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 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.

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.

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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.

Enclosures
FNTV-PMOD.doc 3/27/08

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Mr. David Wehrkamp
Seymour Engine Plant (SEP)
800 East Third Street MC 30125
Seymour, IN 47274

March 8, 2012

Re: 071-30962-00015
Significant Permit Modification to
Part 70 Renewal No.: T071-30358-00015

Dear Mr. Wehrkamp:

Seymour Engine Plant (SEP) was issued a Part 70 Operating Permit Renewal on T071-30358-00015 on November 29, 2011 for an internal combustion engine manufacturing plant, of which the testing and painting of the product is included. A letter requesting changes to this permit was received on September 22, 2011. 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.

The source is adding five (5) new engineering test cells engine HHP6 -10, four (4) new production test cell engines (Production 1-4), three (3) new paint lines, twenty-two (22) new natural gas fired boilers, modifying an existing emission unit with a duct burner (HHP1), ten (10) in-stack duct burners (one for each new/modified test cells), one (1) emergency diesel powered generator and one (1) 100,000 gallon diesel storage tank. The project also add selective catalytic Reduction (SCR), Direct Oxidation catalyst (DOC) to all the Hedgehog test cells, Hedgehog and also address GHGs emissions, established sulfur limit to the diesel fuel used at the source to address NAAQS compliance with the SO2 and add a high sulfur test capability at the four (4) existing test cells.

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating Permit as modified will be provided at issuance.

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 Josiah Balogun, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Josiah Balogun or extension (4-5257), or dial (317) 234-5257.

Sincerely,

Tripurari Sinha

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

Attachments:
Updated Permit
Technical Support Document
PTE Calculations

JB

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Part 70 Permit Operating Permit

OFFICE OF AIR QUALITY

Seymour Engine Plant
800 East Third Street
Seymour, Indiana 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:Tripurari P. Sinha Ph.D, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 29, 2011 Expiration Date: November 29, 2016

Significant Permit Modification No.: T071-30962-00015	
Issued by: Tripurari Sinha Tripurari P. Sinha Ph.D, Section Chief Permits Branch Office of Air Quality	Issuance Date: March 8, 2012 Expiration Date: November 29, 2016

TABLE OF CONTENTS

A. SOURCE SUMMARY

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)] [326 IAC 2-7-1(22)]
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]
A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]
A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

B. GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]
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)]
B.3 Term of Conditions [326 IAC 2-1.1-9.5]
B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]
B.5 Severability [326 IAC 2-7-5(5)]
B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]
B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)] [326 IAC 1-6-3]
B.11 Emergency Provisions [326 IAC 2-7-16]
B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]
B.14 Termination of Right to Operate [326 IAC 2-7-10] [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]
B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]
B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]
B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]
B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]
B.20 Source Modification Requirement [326 IAC 2-7-10.5]
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]
B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]
B.24 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

C. SOURCE OPERATION CONDITIONS

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]
C.2 Opacity [326 IAC 5-1]
C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]
C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
C.5 Stack Height [326 IAC 1-7]
C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

Testing Requirements [326 IAC 2-7-6(1)]
C.7 Performance Testing [326 IAC 3-6]

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

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)]

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

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]
C.12 Risk Management Plan [326 IAC 2-7-5(11)] [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]
C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

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]
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]
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]

Stratospheric Ozone Protection
C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

D.0 EMISSION UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.0.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
D.0.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]
D.0.3 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]
D.0.4 Hazardous Air Pollutants (HAPs) Minor Limits [40 CFR 63]
D.0.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] [40 CFR 64]
D.0.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2][326 IAC 8-1-4]
D.0.7 Particulate Control[326 IAC 2-7-6(6)]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]
D.0.8 Monitoring

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.0.9 Record Keeping Requirements
D.0.10 Reporting Requirements

D.1 EMISSION UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
D.1.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]
D.1.3 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]
D.1.4 Hazardous Air Pollutants (HAPs) Minor Limits [40 CFR 63]
D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] [40 CFR 64]
D.1.6 Particulate Control [326 IAC 2-7-6(6)]
D.1.7 Volatile Organic Compounds (VOC) [326 IAC 8-1-2][326 IAC 8-1-4]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]
D.1.8 Monitoring

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.1.9 Record Keeping Requirements
D.1.10 Reporting Requirements

D.2 EMISSION UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.2.1 PSD Minor Limit [326 IAC 2-2]
D.2.2 HAPs Minor Limits [40 CFR 63]
D.2.3 Sulfur Dioxide (SO_2) Operational Limits
D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] [40 CFR 64]
D.2.5 Nitrogen Oxide (NOx) Control
D.2.6 Carbon Monoxide (CO) Control
D.2.7 Testing Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]
D.2.8 Visible Emissions Notations
D.2.9 SCR Parameteric Monitoring
D.2.10 Oxidation Catalyst Parametric Monitoring

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.2.11 Record Keeping Requirements
D.2.12 Reporting Requirements

D.3 EMISSION UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.3.1 Particulate Matter (PM) Limitation [326 IAC 6-2-3]
D.3.2 Particulate Emission Limitations for Sources of Indirect Heating Matter (PM) Limitation [326 IAC 6-2-4]

D.4 EMISSION UNIT OPERATION CONDITIONS

Emission Limitations and Standards [326 IAC 2-7-5(1)]
D.4.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]
D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]
D.4.3 Particulate Emission Limitations for Manufacturing Processes[326 IAC 6-3-2]
D.4.4 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60, Subpart Kb]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.4.5 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60, Subpart Kb]

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

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

E.3 National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

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]
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]

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]

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]

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]

Certification

Emergency Occurrence Report

Quarterly Reports

Quarterly Deviation and Compliance Monitoring Report

Attachment A: 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 [326 IAC 12] [40 CFR 60, Subpart Kb]

Attachment B: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [326 IAC 12] [40 CFR 60, Subpart IIII]

Attachment C: National Emissions Standard for Hazardous Air Pollutants for stationary reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Attachment D: National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources [40 CFR Part 63, Subpart HHHHHH]

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:

(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.

<u>These Emission units shall cease all operations after the installation of the new paint booths</u>

(a2)

(1) One (1) primer spray booth, identified as EU-01A, constructed in 1986, with a

maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S1 and S2.

(2) One (1) top coat spray booth, identified as EU-01B, constructed in 1995, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S3 and S4.

(3) One (1) touch-up spray booth, identified as EU-01C, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S5 and S6.

(4) One (1) offline spray booth, identified as EU-01D, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S7.

(5) One (1) small parts spray booth, identified as EU-01F, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S8.

(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 burner~~s~~, 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) Twenty-two (22) natural gas fired boilers, identified as EU03C-EU03X, approved for construction in 2011, with EU03C-EU03V each having a maximum capacity of 2.0 MMBtu/hr and EU03W-EU03X each having a maximum capacity of 4.2 MMBtu/hr, exhausting to stacks B3-28, respectively.

(o) Two (2) natural gas-fired boilers, identified as EU-03A and EU-03B, installed in 1978, exhausting to stacks B1 and B2, respectively, each rated at 20.9 MMBtu per hour.

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) 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. [326 IAC 12] [40 CFR 60, Subpart Kb]

(e) One (1) 20,000 gallon No.2 diesel storage tank, constructed in 2011. [326 IAC 12] [40 CFR 60, Subpart Kb]

(f) One (1) 100,000 gallon No 2 diesel storage tank [326 IAC 12] [40 CFR 60 Subpart Kb]

(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.]

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)(9) be revised in response to an emergency.

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

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

B.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)]

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

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

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

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

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

(b) 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.

(c) 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.

(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:
(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:
(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.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.0 EMISSION UNIT OPERATION CONDITIONS

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

<u>These Emission units shall cease all operations after the installation of the new paint booths</u>

(a2) One (1) paint spray line, identified as EU-01, consisting of the following equipment:

(1) One (1) primer spray booth, identified as EU-01A, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S1 and S2.

(2) One (1) top coat spray booth, identified as EU-01B, constructed in 1995, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S3 and S4.

(3) One (1) touch-up spray booth, identified as EU-01C, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S5 and S6.

(4) One (1) offline spray booth, identified as EU-01D, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S7.

(5) One (1) small parts spray booth, identified as EU-01F, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S8.

(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.0.1 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 each of the five (5) spray booths, EU-01A, EU-01B, EU-01C, EU-01D, and EU-01F, shall be controlled by a dry filter, and the Permittee shall operate the control device in accordance with the manufacturer's specifications.

D.0.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the Permittee shall not cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating excluding water for extreme performance coatings, delivered to spray applicators in each of the five (5) spray booths, EU-01A, EU-01B, EU-01C, EU-01D, and EU-01F, computed on a volume weighted average basis.

D.0.3 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.0.4 Hazardous Air Pollutants (HAPs) Minor Limits [40 CFR 63]

(a) The amount of single HAP delivered to the coating applicators (EU-01A through D and F) from coatings, and dilution and cleaning solvents used in the paint spray line identified as EU-01 shall be limited to less than nine (9) 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-01A through D and F) 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 1-3 (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.0.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for each of the five (5) spray booths, EU-01A, EU-01B, EU-01C, EU-01D, and EU-01F, and the dry filters. 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.0.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Compliance with the VOC content limit in condition D.0.2 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis, when using coatings that are above 3.5 pounds per gallon limit. This volume weighted average shall be determined by the following equation:

$$A = [\Sigma (C \times U) / \Sigma U]$$

Where: A is the volume weighted average in pounds VOC per gallon less water as applied;
C is the VOC content of the coating in pounds VOC per gallon less water as applied;
U is the usage rate of the coating in gallons per day.

D.0.7 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-01A, EU-01B, EU-01C, EU-01D and EU-01F are in operation.

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

D.0.8 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 (S1, S2, S3, S4, S5, S6, S7 and S8) 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.

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

D.0.9 Record Keeping Requirements

(a) To document the compliance status with condition D.0.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limit established in condition D.0.2.

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

(2) The amount of coating material and solvent used on a daily 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 volume weighted average VOC content of the coatings used for each day, when using coatings that are above 3.5 pounds per gallon limit.

(4) The daily cleanup solvent usage; and

(5) The total VOC usage for each day.

(b) To document the compliance status with condition D.0.4, 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.0.4.

(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) To document the compliance status with conditions D.0.5 and D.0.9, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

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

D.0.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with conditions D.0.2 and D.0.4 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(15)]:

(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.

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

Pursuant to 326 IAC 8-2-9, the volatile organic compound (VOC) emissions from the new 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.1.3 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.1.4 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 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.

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

D.1.6 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.1.7 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.

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

D.1.8 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.

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

D.1.9 Record Keeping Requirements

(a) To document the compliance status with condition D.1.2, 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.

(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) 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) To document the compliance status with conditions D.1.8 - 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.

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

D.1.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with conditions D.1.2 and D.1.4 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.2 EMISSION UNIT OPERATION CONDITIONS

Emissions Unit Description:

(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 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 (Pl), 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(Pl) and Test Pad 11(Pl), 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 burner~~s~~, 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.

(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 PSD Minor Limit [326 IAC 2-2]

(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 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 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 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B, 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) 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, Test Pad

11, Boiler EU-03A and Boiler EU-03B) 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) 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.

NEW EMISSION LIMITS FOR THE NEW UNITS [HHP1, HHP6-HHP14, Boilers, Duct Burners, and Emergency Generators]

(e) The total NOx emissions from HHP1, HHP6 – HHP14, the boilers, the duct burners and the emergency generator shall not exceed 248 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 boilers x EFepaboilers

+

Diesel Fuel burned in Emergency Generator x EFepaemgen

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 for temperature range x 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

EFepaboilers is the USEPA NOx emission factor for boilers burning natural gas

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 duct burners and the emergency generator shall not exceed 248 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 boilers x COEFepaboilers

+

Diesel Fuel burned in Emergency Generator x COEFepaemgen

Where:

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

COEFepaboilers is the USEPA CO emission factor for boilers burning natural gas

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 duct burners and the emergency generator 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 of VOC/gal of diesel fuel)

+

(Biodiesel fuel burned by HHP1, HHP6 – HHP14) x (Ef2v of VOC/gal of biodiesel fuel)

+

(Natural gas burned by HHP1, HHP6 – HHP14) x (Ef3v of VOC/ft^3 of natural gas)

+

(Hydrogen gas burned by HHP1, HHP6 – HHP14) x (Ef4v of VOC/ft^3 of natural gas)

+

(Natural gas burned by HHP1, HHP6 – HHP14) x (Ef5v of VOC/ft^3 of natural gas)

+

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.

+

Ef6v lbs/mmcf x Ng (mmcf/month) x (1 ton/2000 pounds).

+

Ef7v lbs/mmcf x Nga (mmcf/month) x (1 ton/2000 pounds).

+

Ef8v lb/hp-hr x De (hp-hr/month) x (1 ton/2000 pounds).

+

Lb of Propane vented in HHP 6 and HHP 10 X (1 ton/2000 lb)

Where:

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 or the most current factor from the applicable section of AP-42.
Ng = Amount of natural gas burned in boilers.
Ef7v = Emission factor from AP- 42 Chapter 1.4 Table 1.4-2 July 1998 or the most current factor from the applicable section of AP-42.
Nga = Amount of natural gas burned in the Duct Burners.
Ef8v = Emission factor from AP- 42 Chapter 3.3-1
De = Amount of diesel burned in the Emergency Generators.

Compliance with these limits in combination with the potential to emit of NOx, CO and VOC from all other units from this modification shall limit the emissions of NOx, CO and VOC emissions from this modification 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 2011 modification. After this modification 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, the entire source will become major source under PSD after this Modification.

(h) The total CO2e emissions from the Test Cells, identified as HHP1, HHP 6-14, duct burners, emergency generator and the twenty two (22) boilers 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, duct burners, emergency generator and boilers) x HHVdf x EfCO2df x GWP (CO2) x 0.0011023

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP1, duct burners, emergency generator and boilers) 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, duct burners, emergency generator and boilers) 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, emergency generator and boilers) 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, duct burners, emergency

generator and boilers) x HHVdf x EfN2Opet x GWP(N2O) x 0.0011023

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP1, duct burners, emergency generator and boilers) 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:

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 to less than 100,000 tons, per year and render the requirements of 326 IAC 2-2, not applicable to the source before the 2011 Modification.

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 five (25) engine test cells, identified as 801-808, HHP1-HHP14, 8(PI), 9(PI), 10(PI), EU-02C, 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 identified in EU-02

+ (Natural gas burned by all test cells identified in EU-02 x (Ef2 of HAP/ft3 of natural gas)
+
(Liquid Propane burned by all test cells identified in EU-02) X Ef3 of HAP/gallon of liquid propane)
+
(Hydrogen Gas burned by all test cells identified in EU-02) X Ef4 of HAP per unit of hydrogen gas

Where:

Ef1 = Emission Factor in pounds of single HAP (worse case) per gallon of diesel and biodiesel fuel burned in test cells

Ef2 = Emission Factor in pounds of single HAP (worse case) per MMBtu of natural gas burned in test cells;

Ef3= Emission Factor in pounds of single HAP (worse case) per gallon of liquid propane fuel burned in test cells

Ef4= Emission Factor in pounds of single HAP (worse case) per unit of hydrogen gas burned in test cells

(b) The total HAP from the paint spray line booth, identified as EU-01, twenty five (25) engine test cells, identified as 801-808, HHP1-HHP14, 8(PI), 9(PI), 10(PI), EU-02C, 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 in all test cells identified in EU-02) x (Ef1, of total HAP/gal of diesel and biodiesel fuel)

+ (Natural gas burned by all test cells identified in EU-02 x (Ef2 of total HAP/ft3 of natural gas)
+
(Liquid Propane burned in all test cells identified in EU-02) X Ef3 of total HAP/gal of Liquid Propane
+
(Hydrogen Gas burned in all test cells identified in EU-02) X Ef4 of total HAP/unit of hydrogen gas

Where:

Ef1 = Emission Factor in pounds of total HAP per gallon of diesel and biodiesel fuel burned in test cells

Ef2 = Emission Factor in pounds of total HAP per MMBtu of natural gas burned in test cells

Ef3= Emission Factor in pounds of total HAP per gallon of liquid propane fuel burned in test cells

Ef4= Emission Factor in pounds of total HAP per unit of hydrogen gas burned in test cells

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 Sulfur Dioxide (SO_2) Operational Limits

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

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

(2) Four (4) existing test cells, HHP2, HHP4, Test Pad 8, and Test Pad 10, shall burn diesel with a fuel sulfur content limit of 1,000 parts per million (ppm), but only two (2) of these four test cells may burn diesel fuel with 1000 PPM S at any given time, alternatively, three (3) existing test cells, HHP4, Test Pad 8 and Test Pad 10 shall burn diesel with a fuel sulfur content limit of 2,000 parts per million (ppm), but only one (1) of these three test cells may burn diesel fuel with 2000 PPM S at any given time.

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the engine test cells, production lines, and their 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.2.5 Nitrogen Oxide (NOx) Control

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).

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).

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.

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(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 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.

(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.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 NOx 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.2.11 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:

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

(2) Actual diesel, biodiesel fuel oil, liquid propane, hydrogen and natural gas, usage for EU-02A, EU-02B, EU-02C, and EU-02D (HHP6 through HHP14) since last compliance determination period and equivalent NO_X emissions.

(b) To document the compliance status with Condition D.2.3(1) , 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.2.3(2), 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.2.8 - 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).

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

D.2.12 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 EMISSION UNIT OPERATION CONDITIONS

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

(n) Twenty-two (22) natural gas fired boilers, identified as EU03C-EU03X, approved for construction in 2011, with EU03C-EU03V each having a maximum capacity of 2.0 MMBtu/hr and EU03W-EU03X each having a maximum capacity of 4.2 MMBtu/hr, exhausting to stacks B3-28, respectively.

(o) Two (2) natural gas-fired boilers, identified as EU-03A and EU-03B, installed in 1978, exhausting to stacks B1 and B2, respectively, each rated at 20.9 MMBtu per hour.

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

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

D.3.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from boilers, EU-03A and EU-03B, shall each be limited to 0.172 pounds per MMBtu heat input.

D.3.2 Particulate Emission Limitations for Sources of Indirect Heating Matter (PM) Limitation [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from boilers, EU-03C - EU-03X, shall each be limited to 0.338 pounds per MMBtu heat input.

SECTION D.4 EMISSION UNIT OPERATION CONDITIONS

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

(a) Degreasing operations that do not exceed 145 gallons per 12 months. [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) 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]

(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 [326 IAC 12] [40 CFR 60 Subpart Kb]

(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 Operations) for cold cleaning operations constructed after January 1, 1980, the owner or operator shall:

(a) Equip the cleaner with a cover;

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

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

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

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

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

D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

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

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

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

(B) The solvent is agitated; or

(C) The solvent is heated.

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

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

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

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

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

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

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

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

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

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

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

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

D.4.4 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60, Subpart Kb]

The one (1) 25,000 gallon No.2 diesel storage tank and the one (1) 100,000 gallon No 2 diesel storage tank shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60, Subpart Kb). 40 CFR Part 60.116b paragraphs (a) and (b) require the Permittee to maintain accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

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

D.4.5 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60, Subpart Kb]

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

Emissions Unit Description:

(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 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 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 burner~~s~~, 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.

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 generator and engine test cells 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 generator and engine test cells 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 engine test cells are subject to the following portions of Subpart IIII:

(1) 40 CFR 60.4200(a)(1), (b), and (d)
(2) 40 CFR 60.4201
(3) 40 CFR 60.4202
(4) 40 CFR 60.4203
(5) 40 CFR 60.4210
(6) 40 CFR 60.4218
(7) 40 CFR 60.4219
(8) Table 1 to Subpart IIII
(9) Table 2 to Subpart IIII
(10) Table 3 to Subpart IIII
(11) Table 4 to Subpart IIII
(12) Table 5 to Subpart IIII
(13) Table 6 to Subpart IIII
(14) Table 7 to Subpart IIII
(15) 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.

Under 40 CFR 63, Subpart ZZZZ, the emergency generator is a new 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 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:

The emergency generator is a new affected source 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

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.

These Emission units shall cease all operations after the installation of the new paint booths

(a2) One (1) paint spray line, identified as EU-01, consisting of the following equipment:

(1) One (1) primer spray booth, identified as EU-01A, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S1 and S2.

(2) One (1) top coat spray booth, identified as EU-01B, constructed in 1995, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S3 and S4.

(3) One (1) touch-up spray booth, identified as EU-01C, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S5 and S6.

(4) One (1) offline spray booth, identified as EU-01D, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S7.

(5) One (1) small parts spray booth, identified as EU-01F, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S8.

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: 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: 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:	Seymour Engine Plant (SEP)
Source Address:	800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.:	T 071-30358-00015
Facilities:	Seventeen (17) engine test cells, known as EU-02A, EU-02B and EU-02C
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	This Month			Previous 11 Months			12 Month Total		
	EU-02 Diesel Fuel, biodiesel or propane (gallons)		EU-02 Equivalent NO_X (tons) A + (B + C)	EU-02 Diesel Fuel, biodiesel or propane (gallons)		EU-02 Equivalent NO_X (tons) A + (B + C)	EU-02 Diesel Fuel, biodiesel or propane (gallons)		EU-02 Equivalent NO_X (tons) A + (B + C)
	A	B + C		A	B + C		A	B + C	
	Natural Gas (cubic feet)			Natural Gas (cubic feet)			Natural Gas (cubic feet)		
	A	B		A	B		A	B	

Total NO_X Emissions from Diesel Fuel, Natural Gas, biodiesel or propane	Month	Month	Month
12 Month Total (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: 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
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: 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
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:	Seymour Engine Plant (SEP)
Source Address:	800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.:	T 071-30358-00015
Facility:	Six (6) engine test cells HHP1, HHP6-HHP10, four (4) Production Lines HHP11-HHP14, twenty two (22) boilers EU03C-EU03X, ten (10) duct burners and emergency generator
Parameter:	NOx Emissions
Limit:	Less than 248 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:	Seymour Engine Plant (SEP)
Source Address:	800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.:	T 071-30358-00015
Facility:	Six (6) engine test cells HHP1, HHP6-HHP10, four (4) Production Lines HHP11-HHP14, twenty two (22) boilers EU03C-EU03X, ten (10) duct burners and emergency generator
Parameter:	CO Emissions
Limit:	Less than 248 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:	Seymour Engine Plant (SEP)
Source Address:	800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.:	T 071-30358-00015
Facility:	Six (6) engine test cells HHP1, HHP6-HHP10, four (4) Production Lines HHP11-HHP14, twenty two (22) boilers EU03C-EU03X, ten (10) duct burners and emergency generator
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:	Seymour Engine Plant (SEP)
Source Address:	800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.:	T 071-30358-00015
Facility:	Eight (8) engine test cells (HHP801-808 and HHP2-HHP5), four (4) Test Pad 8-11, two (2) boilers (EU-03A-EU-03B)
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:	Seymour Engine Plant (SEP)
Source Address:	800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.:	T 071-30358-00015
Facility:	Six (6) engine test cells HHP1, HHP6 - HHP10), four (4) Production Lines (HHP11-HHP14), new paint lines, twenty two (22) boilers EU-03C-EU-03X, ten (10) duct burners and emergency generator
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: Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Twenty-five test cells and the Paint spray line booth
Parameter: Single HAP Emissions
Limit: Less than 9.5 tons per year for any single HAP 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: Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Twenty-five test cells and the Paint spray line booth
Parameter: Total HAP Emissions
Limit: Less than 24 tons per year for total HAPs 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 Industrial Center
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Twenty-five test cells and the Paint spray line booth
Parameter: Single HAP Emissions
Limit: Less than 9 tons per year for any single HAP per twelve (12) consecutive month period

These Reporting Form shall removed after the installation of the new paint booths

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 Industrial Center
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Twenty-five test cells and the Paint spray line booth
Parameter: Total HAP Emissions
Limit: Less than 24 tons per year for total HAPs per twelve (12) consecutive month period

These Reporting Form shall removed after the installation of the new paint booths

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 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: 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:	

Page 2 of 2

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: _____

Attachment A: **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 [40 CFR 60, Subpart Kb]**

Source Description and Location

Source Name:	Seymour Engine Plant (SEP)
Source Location:	800 East Third Street, Seymour, IN 47274
County:	Jackson
SIC Code:	3519
Part 70 Operating Permit Renewal No.:	T071-30358-00015
Permit Reviewer:	Kimberly Cottrell

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

Source: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

(1) Vessels at coke oven by-product plants.

(2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

(3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.

(4) Vessels with a design capacity less than or equal to 1,589.874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer.

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

(8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance* —(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of §60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

(3) *Internal floating roof report.* If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) *External floating roof report.* If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003]

§ 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see §60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17);

(4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323–82 or 94 (incorporated by reference—see §60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

(1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in §60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in §60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in §60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m^3 which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in §60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in §60.114b of this subpart.

(c) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.* This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site").

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

§ 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in §60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of §60.112b.

(a) After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified

in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet §60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of §60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in §60.112b (a)(3) or (b)(2) (other than a flare) is exempt from §60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by §60.7(a)(1) or, if the facility is exempt from §60.7(a)(1), as an attachment to the notification required by §60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in

accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in §60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, §60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§ 60.114b Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in §60.112b, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in §60.112b.

§ 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in §60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of §60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Keep a record of each inspection performed as required by §60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §61.112b(a)(1) or §60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with §61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(2) and §60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by §60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by §60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in §60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by §60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with §60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with §60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with §60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by §60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by §60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under §60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

§ 60.116b Monitoring of operations.

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally

less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(ii) ASTM D323–82 or 94 (incorporated by reference—see §60.17); or

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of §60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.117b Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

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

Source Description and Location

Source Name:	Seymour Engine Plant (SEP)
Source Location:	800 East Third Street, Seymour, IN 47274
County:	Jackson
SIC Code:	3519
Part 70 Operating Permit Renewal No.:	T071-30358-00015
Permit Reviewer:	Kimberly Cottrell

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines,

(ii) The model year listed in table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

Emission Standards for Manufacturers

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

§ 60.4203 How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the useful life of the engines.

Emission Standards for Owners and Operators

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Reduce nitrogen oxides (NO_X) emissions by 90 percent or more, or limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (g/KW-hr) (1.2 grams per HP-hour (g/HP-hr)).

(2) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (d)(1) and (2) of this section.

(1) Reduce NO_Xemissions by 90 percent or more, or limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (1.2 grams per HP-hour).

(2) Reduce PM emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

Fuel Requirements for Owners and Operators

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(d) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the Federal Aid Highway System may petition the Administrator for approval to use any fuels mixed with used lubricating oil that do not meet the fuel requirements of paragraphs (a) and (b) of this section. Owners and operators must demonstrate in their petition to the Administrator that there is no other place to use the lubricating oil. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

Other Requirements for Owners and Operators

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model year?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section.

(h) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

Compliance Requirements

§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and §60.4202(c) using the certification procedures required in 40 CFR part 94 subpart C, and must test their engines as specified in 40 CFR part 94.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 40 CFR 1039.125, 40 CFR 1039.130, 40 CFR 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89 or 40 CFR part 94 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under parts 89, 94, or 1039 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and $NO_X$and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit $NO_X$and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

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

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (d) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

C_i= concentration of NO_Xor PM at the control device inlet,

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

R = percent reduction of NO_Xor PM emissions.

(2) You must normalize the NO_Xor PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \% O_2} \qquad \text{(Eq. 3)}$$

Where:

C_{adj}= Calculated NO_Xor PM concentration adjusted to 15 percent O_2.

C_d= Measured concentration of NO_Xor PM, uncorrected.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

$\%O_2$= Measured O_2concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent $O_2$and CO_2concentration is measured in lieu of O_2concentration measurement, a CO_2correction factor is needed. Calculate the CO_2correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific $F_o$value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \qquad \text{(Eq. 4)}$$

Where:

F_o= Fuel factor based on the ratio of O_2volume to the ultimate CO_2volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2, percent/100.

F_d= Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

F_c= Ratio of the volume of CO_2produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2correction factor for correcting measurement data to 15 percent O_2, as follows:

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

Where:

X_{CO2}= CO_2correction factor, percent.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

(iii) Calculate the $NO_X$and PM gas concentrations adjusted to 15 percent O_2using CO_2as follows:

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

Where:

C_{adj}= Calculated NO_Xor PM concentration adjusted to 15 percent O_2.

C_d= Measured concentration of NO_Xor PM, uncorrected.

$\%CO_2$= Measured CO_2concentration, dry basis, percent.

(e) To determine compliance with the NO_Xmass per unit output emission limitation, convert the concentration of NO_Xin the engine exhaust using Equation 7 of this section:

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

Where:

ER = Emission rate in grams per KW-hour.

C_d= Measured NO_Xconcentration in ppm.

1.912×10^{-3}= Conversion constant for ppm $NO_X$to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

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

Where:

ER = Emission rate in grams per KW-hour.

C_{adj}= Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

Notification, Reports, and Records for Owners and Operators

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

Special Requirements

§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §60.4205. Non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder, must meet the applicable emission standards in §60.4204(c).

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

§ 60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI engines located in areas of Alaska not accessible by the Federal Aid Highway System should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) The Governor of Alaska may submit for EPA approval, by no later than January 11, 2008, an alternative plan for implementing the requirements of 40 CFR part 60, subpart IIII, for public-sector electrical utilities located in rural areas of Alaska not accessible by the Federal Aid Highway System. This alternative plan must be based on the requirements of section 111 of the Clean Air Act including any increased risks to human health and the environment and must also be based on the unique circumstances related to remote power generation, climatic conditions, and serious economic impacts resulting from implementation of 40 CFR part 60, subpart IIII. If EPA approves by rulemaking process an alternative plan, the provisions as approved by EPA under that plan shall apply to the diesel engines used in new stationary internal combustion engines subject to this paragraph.

§ 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

(a) Owners and operators of stationary CI ICE that do not use diesel fuel, or who have been given authority by the Administrator under §60.4207(d) of this subpart to use fuels that do not meet the fuel requirements of paragraphs (a) and (b) of §60.4207, may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4202 or §60.4203 using such fuels.

(b) [Reserved]

General Provisions

§ 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

§ 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means either:

(1) The calendar year in which the engine was originally produced, or

(2) The annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

Useful life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for useful life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for useful life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007–2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO_X+ NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

[As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:]

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

[1]For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.
[2]For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.
[3]In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed[1]	Torque (percent)[2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1]Engine speed: ±2 percent of point.
[2]Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder	a. Reduce NO_Xemissions by 90 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for NO_Xconcentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO_Xconcentration.
		iv. Measure NO_Xat the inlet and outlet of the control device	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) NO_Xconcentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO_Xin the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location; and,	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurement for NO_Xconcentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_Xconcentration.
		iv. Measure NO_Xat the exhaust of the stationary internal combustion engine	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by	(d) NO_Xconcentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each	Complying with the requirement to	You must	Using	According to the following requirements
			reference, see §60.17)	
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		iv. Measure PM at the exhaust of the stationary internal combustion engine	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Attachment C: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]

Source Description and Location

Source Name:	Seymour Engine Plant (SEP)
Source Location:	800 East Third Street, Seymour, IN 47274
County:	Jackson
SIC Code:	3519
Part 70 Operating Permit Renewal No.:	T071-30358-00015
Permit Reviewer:	Kimberly Cottrell

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraph (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(h).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; or

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(h) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source, an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source, an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE, an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE, an existing compression ignition (CI) stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected Sources.* (1) If you have an existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a and 2a to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE, an existing 4SLB stationary RICE, or an existing CI stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

[73 FR 3605, Jan. 18, 2008]

§ 63.6601 What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times, except during periods of startup, shutdown, and malfunction.

(b) If you must comply with emission limitations and operating limitations, you must operate and maintain your stationary RICE, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown, and malfunction.

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements in §63.7(e)(1) and under the specific conditions that this subpart specifies in Table 4. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

(c) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 1)}$$

Where:

C_i= concentration of CO or formaldehyde at the control device inlet,

C_o= concentration of CO or formaldehyde at the control device outlet, and

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2concentration is measured in lieu of oxygen concentration measurement, a CO_2correction factor is needed. Calculate the CO_2correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209\, F_d}{F_c} \qquad \text{(Eq. 2)}$$

Where:

F_o= Fuel factor based on the ratio of oxygen volume to the ultimate CO_2volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d= Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

F_c= Ratio of the volume of CO_2produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

Where:

X_{co2}= CO_2correction factor, percent.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

(iii) Calculate the NO_X and SO_2gas concentrations adjusted to 15 percent O_2using CO_2as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 4)}$$

Where:

$\%CO_2$= Measured CO_2concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

§ 63.6625 What are my monitoring, installation, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO_2at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in §63.8.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b and Tables 2a and 2b of this subpart that apply to you according to methods specified in Table 6 of this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b and Tables 2a and 2b of this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) Consistent with §§63.6(e) and 63.7(e)(1), deviations from the emission or operating limitations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations.

Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR §94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate any stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing CI stationary RICE, an existing emergency stationary RICE, an existing limited use emergency stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions or a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions, you must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[73 FR 3606, Jan. 18, 2008]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section.

(1) The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) The first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(3), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off-site for the remaining 3 years.

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate any stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions: An existing 2SLB RICE, an existing 4SLB stationary RICE, an existing CI stationary RICE, an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[73 FR 3606, Jan. 18, 2008]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101–549, 104 Stat. 2399).

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary RICE whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc. Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed on or after June 12, 2006, must comply with requirements specified in 40 CFR 60.4243(d).

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008]

Table1ato Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

[As stated in §63.6600, you must comply with the following emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions at 100 percent load plus or minus 10 percent]

For each...	You must meet the following emission limitations...
1. 4SRB stationary RICE	a. reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007;
	or
	b. limit the concentration of formaldehyde in the stationary RICE exhaust 350 ppbvd or less at 15 percent O_2.

[73 FR 3607, Jan. 18, 2008]

Table1bto Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

[As stated in §§63.6600, 63.6630 and 63.6640, you must comply with the following operating emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions]

For each...	You must meet the following operating limitation...
1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and using NSCR.	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent $O_2$and not using NSCR.	

[73 FR 3607, Jan. 18, 2008]

Table2ato Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

[As stated in §§63.6600 and 63.6601, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent]

For each...	You must meet the following emission limitation...
1. 2SLB stationary RICE	a. reduce CO emissions by 58 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2until June 15, 2007.
2. 4SLB stationary RICE	a. reduce CO emissions by 93 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2.
3. CI stationary RICE	a. reduce CO emissions by 70 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2.

[73 FR 3608, Jan. 18, 2008]

Table2bto Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and 4SLB Burn Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

[As stated in §§63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary]

For each...	You must meet the following operating limitation...
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test;

For each...	You must meet the following operating limitation...
an oxidation catalyst	and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst	Comply with any operating limitations approved by the Administrator.

[73 FR 3608, Jan. 18, 2008]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

[As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements]

For each . . .	Complying with the requirement to . . .	You must . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE with a brake horsepower ≥5,000	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE (all stationary RICE subcategories and all brake horsepower ratings)	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

[As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE]

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI	a. Reduce CO emissions	i. Measure the O_2at the inlet and outlet of the	(1) Portable CO and O_2analyzer	(a) Using ASTM D6522–00 (2005)[a](incorporated by reference, see §63.14).

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
stationary RICE		control device; and		Measurements to determine O2 must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O_2analyzer	(a) Using ASTM D6522–00 (2005)[a](incorporated by reference, see §63.14) or Method 10 of 40 CFR, appendix A. The CO concentration must be at 15 percent O2, dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005).	(a) Measurements to determine O2 concentration must be made at the same time as the measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03[b], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		and		
		ii. Determine the O2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005)	(a) Measurements to determine O2 concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03[b], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a]You may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.
[b]You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.
[73 FR 3609, Jan. 18, 2008]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations

[As stated in §§63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following]

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. the average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
3. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
4. 4SRB stationary RICE	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
5. 4SRB stationary RICE	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		parameters (if any) during the initial performance test.
6. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
7. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations and Operating Limitations

[As stated in §63.6640, you must continuously comply with the emissions and operating limitations as required by the following]

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[1]; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the

		pressure drop across the catalyst is within the operating limitation established during the performance test.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[1]; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to §63.6620; and
		ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. 4SRB stationary RICE	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. 4SRB stationary RICE	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. reducing these data to 4-hour rolling averages;
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance

		test.
6. 4SRB stationary RICE with a brake horsepower ≥5,000	Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved[1].
7. Stationary RICE	Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[1]; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. Stationary RICE	Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[1]; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

[As stated in §63.6650, you must comply with the following requirements for reports]

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were	i. Semiannually according to the requirements in §63.6650(b).

You must submit a(n)	The report must contain . . .	You must submit the report . . .
	no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	
	b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
	c. If you had a startup, shutdown or malfunction during the reporting period, the information in §63.10(d)(5)(i)	i. Semiannually according to the requirements in §63.6650(b).
2. An immediate startup, shutdown, and malfunction report if actions addressing the startup, shutdown, or malfunction were inconsistent with your startup, shutdown, or malfunction plan during the reporting period	a. Actions taken for the event; and	i. By fax or telephone within 2 working days after starting actions inconsistent with the plan.
	b. The information in §63.10(d)(5)(ii).	i. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authorities. (§63.10(d)(5)(ii))
3. Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
	b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 3.a.i.
	c. Any problems or errors suspected with the meters	i. See item 3.a.i.

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ

[As stated in §63.6665, you must comply with the following applicable general provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes	
§63.4	Prohibited activities and circumvention	Yes	
§63.5	Construction and reconstruction	Yes	
§63.6(a)	Applicability	Yes	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources	Yes	
§63.6(b)(5)	Notification	Yes	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes	
§63.6(c)(1)–(2)	Compliance dates for existing sources	Yes	
§63.6(c)(3)–(4)	[Reserved]		
§36.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes	
§63.6(d)	[Reserved]		
§63.6(e)(1)	Operation and maintenance	Yes	
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, shutdown, and malfunction plan	Yes	
§63.6(f)(1)	Applicability of standards except during startup shutdown malfunction (SSM)	Yes	
§63.6(f)(2)	Methods for determining compliance	Yes	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.6(f)(3)	Finding of compliance	Yes	
§63.6(g)(1)–(3)	Use of alternate standard	Yes	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes	
§63.6(j)	Presidential compliance exemption	Yes	
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610 and 63.6611.
§63.7(a)(3)	CAA section 114 authority	Yes	
§63.7(b)(1)	Notification of performance test	Yes	
§63.7(b)(2)	Notification of rescheduling	Yes	
§63.7(c)	Quality assurance/test plan	Yes	
§63.7(d)	Testing facilities	Yes	
§63.7(e)(1)	Conditions for conducting performance tests	Yes	
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes	
§63.7(f)	Alternative test method provisions	Yes	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes	
§63.7(h)	Waiver of tests	Yes	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes	
§63.8(a)(3)	[Reserved]		

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(a)(4)	Monitoring for control devices	No	
§63.8(b)(1)	Monitoring	Yes	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems	Yes	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes	
§63.8(c)(2)–(3)	Monitoring system installation	Yes	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	
§63.8(f)(6)	Alternative to relative accuracy test	Yes	
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes	
§63.9(b)(1)–(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
§63.9(c)	Request for compliance extension	Yes	
§63.9(d)	Notification of special compliance requirements for new sources	Yes	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.9(e)	Notification of performance test	Yes	
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
§63.9(i)	Adjustment of submittal deadlines	Yes	
§63.9(j)	Change in previous information	Yes	
§63.10(a)	Administrative provisions for record keeping/reporting	Yes	
§63.10(b)(1)	Record retention	Yes	
§63.10(b)(2)(i)–(v)	Records related to SSM	Yes	
§63.10(b)(2)(vi)–(xi)	Records	Yes	
§63.10(b)(2)(xii)	Record when under waiver	Yes	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes	
§63.10(b)(3)	Records of applicability determination	Yes	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes	
§63.10(d)(2)	Report of performance test results	Yes	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(d)(4)	Progress reports	Yes	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	Yes	
§63.10(e)(1) and (2)(i)	Additional CMS reports	Yes	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes	Except that §63.10(e)(3)(i)(C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes	
§63.11	Flares	No	
§63.12	State authority and delegations	Yes	
§63.13	Addresses	Yes	
§63.14	Incorporation by reference	Yes	
§63.15	Availability of information	Yes	

[73 FR 3610, Jan. 18, 2008]

Attachment D: National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources [40 CFR 63, Subpart HHHHHH]

Source Description and Location

Source Name:	Seymour Engine Plant (SEP)
Source Location:	800 East Third Street, Seymour, IN 47274
County:	Jackson
SIC Code:	3519
Part 70 Operating Permit Renewal No.:	T071-30358-00015
Permit Reviewer:	Kimberly Cottrell

Subpart HHHHHH—National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

Source: 73 FR 1759, Jan. 9, 2008, unless otherwise noted.

What This Subpart Covers

§ 63.11169 What is the purpose of this subpart?

Except as provided in paragraph (d) of this section, this subpart establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in any of the activities in paragraphs (a) through (c) of this section. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission standards contained herein.

(a) Paint stripping operations that involve the use of chemical strippers that contain methylene chloride (MeCl), Chemical Abstract Service number 75092, in paint removal processes;

(b) Autobody refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations;

(c) Spray application of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd), collectively referred to as the target HAP to any part or product made of metal or plastic, or combinations of metal and plastic that are not motor vehicles or mobile equipment.

(d) This subpart does not apply to any of the activities described in paragraph (d)(1) through (6) of this section.

(1) Surface coating or paint stripping performed on site at installations owned or operated by the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State), the National Aeronautics and Space Administration, or the National Nuclear Security Administration.

(2) Surface coating or paint stripping of military munitions, as defined in §63.11180, manufactured by or for the Armed Forces of the United States (including the Coast Guard and the National Guard of any such State) or equipment directly and exclusively used for the purposes of transporting military munitions.

(3) Surface coating or paint stripping performed by individuals on their personal vehicles, possessions, or property, either as a hobby or for maintenance of their personal vehicles, possessions, or property. This subpart also does not apply when these operations are performed by individuals for others without compensation. An individual who spray applies surface coating to more than two motor vehicles or pieces of mobile equipment per year is subject to the requirements in this subpart that pertain to motor vehicle and mobile equipment surface coating regardless of whether compensation is received.

(4) Surface coating or paint stripping that meets the definition of “research and laboratory activities” in §63.11180.

(5) Surface coating or paint stripping that meets the definition of “quality control activities” in §63.11180.

(6) Surface coating or paint stripping activities that are covered under another area source NESHAP.

§ 63.11170 Am I subject to this subpart?

(a) You are subject to this subpart if you operate an area source of HAP as defined in paragraph (b) of this section, including sources that are part of a tribal, local, State, or Federal facility and you perform one or more of the activities in paragraphs (a)(1) through (3) of this section:

(1) Perform paint stripping using MeCl for the removal of dried paint (including, but not limited to, paint, enamel, varnish, shellac, and lacquer) from wood, metal, plastic, and other substrates.

(2) Perform spray application of coatings, as defined in §63.11180, to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations, and mobile repair and refinishing operations that travel to the customer's location, except spray coating applications that meet the definition of facility maintenance in §63.11180. However, if you are the owner or operator of a motor vehicle or mobile equipment surface coating operation, you may petition the Administrator for an exemption from this subpart if you can demonstrate, to the satisfaction of the Administrator, that you spray apply no coatings that contain the target HAP, as defined in §63.11180. Petitions must include a description of the coatings that you spray apply and your certification that you do not spray apply any coatings containing the target HAP. If circumstances change such that you intend to spray apply coatings containing the target HAP, you must submit the initial notification required by 63.11175 and comply with the requirements of this subpart.

(3) Perform spray application of coatings that contain the target HAP, as defined in §63.11180, to a plastic and/or metal substrate on a part or product, except spray coating applications that meet the definition of facility maintenance or space vehicle in §63.11180.

(b) An area source of HAP is a source of HAP that is not a major source of HAP, is not located at a major source, and is not part of a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (Mg) (10 tons) or more per year, or emit any combination of HAP at a rate of 22.68 Mg (25 tons) or more per year.

§ 63.11171 How do I know if my source is considered a new source or an existing source?

(a) This subpart applies to each new and existing affected area source engaged in the activities listed in §63.11170, with the exception of those activities listed in §63.11169(d) of this subpart.

(b) The affected source is the collection of all of the items listed in paragraphs (b)(1) through (6) of this section. Not all affected sources will have all of the items listed in paragraphs (b)(1) through (6) of this section.

(1) Mixing rooms and equipment;

(2) Spray booths, ventilated prep stations, curing ovens, and associated equipment;

(3) Spray guns and associated equipment;

(4) Spray gun cleaning equipment;

(5) Equipment used for storage, handling, recovery, or recycling of cleaning solvent or waste paint; and

(6) Equipment used for paint stripping at paint stripping facilities using paint strippers containing MeCl.

(c) An affected source is a new source if it meets the criteria in paragraphs (c)(1) and (c)(2) of this section.

(1) You commenced the construction of the source after September 17, 2007 by installing new paint stripping or surface coating equipment. If you purchase and install spray booths, enclosed spray gun cleaners, paint stripping equipment to reduce MeCl emissions, or purchase new spray guns to comply with this subpart at an existing source, these actions would not make your existing source a new source.

(2) The new paint stripping or surface coating equipment is used at a source that was not actively engaged in paint stripping and/or miscellaneous surface coating prior to September 17, 2007.

(d) An affected source is reconstructed if it meets the definition of reconstruction in §63.2.

(e) An affected source is an existing source if it is not a new source or a reconstructed source.

General Compliance Requirements

§ 63.11172 When do I have to comply with this subpart?

The date by which you must comply with this subpart is called the compliance date. The compliance date for each type of affected source is specified in paragraphs (a) and (b) of this section.

(a) For a new or reconstructed affected source, the compliance date is the applicable date in paragraph (a)(1) or (2) of this section:

(1) If the initial startup of your new or reconstructed affected source is after September 17, 2007, the compliance date is January 9, 2008.

(2) If the initial startup of your new or reconstructed affected source occurs after January 9, 2008, the compliance date is the date of initial startup of your affected source.

(b) For an existing affected source, the compliance date is January 10, 2011.

§ 63.11173 What are my general requirements for complying with this subpart?

(a) Each paint stripping operation that is an affected area source must implement management practices to minimize the evaporative emissions of MeCl. The management practices must address, at a minimum, the practices in paragraphs (a)(1) through (5) of this section, as applicable, for your operations.

(1) Evaluate each application to ensure there is a need for paint stripping (e.g., evaluate whether it is possible to re-coat the piece without removing the existing coating).

(2) Evaluate each application where a paint stripper containing MeCl is used to ensure that there is no alternative paint stripping technology that can be used.

(3) Reduce exposure of all paint strippers containing MeCl to the air.

(4) Optimize application conditions when using paint strippers containing MeCl to reduce MeCl evaporation (e.g., if the stripper must be heated, make sure that the temperature is kept as low as possible to reduce evaporation).

(5) Practice proper storage and disposal of paint strippers containing MeCl (e.g., store stripper in closed, air-tight containers).

(b) Each paint stripping operation that has annual usage of more than one ton of MeCl must develop and implement a written MeCl minimization plan to minimize the use and emissions of MeCl. The MeCl minimization plan must address, at a minimum, the management practices specified in paragraphs (a)(1) through (5) of this section, as applicable, for your operations. Each operation must post a placard or sign outlining the MeCl minimization plan in each area where paint stripping operations subject to this subpart occur. Paint stripping operations with annual usage of less than one ton of MeCl, must comply with the requirements in paragraphs (a)(1) through (5) of this section, as applicable, but are not required to develop and implement a written MeCl minimization plan.

(c) Each paint stripping operation must maintain copies of annual usage of paint strippers containing MeCl on site at all times.

(d) Each paint stripping operation with annual usage of more than one ton of MeCl must maintain a copy of their current MeCl minimization plan on site at all times.

(e) Each motor vehicle and mobile equipment surface coating operation and each miscellaneous surface coating operation must meet the requirements in paragraphs (e)(1) through (e)(5) of this section.

(1) All painters must be certified that they have completed training in the proper spray application of surface coatings and the proper setup and maintenance of spray equipment. The minimum requirements for training and certification are described in paragraph (f) of this section. The spray application of surface coatings is prohibited by persons who are not certified as having completed the training described in paragraph (f) of this section. The requirements of this paragraph do not apply to the students of an accredited surface coating training program who are under the direct supervision of an instructor who meets the requirements of this paragraph.

(2) All spray-applied coatings must be applied in a spray booth, preparation station, or mobile enclosure that meets the requirements of paragraph (e)(2)(i) of this section and either paragraph (e)(2)(ii), (e)(2)(iii), or (e)(2)(iv) of this section.

(i) All spray booths, preparation stations, and mobile enclosures must be fitted with a type of filter technology that is demonstrated to achieve at least 98-percent capture of paint overspray. The procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, “Gravimetric and Dust-Spot Procedures for Testing Air-Cleaning Devices Used in General Ventilation for Removing Particulate Matter, June 4, 1992” (incorporated by reference, see §63.14 of subpart A of this part). The test coating for measuring filter efficiency shall be a high solids bake enamel delivered at a rate of at least 135 grams per minute from a conventional (non-HVLP) air-atomized spray gun operating at 40 pounds per square inch (psi) air pressure; the air flow rate across the filter shall be 150 feet per minute. Owners and operators may use published filter efficiency data provided by filter vendors to demonstrate compliance with this requirement and are not required to perform this measurement. The requirements of this paragraph do not apply to waterwash spray booths that are operated and maintained according to the manufacturer's specifications.

(ii) Spray booths and preparation stations used to refinish complete motor vehicles or mobile equipment must be fully enclosed with a full roof, and four complete walls or complete side curtains, and must be ventilated at negative pressure so that air is drawn into any openings in the booth walls or preparation station curtains. However, if a spray booth is fully enclosed and has seals on all doors and other openings and has an automatic pressure balancing system, it may be operated at up to, but not more than, 0.05 inches water gauge positive pressure.

(iii) Spray booths and preparation stations that are used to coat miscellaneous parts and products or vehicle subassemblies must have a full roof, at least three complete walls or complete side curtains, and must be ventilated so that air is drawn into the booth. The walls and roof of a booth may have openings, if needed, to allow for conveyors and parts to pass through the booth during the coating process.

(iv) Mobile ventilated enclosures that are used to perform spot repairs must enclose and, if necessary, seal against the surface around the area being coated such that paint overspray is retained within the enclosure and directed to a filter to capture paint overspray.

(3) All spray-applied coatings must be applied with a high volume, low pressure (HVLP) spray gun, electrostatic application, airless spray gun, air-assisted airless spray gun, or an equivalent technology that is demonstrated by the spray gun manufacturer to achieve transfer efficiency comparable to one of the spray gun technologies listed above for a comparable operation, and for which written approval has been obtained from the Administrator. The procedure used to demonstrate that spray gun transfer efficiency is equivalent to that of an HVLP spray gun must be equivalent to the California South Coast Air Quality Management District's “Spray Equipment Transfer Efficiency Test Procedure for Equipment User, May 24, 1989” and “Guidelines for Demonstrating Equivalency with District Approved Transfer Efficient Spray Guns, September 26, 2002” (incorporated by reference, see §63.14 of subpart A of this part). The requirements of this paragraph do not apply to painting performed by students and instructors at paint training centers. The requirements of this paragraph do not apply to the surface coating of aerospace vehicles that involves the coating of components that normally require the use of an airbrush or an extension on the spray gun to properly reach limited access spaces; to the application of coatings on aerospace vehicles that contain fillers that adversely affect atomization with HVLP spray guns; or to the application of coatings on aerospace vehicles that normally have a dried film thickness of less than 0.0013 centimeter (0.0005 in.).

(4) All paint spray gun cleaning must be done so that an atomized mist or spray of gun cleaning solvent and paint residue is not created outside of a container that collects used gun cleaning solvent. Spray gun cleaning may be done with, for example, hand cleaning of parts of the disassembled gun in a container of solvent, by flushing solvent through the gun without atomizing the solvent and paint residue, or by using a fully enclosed spray gun washer. A combination of non-atomizing methods may also be used.

(5) As provided in §63.6(g), we, the U.S. Environmental Protection Agency, may choose to grant you permission to use an alternative to the emission standards in this section after you have requested approval to do so according to §63.6(g)(2).

(f) Each owner or operator of an affected miscellaneous surface coating source must ensure and certify that all new and existing personnel, including contract personnel, who spray apply surface coatings, as defined in §63.11180, are trained in the proper application of surface coatings as required by paragraph (e)(1) of this section. The training program must include, at a minimum, the items listed in paragraphs (f)(1) through (f)(3) of this section.

(1) A list of all current personnel by name and job description who are required to be trained;

(2) Hands-on and classroom instruction that addresses, at a minimum, initial and refresher training in the topics listed in paragraphs (f)(2)(i) through (2)(iv) of this section.

(i) Spray gun equipment selection, set up, and operation, including measuring coating viscosity, selecting the proper fluid tip or nozzle, and achieving the proper spray pattern, air pressure and volume, and fluid delivery rate.

(ii) Spray technique for different types of coatings to improve transfer efficiency and minimize coating usage and overspray, including maintaining the correct spray gun distance and angle to the part, using proper banding and overlap, and reducing lead and lag spraying at the beginning and end of each stroke.

(iii) Routine spray booth and filter maintenance, including filter selection and installation.

(iv) Environmental compliance with the requirements of this subpart.

(3) A description of the methods to be used at the completion of initial or refresher training to demonstrate, document, and provide certification of successful completion of the required training. Owners and operators who can show by documentation or certification that a painter's work experience and/or training has resulted in training equivalent to the training required in paragraph (f)(2) of this section are not required to provide the initial training required by that paragraph to these painters.

(g) As required by paragraph (e)(1) of this section, all new and existing personnel at an affected motor vehicle and mobile equipment or miscellaneous surface coating source, including contract personnel, who spray apply surface coatings, as defined in §63.11180, must be trained by the dates specified in paragraphs (g)(1) and (2) of this section. Employees who transfer within a company to a position as a painter are subject to the same requirements as a new hire.

(1) If your source is a new source, all personnel must be trained and certified no later than 180 days after hiring or no later than July 7, 2008, whichever is later. Painter training that was completed within five years prior to the date training is required, and that meets the requirements specified in paragraph (f)(2) of this section satisfies this requirement and is valid for a period not to exceed five years after the date the training is completed.

(2) If your source is an existing source, all personnel must be trained and certified no later than 180 days after hiring or no later than January 10, 2011, whichever is later. Painter training that was completed within five years prior to the date training is required, and that meets the requirements specified in paragraph (f)(2) of this section satisfies this requirement and is valid for a period not to exceed five years after the date the training is completed.

(3) Training and certification will be valid for a period not to exceed five years after the date the training is completed, and all personnel must receive refresher training that meets the requirements of this section and be re-certified every five years.

[73 FR 1760, Jan. 9, 2008; 73 FR 8408, Feb. 13, 2008]

§ 63.11174 What parts of the General Provisions apply to me?

(a) Table 1 of this subpart shows which parts of the General Provisions in subpart A apply to you.

(b) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

Notifications, Reports, and Records

§ 63.11175 What notifications must I submit?

(a) Initial Notification. If you are the owner or operator of a paint stripping operation using paint strippers containing MeCl and/or a surface coating operation subject to this subpart, you must submit the initial notification required by §63.9(b). For a new affected source, you must submit the Initial Notification no later than 180 days after initial startup or July 7, 2008, whichever is later. For an existing affected source, you must submit the initial notification no later than January 11, 2010. The initial notification must provide the information specified in paragraphs (a)(1) through (8) of this section.

(1) The company name, if applicable.

(2) The name, title, street address, telephone number, e-mail address (if available), and signature of the owner and operator, or other certifying company official;

(3) The street address (physical location) of the affected source and the street address where compliance records are maintained, if different. If the source is a motor vehicle or mobile equipment surface coating operation that repairs vehicles at the customer's location, rather than at a fixed location, such as a collision repair shop, the notification should state this and indicate the physical location where records are kept to demonstrate compliance;

(4) An identification of the relevant standard (i.e., this subpart, 40 CFR part 63, subpart HHHHHH);

(5) A brief description of the type of operation as specified in paragraph (a)(5)(i) or (ii) of this section.

(i) For all surface coating operations, indicate whether the source is a motor vehicle and mobile equipment surface coating operation or a miscellaneous surface coating operation, and include the number of spray booths and preparation stations, and the number of painters usually employed at the operation.

(ii) For paint stripping operations, identify the method(s) of paint stripping employed (e.g., chemical, mechanical) and the substrates stripped (e.g., wood, plastic, metal).

(6) Each paint stripping operation must indicate whether they plan to annually use more than one ton of MeCl after the compliance date.

(7) A statement of whether the source is already in compliance with each of the relevant requirements of this subpart, or whether the source will be brought into compliance by the compliance date. For paint stripping operations, the relevant requirements that you must evaluate in making this determination are specified in §63.11173(a) through (d) of this subpart. For surface coating operations, the relevant requirements are specified in §63.11173(e) through (g) of this subpart.

(8) If your source is a new source, you must certify in the initial notification whether the source is in compliance with each of the requirements of this subpart. If your source is an existing source, you may certify in the initial notification that the source is already in compliance. If you are certifying in the initial notification that the source is in compliance with the relevant requirements of this subpart, then include also a statement by a responsible official with that official's name, title, phone number, e-mail address (if available) and signature, certifying the truth, accuracy, and completeness of the notification, a statement that the source has complied with all the relevant standards of this subpart, and that this initial notification also serves as the notification of compliance status.

(b) Notification of Compliance Status. If you are the owner or operator of a new source, you are not required to submit a separate notification of compliance status in addition to the initial notification specified in paragraph (a) of this subpart provided you were able to certify compliance on the date of the initial notification, as part of the initial notification, and your compliance status has not since changed. If you are the owner or operator of any existing source and did not certify in the initial notification that your source is already in compliance as specified in paragraph (a) of this section, then you must submit a notification of compliance status. You must submit a Notification of Compliance Status on or before March 11, 2011. You are required to submit the information specified in paragraphs (b)(1) through (4) of this section with your Notification of Compliance Status:

(1) Your company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

(2) The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance. For paint stripping operations, the relevant requirements that you must evaluate in making this determination are specified in §63.11173(a) through (d). For surface coating operations, the relevant requirements are specified in §63.11173(e) through (g).

(3) The date of the Notification of Compliance Status.

(4) If you are the owner or operator of an existing affected paint stripping source that annually uses more than one ton of MeCl, you must submit a statement certifying that you have developed and are implementing a written MeCl minimization plan in accordance with §63.11173(b).

§ 63.11176 What reports must I submit?

(a) Annual Notification of Changes Report. If you are the owner or operator of a paint stripping, motor vehicle or mobile equipment, or miscellaneous surface coating affected source, you are required to submit a report in each calendar year in which information previously submitted in either the initial notification required by §63.11175(a), Notification of Compliance, or a previous annual notification of changes report submitted under this paragraph, has changed. Deviations from the relevant requirements in §63.11173(a) through (d) or §63.11173(e) through (g) on the date of the report will be deemed to be a change. This includes notification when paint stripping affected sources that have not developed and implemented a written MeCl minimization plan in accordance with §63.11173(b) used more than one ton of MeCl in the previous calendar year. The annual notification of changes report must be submitted prior to March 1 of each calendar year when reportable changes have occurred and must include the information specified in paragraphs (a)(1) through (2) of this section.

(1) Your company's name and the street address (physical location) of the affected source and the street address where compliance records are maintained, if different.

(2) The name, title, address, telephone, e-mail address (if available) and signature of the owner and operator, or other certifying company official, certifying the truth, accuracy, and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart or an explanation of any noncompliance and a description of corrective actions being taken to achieve compliance.

(b) If you are the owner or operator of a paint stripping affected source that has not developed and implemented a written MeCl minimization plan in accordance with §63.11173(b) of this subpart, you must submit a report for any calendar year in which you use more than one ton of MeCl. This report must be submitted no later than March 1 of the following calendar year. You must also develop and implement a written MeCl minimization plan in accordance with §63.11173(b) no later than December 31. You must then submit a Notification of Compliance Status report containing the information specified in §63.11175(b) by March 1 of the following year and comply with the requirements for paint stripping operations that annually use more than one ton of MeCl in §§63.11173(d) and 63.11177(f).

§ 63.11177 What records must I keep?

If you are the owner or operator of a surface coating operation, you must keep the records specified in paragraphs (a) through (d) and (g) of this section. If you are the owner or operator of a paint stripping operation, you must keep the records specified in paragraphs (e) through (g) of this section, as applicable.

(a) Certification that each painter has completed the training specified in §63.11173(f) with the date the initial training and the most recent refresher training was completed.

(b) Documentation of the filter efficiency of any spray booth exhaust filter material, according to the procedure in §63.11173(e)(3)(i).

(c) Documentation from the spray gun manufacturer that each spray gun with a cup capacity equal to or greater than 3.0 fluid ounces (89 cc) that does not meet the definition of an HVLP spray gun, electrostatic application, airless spray gun, or air assisted airless spray gun, has been determined by the Administrator to achieve a transfer efficiency equivalent to that of an HVLP spray gun, according to the procedure in §63.11173(e)(4).

(d) Copies of any notification submitted as required by §63.11175 and copies of any report submitted as required by §63.11176.

(e) Records of paint strippers containing MeCl used for paint stripping operations, including the MeCl content of the paint stripper used. Documentation needs to be sufficient to verify annual usage of paint strippers containing MeCl (e.g., material safety data sheets or other documentation provided by the manufacturer or supplier of the paint stripper, purchase receipts, records of paint stripper usage, engineering calculations).

(f) If you are a paint stripping source that annually uses more than one ton of MeCl you are required to maintain a record of your current MeCl minimization plan on site for the duration of your paint stripping operations. You must also keep records of your annual review of, and updates to, your MeCl minimization plan.

(g) Records of any deviation from the requirements in §§63.11173, 63.11174, 63.11175, or 63.11176. These records must include the date and time period of the deviation, and a description of the nature of the deviation and the actions taken to correct the deviation.

(h) Records of any assessments of source compliance performed in support of the initial notification, notification of compliance status, or annual notification of changes report.

§ 63.11178 In what form and for how long must I keep my records?

(a) If you are the owner or operator of an affected source, you must maintain copies of the records specified in §63.11177 for a period of at least five years after the date of each record. Copies of records must be kept on site and in a printed or electronic form that is readily accessible for inspection for at least the first two years after their date, and may be kept off-site after that two year period.

Other Requirements and Information

§ 63.11179 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator and are not transferred to the State, local, or tribal agency.

(c) The authority in §63.11173(e)(5) will not be delegated to State, local, or tribal agencies.

§ 63.11180 What definitions do I need to know?

Terms used in this subpart are defined in the Clean Air Act, in 40 CFR 63.2, and in this section as follows:

Additive means a material that is added to a coating after purchase from a supplier (e.g., catalysts, activators, accelerators).

Administrator means, for the purposes of this rulemaking, the Administrator of the U.S. Environmental Protection Agency or the State or local agency that is granted delegation for implementation of this subpart.

Aerospace vehicle or component means any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets, and space vehicles.

Airless and air-assisted airless spray mean any paint spray technology that relies solely on the fluid pressure of the paint to create an atomized paint spray pattern and does not apply any atomizing compressed air to the paint before it leaves the paint nozzle. Air-assisted airless spray uses compressed air to shape and distribute the fan of atomized paint, but still uses fluid pressure to create the atomized paint.

Appurtenance means any accessory to a stationary structure coated at the site of installation, whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lamp posts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks, and fire escapes; and window screens.

Architectural coating means a coating to be applied to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs.

Cleaning material means a solvent used to remove contaminants and other materials, such as dirt, grease, or oil, from a substrate before or after coating application or from equipment associated with a coating operation, such as spray booths, spray guns, racks, tanks, and hangers. Thus, it includes any cleaning material used on substrates or equipment or both.

Coating means, for the purposes of this subpart, a material spray-applied to a substrate for decorative, protective, or functional purposes. For the purposes of this subpart, coating does not include the following materials:

(1) Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances.

(2) Paper film or plastic film that may be pre-coated with an adhesive by the film manufacturer.

(3) Adhesives, sealants, maskants, or caulking materials.

(4) Temporary protective coatings, lubricants, or surface preparation materials.

(5) In-mold coatings that are spray-applied in the manufacture of reinforced plastic composite parts.

Compliance date means the date by which you must comply with this subpart.

Deviation means any instance in which an affected source, subject to this subpart, or an owner or operator of such a source fails to meet any requirement or obligation established by this subpart.

Dry media blasting means abrasive blasting using dry media. Dry media blasting relies on impact and abrasion to remove paint from a substrate. Typically, a compressed air stream is used to propel the media against the coated surface.

Electrostatic application means any method of coating application where an electrostatic attraction is created between the part to be coated and the atomized paint particles.

Equipment cleaning means the use of an organic solvent to remove coating residue from the surfaces of paint spray guns and other painting related equipment, including, but not limited to stir sticks, paint cups, brushes, and spray booths.

Facility maintenance means, for the purposes of this subpart, surface coating performed as part of the routine repair or renovation of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity. *Facility maintenance* also includes surface coating associated with the installation of new equipment or structures, and the application of any surface coating as part of janitorial activities. *Facility maintenance* includes the application of coatings to stationary structures or their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. *Facility maintenance* also includes the refinishing of mobile equipment in the field or at the site where they are used in service and at which they are intended to remain indefinitely after refinishing. Such mobile equipment includes, but is not limited to, farm equipment and mining equipment for which it is not practical or feasible to move to a dedicated mobile equipment refinishing facility. Such mobile equipment also includes items, such as fork trucks, that are used in a manufacturing facility and which are refinished in that same facility. *Facility maintenance* does not include surface coating of motor vehicles, mobile equipment, or items that routinely leave and return to the facility, such as delivery trucks, rental equipment, or containers used to transport, deliver, distribute, or dispense commercial products to customers, such as compressed gas canisters.

High-volume, low-pressure (HVLP) spray equipment means spray equipment that is permanently labeled as such and used to apply any coating by means of a spray gun which is designed and operated between 0.1 and 10 pounds per square inch gauge (psig) air atomizing pressure measured dynamically at the center of the air cap and at the air horns.

Initial startup means the first time equipment is brought online in a paint stripping or surface coating operation, and paint stripping or surface coating is first performed.

Materials that contain HAP or *HAP-containing materials* mean, for the purposes of this subpart, materials that contain 0.1 percent or more by mass of any individual HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4), or 1.0 percent or more by mass for any other individual HAP.

Military munitions means all ammunition products and components produced or used by or for the U.S. Department of Defense (DoD) or for the U.S. Armed Services for national defense and security, including military munitions under the control of the Department of Defense, the U.S. Coast Guard, the National Nuclear Security Administration (NNSA), U.S. Department of Energy (DOE), and National Guard personnel. The term military munitions includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DoD components, including bulk explosives and chemical warfare agents, chemical munitions, biological weapons, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, nonnuclear components of nuclear weapons, wholly inert ammunition products, and all devices and components of any items listed in this definition.

Miscellaneous parts and/or products means any part or product made of metal or plastic, or combinations of metal and plastic. Miscellaneous parts and/or products include, but are not limited to, metal and plastic components of the following types of products as well as the products themselves: motor vehicle parts and accessories for automobiles, trucks, recreational vehicles; automobiles and light duty trucks at automobile and light duty truck assembly plants; boats; sporting and recreational goods; toys; business machines; laboratory and medical equipment; and household and other consumer products.

Miscellaneous surface coating operation means the collection of equipment used to apply surface coating to miscellaneous parts and/or products made of metal or plastic, including applying cleaning solvents to prepare the surface before coating application, mixing coatings before application, applying coating to a surface, drying or curing the coating after application, and cleaning coating application equipment, but not plating. A single surface coating operation may include any combination of these types of equipment, but always includes at least the point at which a coating material is applied to a given part. A surface coating operation includes all other steps (such as surface preparation with solvent and equipment cleaning) in the affected source where HAP are emitted from the coating of a part. The use of solvent to clean parts (for example, to remove grease during a mechanical repair) does not constitute a miscellaneous surface coating operation if no coatings are applied. A single affected source may have multiple surface coating operations. Surface coatings applied to wood, leather, rubber, ceramics, stone, masonry, or substrates other than metal and plastic are not considered miscellaneous surface coating operations for the purposes of this subpart.

Mobile equipment means any device that may be drawn and/or driven on a roadway including, but not limited to, heavy-duty trucks, truck trailers, fleet delivery trucks, buses, mobile cranes, bulldozers, street cleaners, agriculture equipment, motor homes, and other recreational vehicles (including camping trailers and fifth wheels).

Motor vehicle means any self-propelled vehicle, including, but not limited to, automobiles, light duty trucks, golf carts, vans, and motorcycles.

Motor vehicle and mobile equipment surface coating means the spray application of coatings to assembled motor vehicles or mobile equipment. For the purposes of this subpart, it does not include the surface coating of motor vehicle or mobile equipment parts or subassemblies at a vehicle assembly plant or parts manufacturing plant.

Non-HAP solvent means, for the purposes of this subpart, a solvent (including thinners and cleaning solvents) that contains less than 0.1 percent by mass of any individual HAP that is an OSHA-defined carcinogen as specified in 29 CFR 1910.1200(d)(4) and less than 1.0 percent by mass for any other individual HAP.

Paint stripping and/or miscellaneous surface coating source or facility means any shop, business, location, or parcel of land where paint stripping or miscellaneous surface coating operations are conducted.

Paint stripping means the removal of dried coatings from wood, metal, plastic, and other substrates. A single affected source may have multiple paint stripping operations.

Painter means any person who spray applies coating.

Plastic refers to substrates containing one or more resins and may be solid, porous, flexible, or rigid. Plastics include fiber reinforced plastic composites.

Protective oil means organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes, but is not limited to, lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

Quality control activities means surface coating or paint stripping activities that meet all of the following criteria:

(1) The activities associated with a surface coating or paint stripping operation are intended to detect and correct defects in the final product by selecting a limited number of samples from the operation, and comparing the samples against specific performance criteria.

(2) The activities do not include the production of an intermediate or final product for sale or exchange for commercial profit; for example, parts that are surface coated or stripped are not sold and do not leave the facility.

(3) The activities are not a normal part of the surface coating or paint stripping operation; for example, they do not include color matching activities performed during a motor vehicle collision repair.

(4) The activities do not involve surface coating or stripping of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity; that is, the activities are not facility maintenance.

Research and laboratory activities means surface coating or paint stripping activities that meet one of the following criteria:

(1) Conducted at a laboratory to analyze air, soil, water, waste, or product samples for contaminants, or environmental impact.

(2) Activities conducted to test more efficient production processes, including alternative paint stripping or surface coating materials or application methods, or methods for preventing or reducing adverse environmental impacts, provided that the activities do not include the production of an intermediate or final product for sale or exchange for commercial profit.

(3) Activities conducted at a research or laboratory facility that is operated under the close supervision of technically trained personnel, the primary purpose of which is to conduct research and development into new processes and products and that is not engaged in the manufacture of products for sale or exchange for commercial profit.

Solvent means a fluid containing organic compounds used to perform paint stripping, surface prep, or cleaning of surface coating equipment.

Space Vehicle means vehicles designed to travel beyond the limit of the earth's atmosphere, including but not limited to satellites, space stations, and the Space Shuttle System (including orbiter, external tanks, and solid rocket boosters).

Spray-applied coating operations means coatings that are applied using a hand-held device that creates an atomized mist of coating and deposits the coating on a substrate. For the purposes of this subpart, spray-applied coatings do not include the following materials or activities:

(1) Coatings applied from a hand-held device with a paint cup capacity that is equal to or less than 3.0 fluid ounces (89 cubic centimeters).

(2) Surface coating application using powder coating, hand-held, non-refillable aerosol containers, or non-atomizing application technology, including, but not limited to, paint brushes, rollers, hand wiping, flow coating, dip coating, electrodeposition coating, web coating, coil coating, touch-up markers, or marking pens.

(3) Thermal spray operations (also known as metallizing, flame spray, plasma arc spray, and electric arc spray, among other names) in which solid metallic or non-metallic material is heated to a molten or semi-molten state and propelled to the work piece or substrate by compressed air or other gas, where a bond is produced upon impact.

Surface preparation or *Surface prep* means use of a cleaning material on a portion of or all of a substrate prior to the application of a coating.

Target HAP are compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).

Target HAP containing coating means a spray-applied coating that contains any individual target HAP that is an Occupational Safety and Health Administration (OSHA)–defined carcinogen as specified in 29 CFR 1910.1200(d)(4) at a concentration greater than 0.1 percent by mass, or greater than 1.0 percent by mass for any other individual target HAP compound. For the purpose of determining whether materials you use contain the target HAP compounds, you may rely on formulation data provided by the manufacturer or supplier, such as the material safety data sheet (MSDS), as long as it represents each target HAP compound in the material that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other target HAP compounds.

Transfer efficiency means the amount of coating solids adhering to the object being coated divided by the total amount of coating solids sprayed, expressed as a percentage. Coating solids means the nonvolatile portion of the coating that makes up the dry film.

Truck bed liner coating means any coating, excluding color coats, labeled and formulated for application to a truck bed to protect it from surface abrasion.

Table 1 to Subpart HHHHHH of Part 63—Applicability of General Provisions to Subpart HHHHHH of Part 63

Citation	Subject	Applicable to subpart HHHHHH	Explanation
§63.1(a)(1)–(12)	General Applicability	Yes	
§63.1(b)(1)–(3)	Initial Applicability Determination	Yes	Applicability of subpart HHHHHH is also specified in §63.11170.
§63.1(c)(1)	Applicability After Standard Established	Yes	
§63.1(c)(2)	Applicability of Permit Program for Area Sources	Yes	(63.11174(b) of Subpart HHHHHH exempts area sources from the obligation to obtain Title V operating permits.
§63.1(c)(5)	Notifications	Yes	
§63.1(e)	Applicability of Permit Program to Major Sources Before Relevant Standard is Set	No	(63.11174(b) of Subpart HHHHHH exempts area sources from the obligation to obtain Title V operating permits.
§63.2	Definitions	Yes	Additional definitions are specified in §63.11180.
§63.3(a)–(c)	Units and Abbreviations	Yes	
§63.4(a)(1)–(5)	Prohibited Activities	Yes	
§63.4(b)–(c)	Circumvention/Fragmentation	Yes	
§63.5	Construction/Reconstruction of major sources	No	Subpart HHHHHH applies only to area sources.

Citation	Subject	Applicable to subpart HHHHHH	Explanation
§63.6(a)	Compliance With Standards and Maintenance Requirements—Applicability	Yes	
§63.6(b)(1)–(7)	Compliance Dates for New and Reconstructed Sources	Yes	§63.11172 specifies the compliance dates.
§63.6(c)(1)–(5)	Compliance Dates for Existing Sources	Yes	§63.11172 specifies the compliance dates.
§63.6(e)(1)–(2)	Operation and Maintenance	Yes	
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	No	No startup, shutdown, and malfunction plan is required by subpart HHHHHH.
§63.6(f)(1)	Compliance Except During Startup, Shutdown, and Malfunction	Yes	
§63.6(f)(2)–(3)	Methods for Determining Compliance	Yes	
§63.6(g)(1)–(3)	Use of an Alternative Standard	Yes	
§63.6(h)	Compliance With Opacity/Visible Emission Standards	No	Subpart HHHHHH does not establish opacity or visible emission standards.
§63.6(i)(1)–(16)	Extension of Compliance	Yes	
§63.6(j)	Presidential Compliance Exemption	Yes	
§63.7	Performance Testing Requirements	No	No performance testing is required by subpart HHHHHH.
§63.8	Monitoring Requirements	No	Subpart HHHHHH does not require the use of continuous monitoring systems.
§63.9(a)–(d)	Notification Requirements	Yes	§63.11175 specifies notification requirements.
§63.9(e)	Notification of Performance Test	No	Subpart HHHHHH does not require performance tests.
§63.9(f)	Notification of Visible Emissions/Opacity Test	No	Subpart HHHHHH does not have opacity or visible emission standards.
§63.9(g)	Additional Notifications When Using CMS	No	Subpart HHHHHH does not require the use of continuous monitoring systems.
§63.9(h)	Notification of Compliance Status	No	§63.11175 specifies the dates and required content for submitting the notification of compliance status.
§63.9(i)	Adjustment of Submittal Deadlines	Yes	

Citation	Subject	Applicable to subpart HHHHHH	Explanation
§63.9(j)	Change in Previous Information	Yes	§63.11176(a) specifies the dates for submitting the notification of changes report.
§63.10(a)	Recordkeeping/Reporting—Applicability and General Information	Yes	
§63.10(b)(1)	General Recordkeeping Requirements	Yes	Additional requirements are specified in §63.11177.
§63.10(b)(2)(i)–(xi)	Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS	No	Subpart HHHHHH does not require startup, shutdown, and malfunction plans, or CMS.
§63.10(b)(2)(xii)	Waiver of recordkeeping requirements	Yes	
§63.10(b)(2)(xiii)	Alternatives to the relative accuracy test	No	Subpart HHHHHH does not require the use of CEMS.
§63.10(b)(2)(xiv)	Records supporting notifications	Yes	
§63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations	Yes	
§63.10(c)	Additional Recordkeeping Requirements for Sources with CMS	No	Subpart HHHHHH does not require the use of CMS.
§63.10(d)(1)	General Reporting Requirements	Yes	Additional requirements are specified in §63.11176.
§63.10(d)(2)–(3)	Report of Performance Test Results, and Opacity or Visible Emissions Observations	No	Subpart HHHHHH does not require performance tests, or opacity or visible emissions observations.
§63.10(d)(4)	Progress Reports for Sources With Compliance Extensions	Yes	
§63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	No	Subpart HHHHHH does not require startup, shutdown, and malfunction reports.
§63.10(e)	Additional Reporting requirements for Sources with CMS	No	Subpart HHHHHH does not require the use of CMS.
§63.10(f)	Recordkeeping/Reporting Waiver	Yes	
§63.11	Control Device Requirements/Flares	No	Subpart HHHHHH does not require the use of flares.
§63.12	State Authority and Delegations	Yes	
§63.13	Addresses of State Air Pollution Control Agencies and EPA Regional Offices	Yes	

Citation	Subject	Applicable to subpart HHHHHH	Explanation
§63.14	Incorporation by Reference	Yes	Test methods for measuring paint booth filter efficiency and spray gun transfer efficiency in §63.11173(e)(2) and (3) are incorporated and included in §63.14.
§63.15	Availability of Information/Confidentiality	Yes	
§63.16(a)	Performance Track Provisions—reduced reporting	Yes	
§63.16(b)–(c)	Performance Track Provisions—reduced reporting	No	Subpart HHHHHH does not establish numerical emission limits.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD)
for a Part 70 Significant Permit Modification

Source Description and Location

Source Name:	Seymour Engine Plant (SEP)
Source Location:	800 East Third Street, Seymour, IN 47274
County:	Jackson
SIC Code:	3519
Operation Permit No.:	T071-30358-00015
Operation Permit Issuance Date:	December 28, 2006
Significant Source Modification No.:	071-30956-00015
Significant Permit Modification No.:	071-30962-00015
Permit Reviewer:	Josiah Balogun

Public Notice Information

On January 11, 2012, the Office of Air Quality (OAQ) had a notice published in the Tribune in Seymour, Indiana, stating that Seymour Engine Plant had applied for a Significant Modification to their Part 70 Operating Title V Permit issued on December 28, 2006 relating to updates in their permit. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments Received

On February 8, 2012, IDEM, OAQ received comments from Bruce Carter of Bruce Carter Associates. The comments are summarized in the subsequent pages, with IDEM's corresponding responses.

No changes have been made to the TSD because the OAQ prefers that the Technical Support Document reflects the permit that was on public notice. Changes that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result, ensuring that these types of concerns are documented and part of the record regarding this permit decision.

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

Comment 1: IDEM should revise the descriptive information in Section A.2 in the permit.

Response 1: The descriptive information in Section A.2 has been revised in the permit accordingly.

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

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

(a) *******

.....

(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 burner~~s~~, 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.

.....

(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.

Comment 2: IDEM should revise the single HAPs limit from 9.0 tons per year to 9.5 tons per year.

Response 2: The single HAPs limit has been revised in Condition D.1.4 - Hazardous Air Pollutants (HAPs) Minor Limits [40 CFR 63] to reflect the permitted limit in the permit.

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** ~~nine (9)~~ tons per twelve (12) consecutive month period for any single HAP with compliance determined at the end of each month period.

.....

Comment 3: All paints that SEP is currently using comply with the requirements of 326 8-2-9. The use of compliant coating can be demonstrated by maintaining records of MSDS and manufacture's information on VOC content. SEP requests that daily recordkeeping be removed from the permit and section D.1.9 be drafted as follows:

Response 3: Condition D.1.9 - Record Keeping Requirements has been revised in the permit accordingly.

D.1.9 Record Keeping Requirements

(a) To document the compliance status with condition D.1.2, the Permittee shall maintain records in accordance with (1) through (**4**~~5~~) below. Records maintained for (1) through (**4**~~5~~) shall be taken **monthly** ~~daily~~ and shall be complete and sufficient to establish compliance with the VOC usage limit established in condition D.1.2.

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

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

.....

(3) The **monthly** ~~daily~~ cleanup solvent usage; and
(4) The total VOC usage for each **month** ~~day~~.

.....

Comment 4: IDEM should revise the descriptive information in Section D.2 in the permit.

Response 4: The descriptive information in Section D.2 and few typos have been corrected in the permit accordingly.

SECTION D.2 EMISSION UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) **********

.....

(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 burner~~s~~, 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.

.....

(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.

.....

(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 PSD Minor Limit [326 IAC 2-2]

(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.

.....

~~(b) The NO_x emissions shall not exceed:~~

Where:

.....

(**b**~~c~~) 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.

.....

~~(d) The VOC emissions shall not exceed:~~

Where:

.....

(**c**~~e~~) 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.

.....

~~(f) The CO emissions shall not exceed:~~

Where:

.....

(**d**~~g~~) 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B, 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVdf x EfCO2df x GWP(CO2) ~~/2000~~ **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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVng x EfCO2ng x GWP(CO2) ~~/2000~~ **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, Test Pad 11**)**~~, Boiler EU-03A and Boiler EU-03B)~~ x HHVlp x EfCO2lp x GWP(CO2) ~~/2000~~ **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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVdf x EfCH4pet x GWP(CH4) ~~/2000~~ **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, Test Pad 11, ~~Boiler EU-03A and Boiler EU-03B~~) x HHVlp x EfCH4pet x GWP(CH4) ~~/2000~~ **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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVng x EfCH4ng x GWP(CH4) ~~/2000~~ **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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVdf x EfN2Opet x GWP(N2O) ~~/2000~~ **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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVlp x EfN2Opet x GWP(N2O) ~~/2000~~ **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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVng x EfN2Ong x GWP(N2O) ~~/2000~~ **x 0.0011023**

.....

NEW EMISSION LIMITS FOR THE NEW UNITS [HHP1, HHP6-HHP14, Boilers, Duct Burners, and Emergency Generators]

(**e**~~h~~) The total NOx emissions from HHP1, HHP6 – HHP14, the boilers, the duct burners and the emergency generator shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

.....

(**f**~~i~~) The total CO emissions from HHP1, HHP6 – HHP14, the boilers, the duct burners and the emergency generator shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

.....

(**g**~~j~~) The total VOC emissions from HHP1, HHP6 – HHP14, the new paint booths, the boilers, the duct burners and the emergency generator 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 of VOC/gal of diesel fuel)

+

(Biodiesel fuel burned by HHP1, HHP6 – HHP14) x (Ef2v of VOC/gal of biodiesel fuel)

+

(Natural gas burned by HHP1, HHP6 – HHP14) x (Ef3v of VOC/ft^3 of natural gas)

+

(Hydrogen gas burned by HHP1, HHP6 – HHP14) x (Ef4v of VOC/ft^3 of natural gas)

+

(Natural gas burned by HHP1, HHP6 – HHP14) x (Ef5v of VOC/ft^3 of natural gas)

+

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.

+

Ef6v lbs/mmcf x Ng (mmcf/month) x (1 ton/2000 pounds).

+

Ef7v lbs/mmcf x Nga (mmcf/month) x (1 ton/2000 pounds).

+

Ef8v lb/hp-hr x De (hp-hr/month) x (1 ton/2000 pounds).

+

Lb of Propane vented in HHP 6 and HHP 10 X (1 ton/2000 lb)

.....

(**h**~~k~~) The total CO2e emissions from the Test Cells, identified as HHP1, HHP 6-14, duct burners, emergency generator and the twenty two (22) boilers 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, duct burners, emergency generator and boilers) x HHVdf x EfCO2df x GWP (CO2) ~~/2000~~ **x 0.0011023**

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP1, duct burners, emergency generator and boilers) x HHVng x EfCO2ng x GWP(CO2) ~~/2000~~ **x 0.0011023**

+

(gallons of diesel fuel and biodiesel fuel burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVdf x EfCH4pet x GWP(CH4) ~~/2000~~ **x 0.0011023**

+

(SCF of natural gas burned by Test Cells HHP 6-14,

HHP 1, duct burners, emergency generator and boilers) x HHVng x EfCH4ng x GWP(CH4) ~~/2000~~ **x 0.0011023**

+

(gallons of diesel fuel and biodiesel fuel burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVdf x EfN2Opet x GWP(N2O) ~~/2000~~ **x 0.0011023**

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP1, duct burners, emergency generator and boilers) x HHVng x EfN2Ong x GWP(N2O) ~~/2000~~ **x 0.0011023**

+

(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfCO2lp x GWP(CO2) ~~/2000~~ **x 0.0011023**

+

(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfCH4pet x GWP(CH4) ~~/2000~~ **x 0.0011023**

+

(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfN2Opet x GWP(N2O) ~~/2000~~ **x 0.0011023**

+

(mass of hydrogen gas burned by Test Cells HHP 6-14, HHP 1) X EfCO2eh2

+

~~Metric tons~~ **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)

.....

D.2.3 Sulfur Dioxide (SO_2) Operational Limits

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

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

(2) Four (4) existing test cells, HHP2, HHP4, Test Pad 8, and Test Pad 10, shall burn diesel with a fuel sulfur content limit of 1,000 parts per million (ppm), but only two (2) of these four test cells may burn diesel fuel with 1000 PPM S at any given time, alternatively, three (3) existing test cells, HHP4, Test Pad 8 and Test Pad 10 shall burn diesel with a fuel sulfur content limit~~s~~ of 2,000 parts per million (ppm), but only one (1) of these three test cells may burn diesel fuel with 2000 PPM S at any given time.

.....

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

D.2.5 Nitrogen Oxide (NOx) Control

In order to ensure compliance with Condition D.2.1(~~e~~h), 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**~~h~~).

D.2.6 Carbon Monoxide (CO) Control

In order to ensure compliance with Condition D.2.1(**f**~~i~~), 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**~~i~~).

D.2.9 SCR Parametric Monitoring

(a) In order to demonstrate compliance status with Conditions D.2.1(**e**~~h~~), 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**~~h~~), 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 NOx 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).

Comment 5: SEP will be developing an Alternate Emission Factor in accordance with Nonrule Policy Document “Air-014-NPD” for NOx when the SCR is not operating. SEP is requesting the following language be inserted into section D.2.7 (b) to allow this as an accepted method to determine emission factors for NOx when the SR is not operating:

Response 5: The Testing Requirements has been updated in the permit accordingly.

D.2.7 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.2.1(**e**~~h~~) 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**~~h~~) 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.

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(c) In order to demonstrate compliance with Condition D.2.1(**f**~~i~~) 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.

Comment 6: The supplier of the emission control equipment has notified SEP that it will not be possible to use temperature as a parametric indicator of the performance of the Oxidation Catalyst. SEP proposes to use a portable analyzer to determine downstream concentrations of CO to determine the performance of the oxidation catalyst. SEP proposes the following changes to section D.2.10 to allow the use of a portable analyzer as a measure of performance:

Response 6: The Oxidation Catalyst Parametric Monitoring has been updated in the permit acordingly.

D.2.10 Oxidation Catalyst Parametric Monitoring

(a) In order to demonstrate the compliance status with Conditions D.2.1(**f**~~l~~), 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**~~h~~), the Permittee shall monitor ~~the DOC temperature based~~ 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 ~~temperature based~~ **the** performance characteristics of the DOC **as measured by the portable analyzer** do not correlate with **those established during** ~~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

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.

Comment 7: In order for SEP to comply with NAAQS for SO_2, two conditions must be met as described in section D.2.3. Section 2.11 (b) establishes the fuel certification for the Ultra Low Sulfur Diesel Fuel that is used plant wide required in section D.2.3 (1). However, there are no recordkeeping requirements for establishing compliance with the High Sulfur testing requirements established in section D.2.3 (2). SEP suggests adding Section D.2.11 (c) to address high sulfur testing.

Response 7: A sub-condition has been added to Condition D.2.11 - Record Keeping Requirement to establish a High Sulfur testing requirements.

D.2.11 Record Keeping Requirements

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(b) To document the compliance status with Condition D.2.4**3(1)** , 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.2.3(2), 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**~~c~~) **********

(**e**~~d~~) **********

(**f**~~e~~) **********

(**g**~~f~~) **********

Technical Support Document (TSD)

Comment 8: **"Total for 2011 Modification for SO2" on page 6 should be 1.90 tpy and the "Total after Modification" should be 24.56 tpy based on the calculations provided in Jan 2012. Table on page 7 needs to show uncontrolled CO PTE as 170.94 tpy and NOx as 737.99 for each emission unit, per the calculations sent to IDEM in Jan 2012. The worse case fuel for CO and NOx are the newly added propane and hydrogen, respectively.**

Response 8: No changes shall be made to the Technical Support Document (TSD) because the OAQ prefers that the TSD reflects the permit that was public noticed. The Permit Level Determination - PSD table that was public noticed was improper and should be disregarded because the information it contained for PM, PM10, PM2.5 and VOC emissions were incorrect. The source has included the emission of the old paint booths in the source status pending the time that the source will install the new paint lines. After the installation of the new paint lines that old paint booths will be removed from the permit. IDEM has revised the Permit Level Determination - PSD table and the revisions are documented below in this Addendum to the Technical Support Document (TSD).

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 and permit 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**
Before Modification								
Existing Test Cells	233.11	231.45	231.45	22.53	163.56	183.62	217.9	--
Existing Old Paint Booths EU-01A, EU-02C, EU-01D & EU-01F	**6.40**	**6.40**	**6.40**	**0**	**57.52**	**0**	**0**	**---**
Existing Old Paint Booths EU-01B					**23.35**			
Existing Boilers (B1 and B2)	0.3	1.4	1.4	0.1	1.0	15.4	18.3	--
Total Before Modification	**~~233.41~~ 239.81**	**~~232.85~~ 239.25**	**~~232.85~~ 239.85**	**22.63**	**~~164.56~~ 245.43**	**199.02**	**263.20**	**99,000**
2011 Modification								
Diesel Storage Tank	0	0	0	0	0.072	0	0	0

	Potential to Emit (ton/yr)							
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**VOC**	**CO**	**NO_X**	**GHGs**
New Paint Lines	1.65	1.65	1.65	0	248	0	0	0
HHP 1	7.48	6.91	6.7	0.18		248	248	99,000
HHP 6	7.48	6.91	6.7	0.18				
HHP 7	7.48	6.91	6.7	0.18				
HHP8	7.48	6.91	6.7	0.18				
HHP9	7.48	6.91	6.7	0.18				
HHP10	7.48	6.91	6.7	0.18				
HHP11	7.48	6.91	6.7	0.18				
HHP 12	7.48	6.91	6.7	0.18				
HHP 13	7.48	6.91	6.7	0.18				
HHP 14	7.48	6.91	6.7	0.18				
Twenty-Two (22) New Boilers (EU03C-EU03X)	0.4	1.6	1.6	0.1				
Ten (10) Duct Burners	0.1	0.5	0.5	0.0				
Emergency Generators	0.26	0.15	0.15	0.0045				
Total for 2011 Modification	**77.21**	**73**	**70.90**	**1.90**	**248.07**	**248**	**248**	**99,000**
Total after Modification	**~~310.62~~ 317.02**	**~~305.85~~ 312.25**	**~~303.75~~ 310.15**	**24.53**	**~~412.63~~ 493.5**	**447.02**	**484.20**	**198,000**
PSD Major Source Thresholds	**250**	**250**	**250**	**250**	**250**	**250**	**250**	**100,000 CO_2e**

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Other Changes

Upon further review IDEM, OAQ has made the following changes to the Title V permit T071-30358-00015. (deleted language appears as ~~strikout~~ and the new language **bolded**):

Change 1: On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule sites listed in the permit. These changes are not changes to the underlining provisions. The change is only to site of these rules in Section A - General Information, Section A - Emission Units and Pollution Control Equipment Summary, Section A - Specifically Regulated Insignificant Activities, Section B - Preventative Maintenance Plan, Section B - Emergency Provisions, Section B - Operational Flexibility, Section C - Risk Management Plan, the Facility Descriptions, and Section D - Preventative Maintenance Plan.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5**(14)** ~~(15)~~][326 IAC 2-7-1(22)]

***

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5**(14)** ~~(15)~~]

***

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)] 326 IAC 2-7-5(**14)** ~~(15)~~]

***

B.10 Preventive Maintenance Plan [326 IAC 2-7-5~~(1),(3) and (13)~~ **(12)**] [~~326 IAC 2-7-6(1) and (6)~~][326 IAC 1-6-3]

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

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(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)~~(9)~~ **(8)** be revised in response to an emergency.

***

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)~~, or (e)~~ without a prior permit revision, if each of the following conditions is met:

***

(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)~~, or (e)~~. The Permittee shall make such records available, upon reasonable request, for public review.

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

***

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

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Change 2: IDEM has moved to separate CAM language for Section C - compliance monitoring, REE, and reporting. This language is mainly verbatim of the CAM rule this is to clarify the Permittee's responsibility under CAM.

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

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

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

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

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

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

(b) **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.**

(c) **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.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.

Change 3: On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions included the incorporation of the U.S. EPA's definition of reasonable possibility. The permit previously sited to the EPA definition. Also, the revisions resulted in changes to other rule sites listed in the permit. And IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.

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:**

(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:

(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.

.....

(c) If there is a reasonable possibility (as defined in ~~40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)~~ **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(~~qq~~ **oo**) and/or 326 IAC 2-3-1(~~ll~~ **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(~~ee~~ **dd**) and/or 326 IAC 2-3-1(~~z~~ **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(~~rr~~ **pp**) and/or 326 IAC 2-3-1(~~mm~~ **kk**)), the Permittee shall comply with following:

(1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(~~qq~~ **oo**) and/or 326 IAC 2-3-1(~~ll~~ **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(~~rr~~ **pp**)(2)(A)(iii) and/or 326 IAC 2-3-1 (~~mm~~ **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 (~~as defined in 40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)~~ **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(~~qq~~ **oo**) and/or 326 IAC 2-3-1(~~ll~~ **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(~~ee~~ **dd**) and/or 326 IAC 2-3-1(~~z~~ **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(~~rr~~ **pp**) and/or 326 IAC 2-3-1(~~mm~~ **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.

Change 4: IDEM inadvertently removed the five (5) paint lines and its conditions from the permit. This typographical error has been corrected by putting back the five paint lines in the permit in a new section D.0 of the permit. These units were already permitted in Permit No. 071-30358-00015, issued on November 29, 2011. These emission units shall cease all operation after the installation of the new paint booths at the source and all associated conditions and reporting forms shall be removed from the permit.

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

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

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

.....

These Emission units shall cease all operations after the installation of the new paint booths

(a2) (1) One (1) primer spray booth, identified as EU-01A, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S1 and S2.

(2) One (1) top coat spray booth, identified as EU-01B, constructed in 1995, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S3 and S4.

(3) One (1) touch-up spray booth, identified as EU-01C, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S5 and S6.

(4) One (1) offline spray booth, identified as EU-01D, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S7.

(5) One (1) small parts spray booth, identified as EU-01F, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S8.

SECTION D.~~1~~0 EMISSION UNIT OPERATION CONDITIONS

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

These Emission units shall cease all operations after the installation of the new paint booths

(**a2**) One (1) paint spray line, identified as EU-01, consisting of the following equipment:

(1) One (1) primer spray booth, identified as EU-01A, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S1 and S2.

(2) One (1) top coat spray booth, identified as EU-01B, constructed in 1995, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S3 and S4.

(3) One (1) touch-up spray booth, identified as EU-01C, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S5 and S6.

(4) One (1) offline spray booth, identified as EU-01D, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S7.

(5) One (1) small parts spray booth, identified as EU-01F, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S8.

(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~~**0**.1 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 each of the five (5) spray booths, EU-01A, EU-01B, EU-01C, EU-01D, and EU-01F, shall be controlled by a dry filter, and the Permittee shall operate the control device in accordance with the manufacturer's specifications.

D.~~1~~**0**.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the Permittee shall not cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating excluding water for extreme performance coatings, delivered to spray applicators in each of the five (5) spray booths, EU-01A, EU-01B, EU-01C, EU-01D, and EU-01F, computed on a volume weighted average basis.

D.~~1~~**0**.3 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~~**0**.4 Hazardous Air Pollutants (HAPs) Minor Limits [40 CFR 63]

(a) The amount of single HAP delivered to the coating applicators (EU-01A through D and F) from coatings, and dilution and cleaning solvents used in the paint spray line identified as EU-01 shall be limited to less than nine (9) 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-01A through D and F) 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 1-3 (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~~**0**.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for each of the five (5) spray booths, EU-01A, EU-01B, EU-01C, EU-01D, and EU-01F, and the dry filters. 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~~**0**.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

Compliance with the VOC content limit in condition D.~~1~~**0**.2 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis, when using coatings that are above 3.5 pounds per gallon limit. This volume weighted average shall be determined by the following equation:

$$A = [\Sigma\ (C \times U) / \Sigma U]$$

Where: A is the volume weighted average in pounds VOC per gallon less water as applied;
C is the VOC content of the coating in pounds VOC per gallon less water as applied;
U is the usage rate of the coating in gallons per day.

D.~~1~~**0**.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-01A, EU-01B, EU-01C, EU-01D and EU-01F are in operation.

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

D.~~1~~**0**.8 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 (S1, S2, S3, S4, S5, S6, S7 and S8) 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.

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

D.~~1~~**0**.9 Record Keeping Requirements

(a) To document the compliance status with condition D.~~1~~**0**.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limit established in condition D.~~1~~**0**.2.

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

(2) The amount of coating material and solvent used on a daily 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 volume weighted average VOC content of the coatings used for each day, when using coatings that are above 3.5 pounds per gallon limit.

(4) The daily cleanup solvent usage; and

(5) The total VOC usage for each day.

(b) To document the compliance status with condition D.~~1~~**0**.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~~**0**.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) To document the compliance status with conditions D.~~1~~**0**.5 and D.~~1~~**0**.9, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

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

D.~~1~~**0**.10 Reporting Requirements

A quarterly summary of the information to document the compliance status with conditions D.~~1~~**0**.2 and D.~~1~~**0**.4 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.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Industrial Center
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Twenty-five test cells and the Paint spray line booth
Parameter: Single HAP Emissions
Limit: Less than 9 tons per year for any single HAP per twelve (12) consecutive month period

These Reporting Form shall removed after the installation of the new paint booths

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 Industrial Center
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Twenty-five test cells and the Paint spray line booth
Parameter: Total HAP Emissions
Limit: Less than 24 tons per year for total HAPs per twelve (12) consecutive month period

These Reporting Form shall removed after the installation of the new paint booths

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

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

Source Description and Location

Source Name:	Seymour Engine Plant (SEP)
Source Location:	800 East Third Street, Seymour, IN 47274
County:	Jackson
SIC Code:	3519
Operation Permit No.:	T071-30358-00015
Operation Permit Issuance Date:	December 28, 2006
Significant Source Modification No.:	071-30956-00015
Significant Permit Modification No.:	071-30962-00015
Permit Reviewer:	Josiah Balogun

Existing Approvals

The source was issued Part 70 Operating Permit No. 071-30358-00015 on November 29, 2011. The source has not receive any other approval.

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 December 29, 2005, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

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

(b) $PM_{2.5}$
Jackson County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore,

direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Jackson County has been classified as attainment or unclassifiable in Indiana for all other 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	**Emissions** (ton/yr)
PM	128.07
PM_{10}	128.07
$PM_{2.5}$	128.07
SO_2	155.46
VOC	< 250
CO	< 250
NO_X	< 250
GHGs as CO_2e	< 100,000
HAPs	
Single HAP	< 10
Total HAPs	< 25

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant, excluding GHGs, is emitted at a rate of two hundred fifty (250) tons per year or more, emissions of GHGs are less 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 T071-27977-00015, issued on August 28, 2009.

(c) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are limited to 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 Seymour Engine Plant (SEP) on September 22, 2011, relating to the addition of nine (9) new engineering test cells engine HHP6 -14, three (3) new paint lines, twenty-two (22) new natural gas fired boilers, modifying an existing emission unit to test larger engines (HHP1), nine (9) in-stack duct burners (one for each new/modified test cells), one (1) emergency diesel powered generator and

one (1) 100,000 gallon diesel storage tank. The project also adds selective catalytic Reduction (SCR), Direct Oxidation catalyst (DOC) to all ten Hedgehog test cells, addresses GHGs emissions, establishes sulfur limit to the diesel fuel used at the source to address NAAQS compliance with the SO2 and add a high sulfur test capability at four (4) existing test cells. The following are lists of the proposed and modified emission units and pollution control devices:

(1) 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.

(2) 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 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.

(3) 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.

(4) 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.

(5) 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.

(6) 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 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.

(7) 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.

(8) 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.

(9) 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.

(10) 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.

(11) 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.

(12) 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.

(13) 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.

(14) 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.

(15) Twenty-two (22) natural gas fired boilers, identified as EU03C-EU03X, approved for construction in 2011, with EU03C-EU03V each having a maximum capacity of 2.0 MMBtu/hr and EU03W-EU03X each having a maximum capacity of 4.2 MMBtu/hr, exhausting to stacks B3-28, respectively.

Insignificant Unit

(1) One (1) emergency diesel powered generator, permitted in 2011, with a maximum output of 1,490 hp. [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.]

(2) One (1) 100,000 gallon No. 2 diesel storage tank.[326 IAC 12][40 CFR 60 Subpart Kb]

Enforcement Issues

There are no pending enforcement actions related to this modification.

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	266.57
PM_{10}	262.36
$PM_{2.5}$	260.26
SO_2	1.93
VOC	1,261.21
CO	1,734.76
NO_X	7,416.63
GHGs as CO2e	392,357.90

This source modification is subject to 326 IAC 2-7-10.5(f)(4); because, the modification has a potential to emit greater than or equal to twenty-five tons per year of PM, PM10, PM2.5, VOC, CO and NOx. The potential to emit greenhouse gases (GHGs) is greater than 100,000 tons per year CO_2e; but, the source has taken a limit to limit the CO2e to less than 100,000 tons per year. 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) because, the modification involves a case-by-case determination of an emission limitation.

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 and permit 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**
Before Modification								
Existing Test Cells	233.11	231.45	231.45	22.53	163.56	183.62	217.9	--
Existing Boilers (B1 and B2)	0.3	1.4	1.4	0.1	1.0	15.4	18.3	--
Total Before Modification	**233.41**	**232.85**	**232.85**	**22.63**	**164.56**	**199.02**	**236.20**	**99,000**
2011 Modification								
Diesel Storage Tank	0	0	0	0	0.072	0	0	0
New Paint Lines	1.65	1.65	1.65	0	248	0	0	0
HHP 1	7.48	6.91	6.7	0.18		248	248	99,000
HHP 6	7.48	6.91	6.7	0.18				
HHP 7	7.48	6.91	6.7	0.18				
HHP8	7.48	6.91	6.7	0.18				
HHP9	7.48	6.91	6.7	0.18				
HHP10	7.48	6.91	6.7	0.18				
HHP11	7.48	6.91	6.7	0.18				
HHP 12	7.48	6.91	6.7	0.18				
HHP 13	7.48	6.91	6.7	0.18				
HHP 14	7.48	6.91	6.7	0.18				
Twenty-Two (22) New Boilers (EU03C-EU03X)	0.4	1.6	1.6	0.1				
Ten (10) Duct Burners	0.1	0.5	0.5	0.0				
Emergency Generators	0.26	0.15	0.15	0.0045				
Total for 2011 Modification	**77.21**	**73**	**70.90**	**1.93**	**248.07**	**248**	**248**	**99,000**
Total after Modification	**310.62**	**305.85**	**303.75**	**24.56**	**412.63**	**447.02**	**484.20**	**198,000**
PSD Major Source Thresholds	**250**	**250**	**250**	**250**	**250**	**250**	**250**	**100,000 CO_2e**

This modification to an existing minor stationary source is not major because the emissions from the modification are limited to less than the major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

This modification to an existing major stationary source is not major; because, the greenhouse gas emissions are limited to less than 100,000 TPY CO2e, the PSD Major Source Thresholds for greenhouse gases. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
.
After this modification the limited PTE from PM, PM10, SO2, VOC, CO and NOx for the entire source will be greater than 250 tons per year, each and the limited PTE for GHGs will be greater than 100,000 tons per year of CO2e. Therefore, this source will be a Major Source under PSD after this Modification.

Federal Rule Applicability Determination

(a) 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, to each new or modified emission unit involved:

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)**
HHP 1 (CO)	Y	Y	102.5	< 100	100	Y	N
HHP 6 (CO)	Y	Y	102.5	< 100	100	Y	N
HHP 7 (CO)	Y	Y	102.5	< 100	100	Y	N
HHP 8 (CO)	Y	Y	102.5	< 100	100	Y	N
HHP 9 CO)	Y	Y	102.5	< 100	100	Y	N
HHP 10 CO)	Y	Y	102.5	< 100	100	Y	N
HHP 11 CO)	Y	Y	102.5	< 100	100	Y	N
HHP 12 CO)	Y	Y	102.5	< 100	100	Y	N
HHP 13 (CO)	Y	Y	102.5	< 100	100	Y	N
HHP14 (CO)	Y	Y	102.5	< 100	100	Y	N
HHP 1 (NOx)	Y	Y	491.99	< 100	100	Y	N
HHP 6 (NOx)	Y	Y	491.99	< 100	100	Y	N
HHP 7 (NOx)	Y	Y	491.99	< 100	100	Y	N
HHP 8 (NOx)	Y	Y	491.99	< 100	100	Y	N
HHP 9 (NOx)	Y	Y	491.99	< 100	100	Y	N
HHP 10 (NOx)	Y	Y	491.99	< 100	100	Y	N
HHP 11 (NOx)	Y	Y	491.99	< 100	100	Y	N
HHP 12 (NOx)	Y	Y	491.99	< 100	100	Y	N
HHP 13 (NOx)	Y	Y	491.99	< 100	100	Y	N
HHP14 (NOx)	Y	Y	491.99	< 100	100	Y	N

The VOC and CO_2 emissions from the test cells are more than one hundred (100) tons per year but the test cells have no control device for VOC and CO_2 emissions.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the HHP 1 and HHP 6 through to HHP 14 for only CO and NOx upon issuance of the Title V Renewal.

(b) The new boilers (EU03C-EU03X) are not subject to the requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units 40 CFR 60.4c, Subpart Dc, because each has a maximum heat input capacity of less than 10 MMBtu per hour.

(c) The new diesel storage tank will be subject to the requirements of NSPS Subpart Kb-Standards of Performance for Volatile Organic Liquid Storage Vessels as the volume of this tank is greater than 151 m^3, and the maximum true vapor pressure of the diesel fuel is greater than 15 kPa.

(d) 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

Although the source is currently not using coatings that contain one of the target HAPs, the proposed permit does not include any restictions that would prevent use of a coating that contains a target HAP. Therefore, the permit requirements specify that 40 CFR 63, Subpart HHHHHH, applies whenever coatings are used that contain a target HAP.

(e) The proposed boilers (EU03C-EU03X) are natural gas fired, therefore, they are not subject to the requirements of NESHAP Subpart JJJJJJ - National Emission Standards for Industrial, Commercial, and Institutional Boilers at Area Sources for industrial, commercial, and institutional boilers pursuant to 40 CFR 63.11195(e).

(f) The diesel powered emergency generator is subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60.4200, Subpart IIII), which is incorporated by reference as 326 IAC 12 because the emergency generator is constructed after July 11, 2005 and manufactured after April 1, 2006 and is not fire pump engines. The unit subject to this rule include the following:

(1) One (1) emergency diesel powered generator, permitted in 2011, with a maximum output of 1,490 hp. [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 emission unit is subject the following applicable portions of the NSPS Subpart IIII.

(1) 40 CFR 60.4200
(2) 40 CFR 60.4205
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211

(8) 40 CFR 60.4212
(9) 40 CFR 60.4214
(10) 40 CFR 60.4218

(g) The engine test cells are subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII), which is incorporated by reference as 326 IAC 12.

The engine test cells are affected sources because the engines are manufactured after 2007. The engine test cells are subject to the following portions of Subpart IIII:

(1) 40 CFR 60.4200(a)(1), (b), and (d)
(2) 40 CFR 60.4201
(3) 40 CFR 60.4202
(4) 40 CFR 60.4203
(5) 40 CFR 60.4210
(6) 40 CFR 60.4218
(7) 40 CFR 60.4219
(8) Table 1 to Subpart IIII
(9) Table 2 to Subpart IIII
(10) Table 3 to Subpart IIII
(11) Table 4 to Subpart IIII
(12) Table 5 to Subpart IIII
(13) Table 6 to Subpart IIII
(14) Table 7 to Subpart IIII
(15) Table 8 to Subpart IIII

Pursuant to 40 CFR 60.4200(b), the requirements of 40 CFR 60, Subpart IIII, that pertain to owners and operators of Stationary Compression Ignition Internal Combustion Engines do not apply to engine test cells. Pursuant to 40 CFR 60.4200(a), the requirements of 40 CFR 60, Subpart IIII, that pertain to manufacturers of Stationary Compression Ignition Internal Combustion Engines apply to these engine test cells.

(h) The requirements of the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) (40 CFR 63, Subpart ZZZZ), (326 IAC 20-82) are included in this permit for the emergency generator at this source because the unit is a new emergency stationary RICE, (manufactured after June 12, 2006) and are located at an area source of HAP emissions.

The emission unit subject to the following portions of Subpart ZZZZ:

(1) One (1) emergency diesel powered generator, permitted in 2011, with a maximum output of 1,490 hp. [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 emission unit is subject the following applicable portions of the NESHAP for new stationary RICE at an area source of HAP:

(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

Pursuant to 40 CFR 63.6665, the new emergency diesel powered generator does not have to

meet the requirements of 40 CRF 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions.

State Rule Applicability Determination

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
This modification to an existing minor stationary source is not major because the emissions from this modification are limited to less than the major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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, Test Pad 11, Boiler EU-03A and Boiler EU-03B, are in excess of 100,000 tons per year. Therefore, the source has requested a minor limit to keep the limited potential to emit of CO2e emissions to 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVdf x EfCO2df x GWP(CO2)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVng x EfCO2ng x GWP(CO2)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVlp x EfCO2lp x GWP(CO2)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVdf x EfCH4pet x GWP(CH4)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVlp x EfCH4pet x GWP(CH4)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVng x EfCH4ng x GWP(CH4)/2000

+

(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, Test Pad 11, Boiler EU-

03A and Boiler EU-03B) x HHVdf x EfN2Opet x GWP(N2O)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVlp x EfN2Opet x GWP(N2O)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVng x EfN2Ong x GWP(N2O)/2000

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 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.

New Project

(a) The total NOx emissions from HHP1, HHP6 – HHP14, the boilers, the duct burners and the emergency generator shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The NOx emissions (tons/month) shall be calculated using 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 boilers x EFepaboilers

+

Diesel Fuel burned in Emergency Generator x EFepaemgen

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 for temperature range x 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

EFepaboilers is the USEPA NOx emission factor for boilers burning natural gas

EFepaemgen is the USEPA NOx emission factor for emergency generators burning Diesel Fuel

(b) The total CO emissions from HHP1, HHP6 – HHP14, the boilers, the duct burners and the emergency generator shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The CO emissions (tons/month) shall be calculated using 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 boilers x COEFepaboilers

+

Diesel Fuel burned in Emergency Generator x COEFepaemgen

Where:

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

COEFepaboilers is the USEPA CO emission factor for boilers burning natural gas

COEFemgen is the USEPA CO emission factor for emergency generators burning Diesel

Fuel

(c) The total VOC emissions from HHP1, HHP6 – HHP14, the new paint booths, the boilers, the duct burners and the emergency generator 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 of VOC/gal of diesel fuel)

+

(Biodiesel fuel burned by HHP1, HHP6 – HHP14) x (Ef2v of VOC/gal of biodiesel fuel)

+

(Natural gas burned by HHP1, HHP6 – HHP14) x (Ef3v of VOC/ft^3 of natural gas)

+

(Hydrogen gas burned by HHP1, HHP6 – HHP14) x (Ef4v of VOC/ft^3 of natural gas)

+

(Natural gas burned by HHP1, HHP6 – HHP14) x (Ef5v of VOC/ft^3 of natural gas)

+

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.

+

Ef6v lbs/mmcf x Ng (mmcf/month) x (1 ton/2000 pounds).

+

Ef7v lbs/mmcf x Nga (mmcf/month) x (1 ton/2000 pounds).

+

Ef8v lb/hp-hr x De (hp-hr/month) x (1 ton/2000 pounds).

Where:

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 or the most current factor from the applicable section of AP-42.
Ng = Amount of natural gas burned in boilers.
Ef7v = Emission factor from AP- 42 Chapter 1.4 Table 1.4-2 July 1998 or the most current factor from the applicable section of AP-42.

Nga = Amount of natural gas burned in the Duct Burners.
Ef8v = Emission factor from AP- 42 Chapter 3.3-1
De = Amount of diesel burned in the Emergency Generators.

Compliance with these limits in combination with the potential to emit of NOx, CO and VOC from all other units from this modification shall limit the emissions of NOx, CO and VOC emissions from this modification 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 2011 modification.

After this modification the limited PTE from PM, PM10, SO2, NOx, CO and VOC for the entire source will be greater than 250 tons per year, each. Therefore, due to the addition of new Hedgehog test cells, new production lines, the new paint booths, the boilers, duct burners and the emergency generator, the entire source will become major source under PSD after this Modification.

(e) The total CO2e emissions from the Test Cells, identified as HHP 6-14, HHP 1, duct burners, emergency generator and boilers are in excess of 100,000 tons per year. The source has requested a minor limit to keep the limited potential to emit of CO2e emissions to less than 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, duct burners, emergency generator and boilers) x HHVdf x EfCO2df x GWP(CO2)/2000

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVng x EfCO2ng x GWP(CO2)/2000

+

(gallons of diesel fuel and biodiesel fuel burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVdf x EfCH4pet x GWP(CH4)/2000

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVng x EfCH4ng x GWP(CH4)/2000

(gallons of diesel fuel and biodiesel fuel burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVdf x EfN2Opet x GWP(N2O)/2000

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVng x EfN2Ong x GWP(N2O)/2000

+

(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfCO2lp x GWP(CO2)/2000

+

(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfCH4pet x GWP(CH4)/2000

+
(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfN2Opet x GWP(N2O)/2000

+
(mass of hydrogen gas burned by Test Cells HHP 6-14, HHP 1) X EfCO2eh2

+
Metric tons of CO2 used as diluent in Test Cells HHP 1, HHP 6-14

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

EfCO2eh2 is the emission factor for CO2e for hydrogen gas

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 to the source before the 2011 Modification.

After this modification the limited PTE for CO2e for the entire source will be greater than 100,000 tons per year. Therefore, due to the addition of new Hedgehog test cells, new production lines, the new paint booths, the boilers, duct burners and the emergency generator, the entire source will become major source under PSD for GHGs as CO2e after this Modification.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The operation of the new units 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, the requirements of 326 IAC 2-4.1 does not apply.

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-4, the particulate matter (PM) from the new boilers, identified as EU03C-EU03X shall not exceed 0.338 pounds per MMBtu, each. The pound per hour limitation was calculated with the following equation:

Boiler ID	Capacity (mmBtu/hr)	Date of Construction	Rule Applicability	Q (mmBtu/hr)	PM Allowable Emissions (lbs/mmBtu)
EU-03A and EU-03B	41.8	1978	326 IAC 6-2-3	41.8	0.60
EU-03C - EU-03X	48.4	2011	326 IAC 6-2-4	90.2	0.338

This limitation is based on the following equation:

$Pt = 1.09/Q^{0.26}$

Where:

Pt = Allowable Particulate Emissions Limitation in 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.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

(a) The test cells identified as HHP1, HHP6- HHP10 and the production lines, identified as HHP11-HHP14 are not subject to the requirements of 326 IAC 326 IAC 7-1.1 because the SO_2 PTE from each test cell is less than 25 tons per year.

(1) All existing test cells shall utilize a ultra low sulfur diesel (ULSD) (15 PPM S) fuel during normal operation.

(2) Four (4) existing test cells, HHP2, HHP4, Test Pad 8, and Test Pad 10, shall burn diesel with a fuel sulfur content limit of 1,000 parts per million (ppm), but only two (2) of these four test cells may burn diesel fuel with 1000 PPM S at any given time, alternatively, three (3) existing test cells, HHP4, Test Pad 8 and Test Pad 10 shall burn diesel with a fuel sulfur content limits of 2,000 parts per million (ppm), but only one (1) of these three test cells may burn diesel fuel with 2000 PPM S at any given time.

After incorporating the operating condition above, all existing test cells will have a potential to emit less than twenty-five (25) tons per year or ten (10) pounds per hour of SO_2 and therefore, the requirements of 326 IAC 7-1.1 are not applicable to the existing test cells.

(b) The boilers are not subject to 326 IAC 326 IAC 7-1.1 because the SO_2 PTE from each boiler is less than 25 tons per year and less than 10 pounds per hour.

(c) The emergency generator is not subject to 326 IAC 326 IAC 7-1.1 because its SO_2 PTE is less than 25 tons per year and less than 10 pounds per hour.

326 IAC 8-1-6 (New Facilities: General Reduction Requirements)

(a) The proposed test cells (HHP6-14) are not subject to the requirements of 326 IAC 8-1-6. Pursuant to 326 IAC 8-1-6, the provisions of this rule are applicable to units with a potential to emit greater than twenty-five (25) tons of VOC per year. Since none of the new or modified test cells has a potential to emit greater that 25 tons of VOC per year, each, therefore, these units are not subject to the requirements of 326 IAC 8-1-6.

(b) The new paint lines are not subject to the requirements of 326 IAC 8-1-6. Pursuant to 326 IAC 8-1-6, the provisions of this rule are not applicable to units that are regulated by other provisions of 326 IAC 8. The new paint lines are subject to the requirements of 326 IAC 8-2-9, therefore, the requirements of 326 IAC 8-1-6 are not applicable to the new paint lines.

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

The five (5) new paint lines are subject to the requirements of 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations). Pursuant to 326 IAC 8-2-9, the volatile organic compound (VOC) emissions from the new 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.

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.

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 Requirements applicable to this modification are as follows:

(a) Testing Requirements

Emission units	Control device	When to test	Pollutants	Frequency of testing	Limit or Requirement
HHP1, HHP6 - HHP14	Selective Catalytic Reduction	60 days / no later than 180 days	NOx	Every five (5) years	326 IAC -2-2
HHP1, HHP6 - HHP14	Oxidation Catalyst	60 days / no later than 180 days	CO	Every five (5) years	326 IAC -2-2

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

Control	Parameter	Frequency	Range/ Value	Excursions and Exceedances	Limit or Requirement
Oxidation Catalysts (OC)	Temperature	Continuous	NA	Response steps	326 IAC 2-2

Control	Parameter	Frequency	Range/ Value	Excursions and Exceedances	Limit or Requirement
Selective Catalytic Reduction (SCR)	Temperature	Daily	NA	Response steps	326 IAC 2-2
	Urea Flow rate		NA		

NA: Not Available

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

Emission Units	Frequency	Parameters	Limits or Requirements
Primer and Topcoat spray booths , EU-01G & EU-01H (Dryfilters)	Daily	Inspections shall be performed to verify placement, integrity and particle loading of the dry filters.	326 IAC 6-3-2(d)
Offline spray booths , EU-01I (Dryfilters)			
Primer and Topcoat spray booths , EU-01J (Dryfilters)			
Primer and Topcoat spray booths , EU-01K (Dryfilters)			
Primer and Topcoat spray booths , EU-01G & EU-01H (Dryfilters)	Weekly	Observations of the overspray from the surface coating booth stacks, while one or more booths are in operation.	326 IAC 6-3-2(d)
Offline spray booths , EU-01I (Dryfilters)			
Primer and Topcoat spray booths , EU-01J (Dryfilters)			
Primer and Topcoat spray booths , EU-01K (Dryfilters)			
Primer and Topcoat spray booths , EU-01G & EU-01H (Dryfilters)	Monthly	Observations of the coating emission from the stacks, and presence of overspray on rooftops and nearby ground.	326 IAC 6-3-2(d)
Offline spray booths , EU-01I (Dryfilters)			
Primer and Topcoat spray booths , EU-01J (Dryfilters)			
Primer and Topcoat spray booths , EU-01K (Dryfilters)			

(d) Compliance Monitoring Requirements due to this modification are as follows:

Stack	Parameter	Frequency	Range	Excursions and Exceedances	Limits or Requirements
Stacks HHP6.1, HPP7.1, HHP8.1, HPP9.1, HPP10.1, HHP 11.1, HHP 12.1, HHP13.1 and HHP14.1	Visible Emissions, when burning only diesel, biodiesel, only	Daily	Normal-Abnormal	Response Steps	326 IAC 2-2

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 071-21065-00015. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change 1: The new emission units have been added to Section A.2 and A.3 of the permit.

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

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

(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, 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.

~~(1) One (1) primer spray booth, identified as EU-01A, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S1 and S2.~~

~~(2) One (1) top coat spray booth, identified as EU-01B, constructed in 1995, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S3 and S4.~~

~~(3) One (1) touch up spray booth, identified as EU-01C, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S5 and S6.~~

~~(4) One (1) offline spray booth, identified as EU-01D, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S7.~~

~~(5) One (1) small parts spray booth, identified as EU-01F, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S8.~~

(b) Six (6) production engine test cells, identified as EU-02A, constructed in 1978, consisting of the following equipment:

.....

(c) Ten (10) engineering engine test cells, identified as EU-02B, installed in 1978, consisting of the following equipment:

.....

(2) One (1) ~~diesel or biodiesel-powered engineering engine~~ **engineering** test cell **engine with duct burners**, identified as HHP1, **modified in 2011** ~~may be alternatively~~ powered by **diesel, biodiesel** ~~liquid propane or~~ natural gas, **natural gas diluted with CO2, hydrogen or liquid propane** with maximum output of ~~4500~~ **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,** ~~hp, when combusting diesel or biodiesel or 2200 hp when combusting liquid propane or natural gas, with heat input of 28.82 MMBtu/hr when combusting diesel or biodiesel or 14.40 MMBtu/hr when combusting liquid propane and natural gas~~ and exhausting to stack HHP1**.1**;

.....

(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 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 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) Twenty-two (22) natural gas fired boilers, identified as EU03C-EU03X, approved for construction in 2011, with EU03C-EU03V each having a maximum capacity of 2.0 MMBtu/hr and EU03W-EU03X each having a maximum capacity of 4.2 MMBtu/hr, exhausting to stacks B3-28, respectively.

~~(e) One (1) engineering engine test cell, identified as HHP6, approved for construction in 2011, may be powered by diesel, biodiesel JP8/JetA, propane natural gas blend or natural gas, with maximum output of 7032 hp and exhausting to stack HHP6.1.~~

~~(f) One (1) engineering engine test cell, identified as HHP8, approved for construction in 2011, may be powered by diesel, biodiesel, JP8/JetA, propane natural gas blend or natural gas, with maximum output of 7032 hp and exhausting to stack HHP8.1;~~

~~(g) One (1) engineering engine test cell, identified as HHP9, approved for construction in 2011, may be powered by diesel, biodiesel, JP8/JetA, propane natural gas blend or natural gas, with maximum output of 7032 hp and exhausting to stack HHP9.1;~~

~~(h) One (1) production engine test cell, identified as Production 1, approved for construction in 2011, may be powered by diesel, biodiesel with maximum output of 7032 hp and exhausting to stack Production 1.1.~~

~~(i) One (1) production engine test cell, identified as Production 2, approved for construction in 2011, may be powered by diesel, biodiesel with maximum output of 7032 hp and exhausting to stack Production 2.1.~~

~~(j) One (1) production engine test cell, identified as Production 3, approved for construction in 2011, may be powered by diesel, biodiesel with maximum output of 7032 hp and~~

~~exhausting to stack Production 3.1.~~

~~(k) One (1) engineering engine test cell, identified as HHP7, approved for construction in 2011, may be powered by natural gas, biodiesel, JP8/JetA, propane natural gas blend or diesel fuel, with maximum output of 5685 hp and exhausting to stack HHP7.1.~~

~~(l) One (1) engineering engine test cell, identified as HHP10, approved for construction in 2011, may be powered by natural gas, biodiesel, JP8/JetA, propane natural gas blend or diesel fuel, with maximum output of 5685 hp, and exhausting to stack HHP10.1.~~

~~(f) Twenty five (25) natural gas-fired boilers, identified as EU03C-EU03AA, approved for construction in 2011, with EU003C-EU03Z each having a maximum capacity of 2.0 MMBtu/hr and EU03AA having a maximum capacity of 2.52 MMBtu/hr, exhausting to stacks B3-28, respectively~~

(~~n~~**o**) Two (2) natural gas-fired boilers, identified as EU-03A and EU-03B, installed in 1978, exhausting to stacks B1 and B2, respectively, each rated at 20.9 MMBtu per hour.

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

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

.....

~~(f) One (1) emergency diesel powered generator 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.]~~

(f) One (1) 100,000 gallon No 2 diesel storage tank [326 IAC 12] [40 CFR 60 Subpart Kb]

(g) One (1) emergency diesel powered generator permitted in 2012, 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.]

Change 2: The new emission units have been added to Section D.1 and the Conditions have been updated in the permit.

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

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

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

~~(1) One (1) primer spray booth, identified as EU-01A, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S1 and S2.~~

~~(2) One (1) top coat spray booth, identified as EU-01B, constructed in 1995, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S3 and S4.~~

~~(3) One (1) touch-up spray booth, identified as EU-01C, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S5 and S6.~~

~~(4) One (1) offline spray booth, identified as EU-01D, constructed in 1986, with a maximum~~

~~capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S7.~~

~~(5) One (1) small parts spray booth, identified as EU-01F, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S8.~~

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

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, 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.

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

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

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

Pursuant to 326 IAC 6-3-2**(d)** (Particulate emission limitations, work practices, and control technologies), ~~part (d),~~ the particulate **matter** from **EU-01G, EU-01H, EU-01I, EU-01J and EU-01K** ~~EU-01A, EU-01B, EU-01C, EU-01D and EU-01F~~ 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 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

~~Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the Permittee shall not cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating excluding water for extreme performance coatings, delivered to spray applicators in EU-01A, EU-01B, EU-01C, EU-01D and EU-01F, computed on a volume weighted average basis. When using coatings that are above 3.5 pounds per gallon limit.~~

Pursuant to 326 IAC 8-2-9, the volatile organic compound (VOC) emissions from the new 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.1.3 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.1.4 Hazardous Air Pollutants (HAPs)

(a) The amount of single HAP delivered to the coating applicators (**EU-01G, EU-01H, EU-01I, EU-01J and EU-01K** ~~EU-01A through D and F~~) 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** ~~1-3~~ (listed in Section D.2) shall be limited to less than nine and five-tenths (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** ~~EU-01A through D and F~~) 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** ~~1-3~~ (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 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.1.5 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** ~~EU-01A, EU-01B, EU-01C, EU-01D, and EU-01F~~, and the dry filters. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to preventive maintenance plans.

Compliance Determination Requirements

~~D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]~~

~~Compliance with the VOC content limit in condition D.1.2 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. When using coatings that are above 3.5 pounds per gallon limit. This volume weighted average shall be determined by the following equation:~~

~~A = [Σ (C x U) / Σ U]~~

~~Where: A is the volume weighted average in pounds VOC per gallon less water as applied;~~
~~C is the VOC content of the coating in pounds VOC per gallon less water as applied;~~
~~U is the usage rate of the coating in gallons per day.~~

D.1.~~8~~**6** Particulate Control

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** ~~EU-01A, EU-01B, EU-01C, EU-01D and EU-01F~~ are in operation.

D.1.7 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.

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

D.1.~~9~~**8** 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** ~~S1, S2, S3, S4, S5, S6, S7 and S8~~) 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.

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

D.1.~~10~~**9** Record Keeping Requirements

(a) To document the compliance status with condition D.1.2, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (**4**~~5~~) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC usage limit established in condition D.1.2.

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

(2) The amount of coating material and solvent used on a daily 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 volume weighted average VOC content of the coatings used for each day, when using coatings that are above 3.5 pounds per gallon limit.~~

(**3**~~4~~) The daily cleanup solvent usage; and

(**4**~~5~~) The total VOC usage for each day.

(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) To document the compliance status with condition~~s D.1.5 and D.1.9~~ **D.1.8 - 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.

(d) All records shall be maintained. Section C – General Record Keeping Requirements contains the Permittee's obligation with regard to record keeping.

D.1.1~~1~~**0** Reporting Requirements

A quarterly summary of the information to document the compliance status with conditions D.1.2 and D.1.4 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.

Change 3: The new emission units have been added to Section D.2 and the Conditions have been updated in the permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Six (6) production engine test cells, identified as EU-02A, constructed in 1978, consisting of the following equipment:
.....

(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) ~~diesel or biodiesel-powered engineering engine~~ **engineering** test cell **engine with duct burners**, identified as HHP1, **modified in 2011** ~~may be alternatively~~ powered by **diesel, biodiesel** ~~liquid propane or~~ natural gas, **natural gas diluted with CO2, hydrogen or liquid propane** with maximum output of ~~4500~~ **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,** ~~hp, when combusting diesel or biodiesel or 2200 hp when combusting liquid propane or natural gas, with heat input of 28.82 MMBtu/hr when combusting diesel or biodiesel or 14.40 MMBtu/hr when combusting liquid propane and natural gas~~ and exhausting to stack HHP1**.1**;

.....

(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 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 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.

~~(e) One (1) engineering engine test cell, identified as HHP6, approved for construction in 2011, may be powered by diesel, biodiesel JP8/JetA, propane natural gas blend or natural gas, with maximum output of 7032 hp and exhausting to stack HHP6.1.~~

~~(f) One (1) engineering engine test cell, identified as HHP8, approved for construction in 2011, may be powered by diesel, biodiesel, JP8/JetA, propane natural gas blend or natural gas, with maximum output of 7032 hp and exhausting to stack HHP8.1;~~

~~(g) One (1) engineering engine test cell, identified as HHP9, approved for construction in 2011, may be powered by diesel, biodiesel, JP8/JetA, propane natural gas blend or natural gas, with maximum output of 7032 hp and exhausting to stack HHP9.1;~~

~~(h) One (1) production engine test cell, identified as Production 1, approved for construction in 2011, may be powered by diesel, biodiesel with maximum output of 7032 hp and exhausting to stack Production 1.1.~~

~~(i) One (1) production engine test cell, identified as Production 2, approved for construction in 2011, may be powered by diesel, biodiesel with maximum output of 7032 hp and exhausting to stack Production 2.1.~~

~~(j) One (1) production engine test cell, identified as Production 3, approved for construction in 2011,~~

~~may be powered by diesel, biodiesel with maximum output of 7032 hp and exhausting to stack Production 3.1.~~

~~(k) One (1) engineering engine test cell, identified as HHP7, approved for construction in 2011, may be powered by natural gas, biodiesel, JP8/JetA, propane natural gas blend or diesel fuel, with maximum output of 5685 hp and exhausting to stack HHP7.1.~~

~~(l) One (1) engineering engine test cell, identified as HHP10, approved for construction in 2011, may be powered by natural gas, biodiesel, JP8/JetA, propane natural gas blend or diesel fuel, with maximum output of 5685 hp, and exhausting to stack HHP10.1.~~

(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 PSD Minor Limit [326 IAC 2-2]

(a) The total NOx 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, ~~HHP1,~~ 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, ~~HHP1,~~ HHP3 HHP4, HHP5 and PI) x (Ef3 of NO_X /ft3 of natural gas)

+ (Biodiesel fuel burned by 806, 807, ~~HHP1,~~ 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, ~~HHP1,~~ HHP3, HHP5, 8(PI) 10(PI), 11(PI), HHP4 and EU-02C) x (Ef5 of NO_X /gal of Propane fuel)

(b) The NO_X emissions shall not exceed:

(1) Ef1 = Emission **Factor** ~~Limit~~ in pounds of NO_X per gallon of diesel fuel for 801, 802, 803, 804, 805 and 808 ~~= 0.427 lb/gal~~;

(2) Ef2 = Emission **Factor** ~~Limit~~ in pounds of NO_X per gallon of diesel fuel for 806, 807, ~~HHP1,~~ HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C ~~= 0.155 lb/gal;~~

(3) Ef3 = Emission **Factor** ~~Limit~~ in pounds of NO_X per MMBtu of natural gas for 806, 807, 808, ~~HHP1~~, HHP3 HHP4, HHP5 and PI ~~= 4.08 lb/MMBtu~~;

(4) Ef4 = Emission **Factor** ~~Limit~~ in pounds of NO_X per gallon of biodiesel fuel for 806, 807, ~~HHP1,~~ HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C ~~= 0.1639 lb/gal~~; and

(5) Ef5 = Emission **Factor** ~~Limit~~ in pounds of NO_X per gallon of propane for 806, 807, ~~HHP1,~~ HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C ~~= 0.139 lb/gal~~.

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 modification.

(c) 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, ~~HHP1,~~ 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, ~~HHP1~~, 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, ~~HHP1~~, HHP3, HHP5, 8(PI) 10(PI), 11(PI), HHP4 and EU-02C) x (Ef5 of VOC/gal of Propane fuel)

(d) The VOC emissions shall not exceed:

(1) Ef1 = Emission **Factor** ~~Limit~~ in pounds of VOC per gallon of diesel fuel for 801, 802, 803, 804, 805 and 808 ~~= 0.0493 lb/gal~~;

(2) Ef2 = Emission **Factor** ~~Limit~~ in pounds of VOC per gallon of diesel fuel for 806, 807, ~~HHP1,~~ HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C ~~= 0.0493 lb/gal~~;

(3) Ef3 = Emission **Factor** ~~Limit~~ in pounds of VOC per MMBtu of natural gas for 806, 807, 808, ~~HHP1,~~ HHP3 HHP4, HHP5 and PI ~~= 0.12 lb/MMBtu~~;

(4) Ef4 = Emission **Factor** ~~Limit~~ in pounds of VOC per gallon of biodiesel fuel for 806, 807, ~~HHP1~~, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C ~~= 0.0493 lb/gal~~; and

(5) Ef5 = Emission **Factor** ~~Limit~~ in pounds of VOC per gallon of propane for 806, 807, ~~HHP1,~~ HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C ~~= 0.083 lb/gal~~.

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 modification.

(e) 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, ~~HHP1~~, 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, ~~HHP1,~~ 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, ~~HHP1,~~ HHP3, HHP5, 8(PI) 10(PI), 11(PI), HHP4 and EU-02C) x (Ef5 of CO/gal of Propane fuel)

(f) The CO emissions shall not exceed:

(1) Ef1 = Emission **Factor** ~~Limit~~ in pounds of CO per gallon of diesel fuel for 801, 802, 803, 804, 805 and 808 ~~= 0.130 lb/gal~~;

(2) Ef2 = Emission **Factor** ~~Limit~~ in pounds of CO per gallon of diesel fuel for 806, 807, ~~HHP1,~~ HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C ~~= 0.130 lb/gal~~;

(3) Ef3 = Emission **Factor** ~~Limit~~ in pounds of CO per MMBtu of natural gas for 806, 807, 808, ~~HHP1,~~ HHP3 HHP4, HHP5 and PI ~~= 0.32 lb/MMBtu~~;

(4) Ef4 = Emission **Factor** ~~Limit~~ in pounds of CO per gallon of biodiesel fuel for 806, 807, ~~HHP1,~~ HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C ~~= 0.130 lb/gal~~; and

(5) Ef5 = Emission **Factor** ~~Limit~~ in pounds of CO per gallon of propane for 806, 807, HHP1, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C ~~= 0.129 lb/gal~~.

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 modification.

(g) 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B, 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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVdf x EfCO2df x GWP(CO2)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVng x EfCO2ng x GWP(CO2)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVlp x EfCO2lp x GWP(CO2)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVdf x EfCH4pet x GWP(CH4)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVlp x EfCH4pet x GWP(CH4)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVng x EfCH4ng x GWP(CH4)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVdf x EfN2Opet x GWP(N2O)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVlp x EfN2Opet x GWP(N2O)/2000

+

(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, Test Pad 11, Boiler EU-03A and Boiler EU-03B) x HHVng x EfN2Ong x GWP(N2O)/2000

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.

NEW EMISSION LIMITS FOR THE NEW UNITS [HHP1, HHP6-HHP14, Boilers, Duct Burners, and Emergency Generators]

(h) The total NOx emissions from HHP1, HHP6 – HHP14, the boilers, the duct burners and the emergency generator shall not exceed 248 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 boilers x EFepaboilers

+

Diesel Fuel burned in Emergency Generator x EFepaemgen

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 for temperature range x 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

EFepaboilers is the USEPA NOx emission factor for boilers burning natural gas

EFepaemgen is the USEPA NOx emission factor for emergency generators burning Diesel Fuel

(i) The total CO emissions from HHP1, HHP6 – HHP14, the boilers, the duct burners and the emergency generator shall not exceed 248 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 boilers x COEFepaboilers

+

Diesel Fuel burned in Emergency Generator x COEFepaemgen

Where:

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

COEFepaboilers is the USEPA CO emission factor for boilers burning natural gas

COEFemgen is the USEPA CO emission factor for emergency generators burning Diesel Fuel

(j) The total VOC emissions from HHP1, HHP6 – HHP14, the new paint booths, the boilers, the duct burners and the emergency generator 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 of VOC/gal of diesel fuel)

+

(Biodiesel fuel burned by HHP1, HHP6 – HHP14) x (Ef2v of VOC/gal of biodiesel fuel)

+

(Natural gas burned by HHP1, HHP6 – HHP14) x (Ef3v of VOC/ft^3 of natural gas)

+

(Hydrogen gas burned by HHP1, HHP6 – HHP14) x (Ef4v of VOC/ft^3 of natural gas)

+

(Natural gas burned by HHP1, HHP6 – HHP14) x (Ef5v of VOC/ft^3 of natural gas)

+

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.

+

Ef6v lbs/mmcf x Ng (mmcf/month) x (1 ton/2000 pounds).

+

Ef7v lbs/mmcf x Nga (mmcf/month) x (1 ton/2000 pounds).

+

Ef8v lb/hp-hr x De (hp-hr/month) x (1 ton/2000 pounds).

Where:

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 or the most current factor from the applicable section of AP-42.
Ng = Amount of natural gas burned in boilers.
Ef7v = Emission factor from AP- 42 Chapter 1.4 Table 1.4-2 July 1998 or the most current factor from the applicable section of AP-42.
Nga = Amount of natural gas burned in the Duct Burners.
Ef8v = Emission factor from AP- 42 Chapter 3.3-1
De = Amount of diesel burned in the Emergency Generators.

Compliance with these limits in combination with the potential to emit of NOx, CO and VOC from all other units from this modification shall limit the emissions of NOx, CO and VOC emissions from this modification 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 2011 modification. After this modification 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, the entire source will become major source under PSD after this Modification.

(k) The total CO2e emissions from the Test Cells, identified as HHP1, HHP 6-14, duct burners, emergency generator and the twenty two (22) boilers 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, duct burners, emergency generator and boilers) x HHVdf x EfCO2df x GWP (CO2)/2000

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP1, duct burners, emergency generator and boilers) x HHVng x EfCO2ng x GWP(CO2)/2000

+

(gallons of diesel fuel and biodiesel fuel burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVdf x EfCH4pet x GWP(CH4)/2000

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVng x EfCH4ng x GWP(CH4)/2000

+

(gallons of diesel fuel and biodiesel fuel burned by Test Cells HHP 6-14, HHP 1, duct burners, emergency generator and boilers) x HHVdf x EfN2Opet x GWP(N2O)/2000

+

(SCF of natural gas burned by Test Cells HHP 6-14, HHP1, duct burners, emergency generator and boilers) x HHVng x EfN2Ong x GWP(N2O)/2000

+

(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfCO2lp x GWP(CO2)/2000

+

(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfCH4pet x GWP(CH4)/2000

+

(gallons of liquid propane burned by Test Cells HHP 6-14, HHP 1) x HHVlp x EfN2Opet x GWP(N2O)/2000

+

(mass of hydrogen gas burned by Test Cells HHP 6-14, HHP 1) X EfCO2eh2

+

Metric tons of CO2 used as diluent in Test Cells HHP 1, HHP 6-14

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

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 to less than 100,000 tons, per year and render the requirements of 326 IAC 2-2, not applicable to the source before the 2011 Modification.

~~**EMISSION LIMITS FOR HHP6 – HHP10 and Production 1 -3**~~

~~The total NO_x emissions from HHP6 – HHP10 and Production 1 -3 shall not exceed 218 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(g) The NO_x emissions shall be calculated by the following equation:~~

~~NO_x emissions = (Diesel fuel burned by HHP6 – HHP10 x (Ef1n of NO_x /gal of diesel fuel) + (Diesel fuel burned by Production 1 - 3) x (Ef2n, of NO_x /gal of diesel fuel) =~~

~~+ (Natural gas burned by HHP6 – HHP10 x (Ef3n of NO_x /ft3 of natural gas)~~

~~+ (Biodiesel fuel burned by HHP6 – HHP10) x (Ef4n of NO_x /gal of biodiesel fuel) +(Biodiesel fuel burned by Production 1 – 3) x Ef6n of NO_x /gal of biodiesel fuel)~~

~~+ (Propane fuel burned by HHP6 – HHP10) x (Ef5n of NO_x /gal of Propane fuel)~~

~~+ (JP8 and Jet A fuel burned by HHP6, HHP7, HHP8, HHP9, HHP10, x (Ef7n of NO_x /gal of J8 or Jet A)~~

~~Where:~~

~~(1) Ef1n = Emission Factor in pounds of NO_x per gallon of diesel fuel for HHP6 – HHP10 = 0.155 lb/gal;~~

~~(2) Ef2n = Emission Factor in pounds of NO_x per gallon of diesel fuel for Production 1 – 3 = 0.427 lb/gal;~~

~~(3) Ef3n = Emission Factor in pounds of NO_x per MMBtu of natural gas for HHP6 – HHP10 = 4.08 lb/MMBtu;~~

~~(4) Ef4n = Emission Factor in pounds of NO_x per gallon of biodiesel fuel for HHP6 – HHP10 = 0.164 lb/gal;~~

~~(5) Ef5n = Emission Factor in pounds of NO_x per gallon of propane for HHP6 – HHP10 = 0.139 lb/gal;~~

~~(6) Ef6n = Emission Factor in pounds of NO_x per gallon of biodiesel fuel for Production 1 -3 = 0.452 lb/gal; and~~

~~(7) Ef7n = Emission Factor in pounds for NO_x per gallon of J8 or Jet A for HHP6, HHP7, HHP8, HHP9, HHP10 = 0.582 lb/gal.~~

~~(h) The total PM emissions from HHP6 – HHP10 and Production 1 -3 shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The PM emissions shall be calculated by the following equation:~~

~~PM emissions = (Diesel fuel burned by HHP6 – HHP10 x (Ef1n of PM/gal of diesel fuel) + (Diesel fuel burned by Production 1 - 3) x (Ef2n, of PM/gal of diesel fuel)~~

~~+ (Natural gas burned by HHP6 – HHP10 x (Ef3n of PM/ft3 of natural gas)~~

~~+ (Biodiesel fuel burned by HHP6 – HHP10) x (Ef4n of PM/gal of biodiesel fuel) +(Biodiesel fuel burned by Production 1 – 3) x Ef6n of PM/gal of biodiesel fuel)~~

~~+ (Propane fuel burned by HHP6 – HHP10) x (Ef5n of PM/gal of Propane fuel)~~

~~+ (JP8 and Jet A fuel burned by HHP6, HHP7, HHP8, HHP9, HHP10, x (Ef7n of PM/gal of J8 or Jet A)~~

~~Where:~~

~~(1) Ef1n = Emission Factor in pounds of PM per gallon of diesel fuel for HHP6 – HHP10 = 0.0085 lb/gal;~~

~~(2) Ef2n = Emission Factor in pounds of PM per gallon of diesel fuel for Production 1 – 3 = 0.0085 lb/gal;~~

~~(3) Ef3n = Emission Factor in pounds of PM per MMBtu of natural gas for HHP6 – HHP10 = 0.00991 lb/MMBtu~~

~~(4) Ef4n = Emission Factor in pounds of PM per gallon of biodiesel fuel for HHP6 – HHP10 = 0.0085 lb/gal;~~

~~(5) Ef5n = Emission Factor in pounds of PM per gallon of propane for HHP6 – HHP10 = 0.005 lb/MMBtu~~

~~(6) Ef6n = Emission Factor in pounds of PM per gallon of biodiesel fuel for Production 1 -3 = 0.0085 lb/gal; and~~

~~(7) Ef7n = Emission Factor in pounds for PM per gallon of J8 or Jet A for HHP6, HHP7, HHP8, HHP9, HHP10 = 0.0294 lb/gal.~~

~~(i) The total PM_{10} emissions from HHP6 – HHP10 and Production 1 -3 shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The PM_{10} emissions shall be calculated by the following equation:~~

~~PM_{10} emissions = (Diesel fuel burned by HHP6 – HHP10 x (Ef1n of PM_{10}/gal of diesel fuel) + (Diesel fuel burned by Production 1 - 3) x (Ef2n, of PM_{10}/gal of diesel fuel)~~
~~+ (Natural gas burned by HHP6 – HHP10 x (Ef3n of PM_{10}/ft3 of natural gas)~~
~~+ (Biodiesel fuel burned by HHP6 – HHP10) x (Ef4n of PM_{10}/gal of biodiesel fuel) +(Biodiesel fuel burned by Production 1 – 3) x Ef6n of PM_{10}/gal of biodiesel fuel)~~
~~+ (Propane fuel burned by HHP6 – HHP10) x (Ef5n of PM_{10}/gal of Propane fuel)~~
~~+ (JP8 and Jet A fuel burned by HHP6, HHP7, HHP8, HHP9, HHP10, x (Ef7n of PM_{10}/gal of J8 or Jet A)~~

~~Where:~~

~~(1) Ef1n = Emission Factor in pounds of PM_{10} per gallon of diesel fuel for HHP6 – HHP10 = 0.0079 lb/gal;~~
~~(2) Ef2n = Emission Factor in pounds of PM_{10} per gallon of diesel fuel for Production 1 – 3 = 0.0079 lb/gal;~~
~~(3) Ef3n = Emission Factor in pounds of PM_{10} per MMBtu of natural gas for HHP6 – HHP10 = 0.0000771 lb/MMBtu~~
~~(4) Ef4n = Emission Factor in pounds of PM_{10} per gallon of biodiesel fuel for HHP6 – HHP10 = 0.0079 lb/gal;~~
~~(5) Ef5n = Emission Factor in pounds of PM_{10} per gallon of propane for HHP6 – HHP10 = 0.005 lb/MMBtu~~
~~(6) Ef6n = Emission Factor in pounds of PM_{10} per gallon of biodiesel fuel for Production 1 -3 = 0.0079 lb/gal; and~~
~~(7) Ef7n = Emission Factor in pounds for PM_{10} per gallon of J8 or Jet A for HHP6, HHP7, HHP8, HHP9, HHP10 = 0.0294 lb/gal.~~

~~(i) The total $PM_{2.5}$ emissions from HHP6 – HHP10 and Production 1 -3 shall not exceed 248 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~The $PM_{2.5}$ emissions shall be calculated by the following equation:~~

~~$PM_{2.5}$ emissions = (Diesel fuel burned by HHP6 – HHP10 x (Ef1n of $PM_{2.5}$/gal of diesel fuel) + (Diesel fuel burned by Production 1 - 3) x (Ef2n, of $PM_{2.5}$/gal of diesel fuel)~~
~~+ (Natural gas burned by HHP6 – HHP10 x (Ef3n of $PM_{2.5}$/ft3 of natural gas)~~
~~+ (Biodiesel fuel burned by HHP6 – HHP10) x (Ef4n of $PM_{2.5}$/gal of biodiesel fuel) +(Biodiesel fuel burned by Production 1 – 3) x Ef6n of $PM_{2.5}$/gal of biodiesel fuel)~~
~~+ (Propane fuel burned by HHP6 – HHP10) x (Ef5n of $PM_{2.5}$/gal of Propane fuel)~~
~~+ (JP8 and Jet A fuel burned by HHP6, HHP7, HHP8, HHP9, HHP10, x (Ef7n of $PM_{2.5}$/gal of J8 or Jet A)~~

~~Where:~~

~~(1) Ef1n = Emission Factor in pounds of $PM_{2.5}$ per gallon of diesel fuel for HHP6 – HHP10 = 0.0076 lb/gal;~~
~~(2) Ef2n = Emission Factor in pounds of $PM_{2.5}$ per gallon of diesel fuel for Production 1 – 3 = 0.0076 lb/gal;~~
~~(3) Ef3n = Emission Factor in pounds of $PM_{2.5}$ per MMBtu of natural gas for HHP6 – HHP10 = 0.0000771 lb/MMBtu~~
~~(4) Ef4n = Emission Factor in pounds of $PM_{2.5}$ per gallon of biodiesel fuel for HHP6 – HHP10 = 0.0076 lb/gal;~~
~~(5) Ef5n = Emission Factor in pounds of $PM_{2.5}$ per gallon of propane for HHP6 – HHP10 = 0.005 lb/MMBtu~~
~~(6) Ef6n = Emission Factor in pounds of $PM_{2.5}$ per gallon of biodiesel fuel for Production 1 -3 = 0.0076 lb/gal; and~~
~~(7) Ef7n = Emission Factor in pounds for $PM_{2.5}$ per gallon of J8 or Jet A for HHP6, HHP7, HHP8, HHP9, HHP10 = 0.0294 lb/gal.~~

~~(k) The total CO emissions from HHP6 – HHP10 and Production 1 -3 shall not exceed 230 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 HHP6 – HHP10 x (Ef1n of CO/gal of diesel fuel) + (Diesel fuel burned by Production 1 - 3) x (Ef2n, of CO/gal of diesel fuel)~~

~~+ (Natural gas burned by HHP6 – HHP10 x (Ef3n of CO/ft3 of natural gas)~~

~~+ (Biodiesel fuel burned by HHP6 – HHP10) x (Ef4n of CO/gal of biodiesel fuel) +(Biodiesel fuel burned by Production 1 – 3) x Ef6n of CO/gal of biodiesel fuel)~~

~~+ (Propane fuel burned by HHP6 – HHP10) x (Ef5n of CO/gal of Propane fuel)~~

~~+ (JP8 and Jet A fuel burned by HHP6, HHP7, HHP8, HHP9, HHP10, x (Ef7n of CO/gal of J8 or Jet A)~~

~~Where:~~

~~(1) Ef1n = Emission Factor in pounds of CO per gallon of diesel fuel for HHP6 – HHP10 = 0.13 lb/gal;~~

~~(2) Ef2n = Emission Factor in pounds of CO per gallon of diesel fuel for Production 1 – 3 = 0.13 lb/gal;~~

~~(3) Ef3n = Emission Factor in pounds of CO per MMBtu of natural gas for HHP6 – HHP10 = 0.32 lb/MMBtu;~~

~~(4) Ef4n = Emission Factor in pounds of CO per gallon of biodiesel fuel for HHP6 – HHP10 = 0.13 lb/gal;~~

~~(5) Ef5n = Emission Factor in pounds of CO per gallon of propane for HHP6 – HHP10 = 0.129 lb/gal;~~

~~(6) Ef6n = Emission Factor in pounds of CO per gallon of biodiesel fuel for Production 1 -3 = 0.13 lb/gal; and~~

~~(7) Ef7n = Emission Factor in pounds for CO per gallon of J8 or Jet A for HHP6, HHP7, HHP8, HHP9, HHP10 = 0.18 lb/gal.~~

~~Compliance with these limits in combination with the potential to emit of PM, PM_{10}, NO_x, CO and VOC from all other units from this modification shall limit the emissions of PM, PM_{10}, NO_x, CO and VOC emissions from this modification 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 2011 modification. After this modification 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, the entire source will become major source under PSD after this Modification.~~

D.2.2 HAPs Minor Limits [326 IAC 2-4.1]

The Permittee shall comply with the following:

(a) The single HAP from the **paint spray line booth, identified as EU-01,** twenty five (25) engine test cells, identified as 801-808, HHP1-**HHP14** ~~**10**~~, 8(PI), 9(PI), 10(PI), EU-02C, ~~and Production lines~~ 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-01A through D and F~~ **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 identified in EU-02** ~~801, 802, 803, 804, 805 and 808) x (Ef1 of HAP/gal of diesel fuel) + (Diesel fuel burned by 806, 807, HHP1, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C) x Ef2, of HAP/gal of diesel fuel) + ((Diesel fuel burned by HHP6 – HHP10 x~~ (Ef1~~n~~ of HAP/gal of diesel fuel) ~~+ (Diesel fuel burned by Production 1 - 3) x (Ef2n, of HAP/gal of diesel fuel)~~

~~+ (Biodiesel fuel burned by 806, 807, HHP1, HHP2, HHP3, HHP5, 8(PI) (PI), 11(PI), HHP4 and EU-02C) x (Ef4 of HAP/gal of biodiesel fuel) + ((Biodiesel fuel burned by HHP6 – HHP10) x (Ef4n of HAP/gal of biodiesel fuel) +(Biodiesel fuel burned by Production 1 – 3) x Ef6n of HAP/gal of biodiesel fuel)~~

+ (Natural gas burned by **all test cells identified in EU-02** ~~806, 807, 808, HHP1, HHP3 HHP4, HHP5 and PI) x (Ef3 of HAP/ft3 of natural gas)+ (Natural gas burned by HHP6 – HHP10~~ x (Ef**2** ~~3n~~ of HAP/ft3 of natural gas)

+

(Liquid Propane burned by all test cells identified in EU-02) X Ef3 of HAP/gallon of liquid propane)

+

(Hydrogen Gas burned by all test cells identified in EU-02) X Ef4 of HAP per unit of hydrogen gas

~~+ (Propane natural gas blend fuel burned by 806, 807, HHP1, HHP3, HHP5, 8(PI) 10(PI), 11(PI), HHP4 and EU-02C) x (Ef5 of HAP/gal of Propane fuel) + (Propane fuel burned by HHP6 – HHP10) x (Ef5n of HAP/gal of Propane fuel)~~

~~+ (JP8 and Jet A fuel burned by HHP6, HHP7, HHP8, HHP9, HHP10, x (Ef7n of HAP/gal of J8 or Jet A)~~

Where:

~~(1)~~ Ef1 = Emission Factor in pounds of **single** HAP **(worse case)** per gallon of diesel **and biodiesel** fuel **burned in** ~~for~~ **test cells** ~~801, 802, 803, 804, 805 and 808 = 0.0002 lb/gal;~~

~~(2) Ef2 = Emission Factor in pounds of HAP per gallon of diesel fuel for 806, 807, HHP1, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C = 0.0002 lb/gal;~~

~~(3)~~ Ef**2**~~3~~ = Emission Factor in pounds of **single** HAP **(worse case)** per MMBtu of natural gas **burned in** ~~for~~ **test cells** ~~806, 807, 808, HHP1, HHP3 HHP4, HHP5 and PI = 0.015 lb/MMBtu~~;

Ef3= Emission Factor in pounds of single HAP (worse case) per gallon of liquid propane fuel burned in test cells

Ef4= Emission Factor in pounds of single HAP (worse case) per unit of hydrogen gas burned in test cells

~~(4) Ef4 = Emission Factor in pounds of HAP per gallon of biodiesel fuel for 806, 807, HHP1, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C = 0.0002 lb/gal;~~

~~(5) Ef5 = Emission Factor in pounds of HAP per gallon of propane for 806, 807, HHP1, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C = 0.0 lb/gal;~~

~~(6) Ef1n = Emission Factor in pounds of HAP per gallon of diesel fuel for HHP6 – HHP10 = 0.0002 lb/gal;~~

~~(7) Ef2n = Emission Factor in pounds of HAP per gallon of diesel fuel for Production 1 – 3 = 0.0002 lb/gal;~~

~~(8) Ef3n = Emission Factor in pounds of HAP per MMBtu of natural gas for HHP6 – HHP10 = 0.009 lb/MMBtu;~~

~~(9) Ef4n = Emission Factor in pounds of HAP per gallon of biodiesel fuel for HHP6 – HHP10 = 0.0002 lb/gal;~~

~~(10) Ef5n = Emission Factor in pounds of HAP per gallon of propane for HHP6 – HHP10 = 0.0 lb/gal;~~

~~(11~~**9**) ~~Ef6n = Emission Factor in pounds of HAP per gallon of biodiesel fuel for Production 1 -3 = 0.0002 lb/gal;~~

~~(12) Ef7n = Emission Factor in pounds for HAP per gallon of J8 or Jet A for HHP6, HHP7, HHP8, HHP9, HHP10 = 0.0002 lb/gal.~~

(b) The total HAP from the paint spray line booth, identified as EU-01, twenty five (25) engine test cells, identified as 801-808, HHP1-HHP**14** ~~10~~, 8(PI), 9(PI), 10(PI), EU-02C, ~~and Production lines 1-3~~ shall be ~~to~~ 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-01A through D and F~~ **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 **in all test cells identified in EU-02** ~~by 801, 802, 803, 804, 805 and 808) x (Ef1 of HAP/gal of diesel fuel) + (Diesel fuel burned by 806, 807, HHP1, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C) x Ef2, of HAP/gal of diesel fuel) + ((Diesel fuel burned by HHP6 – HHP10 x (Ef1n of HAP/gal of diesel fuel) + (Diesel fuel burned by Production 1 - 3)~~ x (Ef**1** ~~2n~~, of **total** HAP/gal of diesel **and biodiesel** fuel)

~~+ (Biodiesel fuel burned by 806, 807, HHP1, HHP2, HHP3, HHP5, 8(PI) (PI), 11(PI), HHP4 and EU-02C) x (Ef4 of HAP/gal of biodiesel fuel) + ((Biodiesel fuel burned by HHP6 – HHP10) x (Ef4n of HAP/gal of biodiesel fuel) +(Biodiesel fuel burned by Production 1 – 3) x Ef6n of HAP/gal of biodiesel fuel)~~

\+ (Natural gas burned by **all test cells identified in EU-02** ~~806, 807, 808, HHP1, HHP3 HHP4, HHP5 and PI) x (Ef3 of HAP/ft3 of natural gas)+ (Natural gas burned by HHP6 – HHP10~~ x (Ef**2** ~~3n~~ of **total** HAP/ft3 of natural gas)

+

(Liquid Propane burned in all test cells identified in EU-02) X Ef3 of total HAP/gal of Liquid Propane

+

(Hydrogen Gas burned in all test cells identified in EU-02) X Ef4 of total HAP/unit of hydrogen gas

~~+ (Propane natural gas blend fuel burned by 806, 807, HHP1, HHP3, HHP5, 8(PI) 10(PI), 11(PI), HHP4 and EU-02C) x (Ef5 of HAP/gal of Propane fuel) + (Propane fuel burned by HHP6 – HHP10) x (Ef5n of HAP/gal of Propane fuel)~~

~~+ (JP8 and Jet A fuel burned by HHP6, HHP7, HHP8, HHP9, HHP10, x (Ef7n of HAP/gal of J8 or Jet A)~~

Where:

Ef1 = Emission Factor in pounds of total HAP per gallon of diesel and biodiesel fuel burned in test cells

Ef2 = Emission Factor in pounds of total HAP per MMBtu of natural gas burned in test cells

Ef3= Emission Factor in pounds of total HAP per gallon of liquid propane fuel burned in test cells

Ef4= Emission Factor in pounds of total HAP per unit of hydrogen gas burned in test cells

~~(1) Ef1 = Emission Factor in pounds of HAP per gallon of diesel fuel for 801, 802, 803, 804, 805 and 808 = 0.0005 lb/gal;~~
~~(2) Ef2 = Emission Factor in pounds of HAP per gallon of diesel fuel for 806, 807, HHP1, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C = 0.0005 lb/gal;~~
~~(3) Ef3 = Emission Factor in pounds of HAP per MMBtu of natural gas for 806, 807, 808, HHP1, HHP3 HHP4, HHP5 and PI = 0.015 lb/MMBtu;~~
~~(4) Ef4 = Emission Factor in pounds of HAP per gallon of biodiesel fuel for 806, 807, HHP1, HHP2, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C = 0.0005 lb/gal;~~
~~(5) Ef5 = Emission Factor in pounds of HAP per gallon of propane for 806, 807, HHP1, HHP3, HHP5, 8(PI), 10(PI), 11(PI), HHP4 and EU-02C = 0.0 lb/gal;~~
~~(6) Ef1n = Emission Factor in pounds of HAP per gallon of diesel fuel for HHP6 – HHP10 = 0.0005 lb/gal;~~
~~(7) Ef2n = Emission Factor in pounds of HAP per gallon of diesel fuel for Production 1 – 3 = 0.0005 lb/gal;~~
~~(8) Ef3n = Emission Factor in pounds of HAP per MMBtu of natural gas for HHP6 – HHP10 = 0.009 lb/MMBtu;~~
~~(9) Ef4n = Emission Factor in pounds of HAP per gallon of biodiesel fuel for HHP6 – HHP10 = 0.0005 lb/gal;~~
~~(10) Ef5n = Emission Factor in pounds of HAP per gallon of propane for HHP6 – HHP10 = 0.0 lb/gal;~~
~~(11) Ef6n = Emission Factor in pounds of HAP per gallon of biodiesel fuel for Production 1 -3 = 0.0005 lb/gal;~~

~~(12) Ef7n = Emission Factor in pounds for HAP per gallon of J8 or Jet A for HHP6, HHP7, HHP8, HHP9, HHP10 = 0.0005 lb/gal.~~

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 VOC Limitations [326 IAC 8-1-6]~~

~~Pursuant to 326 IAC 8-1-6, the VOC emissions from the five test cells and the three production lines shall be limited to less than 25 tons, each per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~VOC emissions = (Diesel fuel burned by HHP6 – HHP10 x (Ef1n of VOC/gal of diesel fuel) + (Diesel fuel burned by Production 1 - 3) x (Ef2n, of VOC/gal of diesel fuel) +~~

~~+~~

~~(Natural gas burned by HHP6 – HHP10 x (Ef3n of VOC/ft^3 of natural gas)+~~

~~+~~

~~(Biodiesel fuel burned by HHP6 – HHP10) x (Ef4n of VOC/gal of biodiesel fuel) +(Biodiesel fuel burned by Production 1 – 3) x Ef6n of VOC/gal of biodiesel fuel)~~

~~+~~

~~(Propane fuel burned by HHP6 – HHP10) x (Ef5n of VOC/gal of Propane fuel)~~ ~~+~~

~~(JP8 and Jet A fuel burned by HHP6, HHP7, HHP8, HHP9, HHP10, x (Ef7n of VOC/gal of J8 or Jet A)~~

~~Where:~~

~~(1) Ef1n = Emission Factor in pounds of VOC per gallon of diesel fuel for HHP6 – HHP10~~

~~(2) Ef2n = Emission Factor in pounds of VOC per gallon of diesel fuel for Production 1 – 3~~

~~(3) Ef3n = Emission Factor in pounds of VOC per cubic foot of natural gas for HHP6 – HHP10~~

~~(4) Ef4n = Emission Factor in pounds of VOC per gallon of biodiesel fuel for HHP6 – HHP10~~

~~(5) Ef5n = Emission Factor in pounds of VOC per kilogallon of propane for HHP6 – HHP10~~

~~(6) Ef6n = Emission Factor in pounds of VOC per gallon of biodiesel fuel for Production 1 -3.~~

~~(7) Ef7n = Emission Factor in pounds for VOC per gallon of J8 or Jet A for HHP6,HHP7, HHP8, HHP9, HHP10.~~

~~Compliance with these limits, will limit the VOC emissions from each of the test cells and each of the production lines to less than 25 tons per year and render 326 IAC 8-1-6 (New Facilities, General Reduction requirements) not applicable to the five test cells and the three production lines.~~

D.2.~~4~~**3** Sulfur Dioxide (SO_2) **Operational Limits** ~~[326 IAC 7-1.1-1]~~

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

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

(2) Four (4) existing test cells, HHP2, HHP4, Test Pad 8, and Test Pad 10, shall burn diesel with a fuel sulfur content limit of 1,000 parts per million (ppm), but only two (2) of these four test cells may burn diesel fuel with 1000 PPM S at any given time, alternatively, three (3) existing test cells, HHP4, Test Pad 8 and Test Pad 10 shall burn diesel with a fuel sulfur content limits of 2,000 parts per million (ppm), but only one (1) of these three test cells may burn diesel fuel with 2000 PPM S at any given time.

~~Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations), the SO_2 emissions from the test cells and production lines shall not exceed five tenths (0.5) pounds per million Btu heat input, each. Compliance shall be demonstrated on a calendar month average.~~

D.2.~~5~~**4** Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the engine test cells, production lines, and their 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.2.5 Nitrogen Oxide (NOx) Control

In order to ensure compliance with Condition D.2.1(h), 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 (h).

D.2.6 Carbon Monoxide (CO) Control

In order to ensure compliance with Condition D.2.1(i), 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 (i).

D.2.7 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.2.1(h) 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(h) 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). 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(i) 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.

~~D.2.6 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7-4]~~

~~Compliance with the limits in Condition D.2.4 shall be determined utilizing one of the following options for the thirteen (13) test cells identified as HHP1, HHP2, HHP3, Test Pad 8, Test Pad 9, and HHP6 - HHP14.~~

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

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

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

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

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

~~(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boiler using 40 CFR 60, Appendix A, Method 6 in accordance with the~~

~~procedures in 326 IAC 3-6.~~
~~A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.~~

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

D.2.~~7~~**8** 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 ~~and~~ PD9.2, PD10.1, PD11.1, HHP6.1 through HHP10.1, ~~and~~ **HHP11.1, HHP12.1, HHP13.1 and HHP14.1** ~~Production 1.1 through Production 3.1~~) 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.

.....

D.2.9 SCR Parametric Monitoring

(a) In order to demonstrate compliance status with Conditions D.2.1(h), 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(h), 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 NOx 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(l), 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(h), the Permittee shall monitor the DOC temperature based performance characteristics. If temperature based performance characteristics of the DOC do 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 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 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.~~7~~**11** Record Keeping Requirements

(a) **********

(2) Actual diesel, biodiesel fuel oil, **liquid** propane, **hydrogen and** natural gas, ~~JetA, and J8~~ usage for EU-02A, EU-02B, EU-02C, and EU-02D (HHP6 through **HHP14** ~~**10**~~, ~~and Production1 through 3~~) since last compliance determination period and equivalent NO_X emissions.

(b) To document the compliance status with Condition~~s~~ D.2.~~4~~**3** ~~and D.2.6~~, the Permittee shall maintain records in accordance with (1) through (5) below.

.....

(c) To document the compliance status with Condition D.2.~~7~~ **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** ~~and Production 1.1 through Production 3.1~~) 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).

(d) 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).

(e) 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.

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

D.2.~~8~~**12** Reporting Requirements

A quarterly summary of the information to document the compliance status with conditions D.2.1, **and** D.2.2 ~~and D.2.3~~ 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.

Change 4: The new emission units have been added to Section D.2 in the permit.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

~~(f) Twenty five (25) natural gas-fired boilers, identified as EU03C-EU03AA, approved for construction in 2011, with EU003C-EU03Z each having a maximum capacity of 2.0 MMBtu/hr and EU03AA having a maximum capacity of 2.52 MMBtu/hr, exhausting to stacks B3-28, respectively.~~

(n) Twenty-two (22) natural gas fired boilers, identified as EU03C-EU03X, approved for construction in 2011, with EU03C-EU03V each having a maximum capacity of 2.0 MMBtu/hr and EU03W-EU03X each having a maximum capacity of 4.2 MMBtu/hr, exhausting to stacks B3-28, respectively.

(~~g~~**o**) Two (2) natural gas-fired boilers, identified as EU-03A and EU-03B, installed in 1978, exhausting to stacks B1 and B2, respectively, each rated at 20.9 MMBtu per hour.

(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.3.1 Particulate **Emission** ~~Matter (PM)~~ Limitation**s for Sources of Indirect Heating** [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating), **the** PM emissions from boilers, EU-03A and EU-03B, shall each be limited to 0.172 pounds per MMBtu heat input.

D.3.2 Particulate Emission Limitations for Sources of Indirect Heating Matter (PM) Limitation [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), **the** PM emissions from boilers, ~~EU03C-EU03AA~~ **EU-03C - EU-03X**, shall each be limited to ~~0.323~~ **0.338** pounds per MMBtu heat input. ~~This emission limit was calculated using the following equation:~~

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

~~where: Pt = pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input~~
~~Q = Total source maximum operating capacity rating in MMBtu/hr heat input.~~
~~= 108.05 MMBtu/hr~~

SECTION D.4 EMISSION UNIT OPERATION CONDITIONS

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

(a) Degreasing operations that do not exceed 145 gallons per 12 months. [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) 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]

(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 [326 IAC 12] [40 CFR 60 Subpart Kb]

(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)]

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D.4.4 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60, Subpart Kb]

The one (1) 25,000 gallon No.2 diesel storage tank **and the one (1) 100,000 gallon No 2 diesel storage tank** shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60, Subpart Kb). 40 CFR Part 60.116b paragraphs (a) and (b) require the Permittee to maintain accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

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:

(b) Six (6) production engine test cells, identified as EU-02A, constructed in 1978, consisting of the following equipment:

.....

(c) Ten (10) engineering engine test cells, identified as EU-02B, installed in 1978, consisting of the following equipment:

.....

(2) One (1) ~~diesel or biodiesel powered engineering engine~~ **engineering** test cell **engine with duct burners**, identified as HHP1, **modified in 2011** ~~may be alternatively~~ powered by **diesel, biodiesel** ~~liquid propane or~~ natural gas, **natural gas diluted with CO2, hydrogen or liquid propane** with maximum output of ~~4500~~ **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,** ~~hp, when combusting diesel or biodiesel or 2200 hp when combusting liquid propane or natural gas, with heat input of 28.82 MMBtu/hr when combusting diesel or biodiesel or 14.40 MMBtu/hr when combusting liquid propane and natural gas~~ and exhausting to stack HHP1**.1**;

.....

(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 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 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.

~~(e) Eight (8) engineering engine test cells, identified as EU-02D, approved for construction in 2011, consisting of the following equipment:~~

~~(1) One (1) engineering engine test cell, identified as HHP6, approved for construction in 2011, may be powered by diesel, biodiesel JP8/JetA, propane natural gas blend or natural gas, with maximum output of 7032 hp and exhausting to stack HHP6.1.~~

~~(2) One (1) engineering engine test cell, identified as HHP8, approved for construction in 2011, may be powered by diesel, biodiesel, JP8/JetA, propane natural gas blend or natural gas, with maximum output of 7032 hp and exhausting to stack HHP8.1;~~

~~(3) One (1) engineering engine test cell, identified as HHP9, approved for construction in 2011, may be powered by diesel, biodiesel, JP8/JetA, propane natural gas blend or natural gas, with maximum output of 7032 hp and exhausting to stack HHP9.1;~~

~~(4) One (1) production engine test cell, identified as Production 1, approved for construction in 2011, may be powered by diesel, biodiesel with maximum output of 7032 hp and exhausting to stack Production 1.1.~~

~~(5) One (1) production engine test cell, identified as Production 2, approved for construction in 2011, may be powered by diesel, biodiesel with maximum output of 7032 hp and exhausting to stack Production 2.1.~~

~~(6) One (1) production engine test cell, identified as Production 3, approved for construction in 2011, may be powered by diesel, biodiesel with maximum output of 7032 hp and exhausting to stack Production 3.1.~~

~~(7) One (1) engineering engine test cell, identified as HHP7, approved for construction in 2011, may be powered by natural gas, biodiesel, JP8/JetA, propane natural gas blend or diesel fuel, with maximum output of 5685 hp and exhausting to stack HHP7.1.~~

~~(8) One (1) engineering engine test cell, identified as HHP10, approved for construction in 2011, may be powered by natural gas, biodiesel, JP8/JetA, propane natural gas blend or diesel fuel, with maximum output of 5685 hp, and exhausting to stack HHP10.1.~~

.....

(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]

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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** ~~2011~~, with maximum capacity of 1,490 horse power.

Under 40 CFR 63, Subpart ZZZZ, the emergency generator is a new affected source.

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

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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:

(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, 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.

~~(1) One (1) primer spray booth, identified as EU-01A, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S1 and S2.~~
~~(2) One (1) top coat spray booth, identified as EU-01B, constructed in 1995, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S3 and S4.~~
~~(3) One (1) touch-up spray booth, identified as EU-01C, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stacks S5 and S6.~~
~~(4) One (1) offline spray booth, identified as EU-01D, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S7.~~
~~(5) One (1) small parts spray booth, identified as EU-01F, constructed in 1986, with a maximum capacity of 3 engines per hour, equipped with dry filters for overspray control, exhausting to stack S8.~~

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.)

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Change 5: The quarterly reports have been updated in the permit.

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~COMPLIANCE DATA SECTION~~
~~Part 70 Quarterly Report~~

~~Source Name:~~ ~~Cummins Industrial Center~~
~~Source Address:~~ ~~800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:~~ ~~T 071-30358-00015~~
~~Facilities:~~ ~~Five (5) engine test cells and Three (3) Production Lines~~
~~Parameter:~~ ~~NO_x Emissions~~
~~Limit:~~ ~~NO_x emissions shall not exceed 218 tons of NO_x per twelve (12) consecutive month period~~YEAR: _____

~~Month~~	~~Fuel Type~~	~~Engines~~	~~Ef ID~~	~~Emission Factor Value (lb/gal or lb/cf)~~	~~Combined Fuel Usage This Month (gal of cf)~~	~~NO_x Emissions (tons)~~			
						~~This Month~~	~~This Month, all engines~~	~~Previous 11 Months, all engines~~	~~12 month total, all engines~~
_____	~~Diesel~~	~~HHP6-HHP 10~~	~~Ef1n~~	_____	_____	_____	_____	_____	_____
				_____	_____	_____			
				_____	_____	_____			
		~~Production HHP11-HHP14 1-3~~	~~Ef2n~~	_____	_____	_____			
	~~Natural Gas~~	~~HHP6-HHP10~~	~~Ef3n~~	_____	_____	_____			
				_____	_____	_____			
	~~Biodiesel~~	~~HHP6-HHP 10~~	~~Ef4n~~	_____	_____	_____			
				_____	_____	_____			
		~~Production HHP11-HHP141-3~~	~~Ef6n~~	_____	_____	_____			
	~~Propane~~	~~HHP6-HHP10~~	~~Ef5n~~	_____	_____	_____			
	~~JP8/JetA~~	~~HHP6-HHP 10,~~	~~Ef7n~~	_____	_____	_____			

☐ ~~No deviation occurred in this quarter.~~

☐ ~~Deviations occurred in this quarter.~~
~~Deviation has been reported on:~~ _____

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~COMPLIANCE AND ENFORCEMENT BRANCH~~
~~Part 70 Quarterly Report~~

~~Source Name:~~ ~~Cummins Industrial Center~~
~~Source Address:~~ ~~800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:~~ ~~T 071-30358-00015~~
~~Facility:~~ ~~Five (5) engine test cells and Three (3) Production Lines~~
~~Parameter:~~ ~~PM Emissions~~
~~Limit:~~ ~~Less than 248 tons per twelve (12) consecutive month period.~~YEAR: _____

~~Month~~	~~Total PM Emissions for This Month (tons)~~	~~Total PM Emissions for Previous 11 Months (tons)~~	~~Total PM 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 Industrial Center~~
~~Source Address:~~ ~~800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:T 071-30358-00015~~
~~Facility:~~ ~~Five (5) engine test cells and Three (3) Production Lines~~
~~Parameter:~~ ~~CO Emissions~~
~~Limit:~~ ~~Less than 230 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 Industrial Center**
Source Address: **800 East Third Street, Seymour, Indiana 47274**
Part 70 Permit Renewal No.: **T 071-30358-00015**
Facility: **Six (6) engine test cells HHP1, HHP6-HHP10, four (4) Production Lines HHP11-HHP14, twenty two (22) boilers EU03C-EU03X, ten (10) duct burners and emergency generator**
Parameter: **NOx Emissions**
Limit: **Less than 248 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 Industrial Center
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Six (6) engine test cells HHP1, HHP6-HHP10, four (4) Production Lines HHP11-HHP14, twenty two (22) boilers EU03C-EU03X, ten (10) duct burners and emergency generator
Parameter: CO Emissions
Limit: Less than 248 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: _____

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Cummins Industrial Center
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Six (6) engine test cells HHP1, HHP6-HHP10, four (4) Production Lines HHP11-HHP14, twenty two (22) boilers EU03C-EU03X, ten (10) duct burners and emergency generator
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: _____

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: **Cummins Industrial Center**
Source Address: **800 East Third Street, Seymour, Indiana 47274**
Part 70 Permit Renewal No.: **T 071-30358-00015**
Facility: **Eight (8) engine test cells (HHP801-808 and HHP2-HHP5), four (4) Test Pad 8-11, two (2) boilers (EU-03A-EU-03B)**
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: _____

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: **Cummins Industrial Center**
Source Address: **800 East Third Street, Seymour, Indiana 47274**
Part 70 Permit Renewal No.: **T 071-30358-00015**
Facility: **Six (6) engine test cells HHP1, HHP6 - HHP10, four (4) Production Lines (HHP11-HHP14), new paint lines, twenty two (22) boilers EU-03C - EU-03X, ten (10) duct burners and emergency generator**
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 Industrial Center~~
~~Source Address: 800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:T 071-30358-00015~~
~~Facility: HHP6~~

~~Parameter: VOC Emissions~~
~~Limit: Less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~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 Industrial Center~~
~~Source Address: 800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:T 071-30358-00015~~
~~Facility: HHP7~~
~~Parameter: VOC Emissions~~
~~Limit: Less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~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 Industrial Center~~
~~Source Address:~~ ~~800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:T 071-30358-00015~~
~~Facility:~~ ~~HHP8~~
~~Parameter:~~ ~~VOC Emissions~~
~~Limit:~~ ~~Less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~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 Industrial Center~~
~~Source Address:~~ ~~800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:T 071-30358-00015~~
~~Facility:~~ ~~HHP9~~
~~Parameter:~~ ~~VOC Emissions~~
~~Limit:~~ ~~Less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~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 Industrial Center~~
~~Source Address:~~ ~~800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:T 071-30358-00015~~
~~Facility:~~ ~~HHP10~~
~~Parameter:~~ ~~VOC Emissions~~
~~Limit:~~ ~~Less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~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 Industrial Center~~
~~Source Address:~~ ~~800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:T 071-30358-00015~~
~~Facility:~~ ~~Production 1~~
~~Parameter:~~ ~~VOC Emissions~~
~~Limit:~~ ~~Less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~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 Industrial Center~~
~~Source Address:~~ ~~800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:T 071-30358-00015~~
~~Facility:~~ ~~Production 2~~
~~Parameter:~~ ~~VOC Emissions~~
~~Limit:~~ ~~Less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~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 Industrial Center~~
~~Source Address:~~ ~~800 East Third Street, Seymour, Indiana 47274~~
~~Part 70 Permit Renewal No.:T 071-30358-00015~~

~~Facility:~~ ~~Production 3~~
~~Parameter:~~ ~~VOC Emissions~~
~~Limit:~~ ~~Less than 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~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: Seymour Engine Plant (SEP)
Source Address: 800 East Third Street, Seymour, Indiana 47274
Part 70 Permit Renewal No.: T 071-30358-00015
Facility: Twenty-five test cells and the Paint spray line booth
Parameter: Single HAP Emissions
Limit: Less than 9**.5** tons per year for any single HAP 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: _____

Change 6: The Company has changed their name from Cummins Industrial Center to **Seymour Engine Plant (SEP)**.

Conclusion and Recommendation

The construction and the operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 071-30956-00015 and Significant Permit Modification No. 071-30962-00015. 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 Josiah Balogun 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) 234-5257 or toll free at 1-800-451-6027 extension 4-5257.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emissions Calculations
Emission Summary

Source Name: Seymour Engine Plant (SEP)
Source Location: 800 East Third St., Seymour , IN 47274
Significant Source Modification No: 071-30956-00015
Significant Permit Modification No: 071-30962-00015
Permit Reviewer: Josiah Balogun
Date: 1-Dec-11

Uncontrolled Potential to Emit

	PM (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	GHGs as CO2e (tons/yr)	HAPs (tons/yr)
Emission Unit									
Diesel Storage Tank	0	0	0	0	0.072	0	0	0	0
New Paint Lines	191.01	191.01	191.01	0	159.42	0	0	0	116.53
HHP1	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
HHP6	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
HHP8	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
HHP9	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
Production 1	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
Production 2	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
Production 3	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
Production 4	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
HHP7	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
HHP10	7.48	6.91	6.7	0.18	110.0	170.9	738.0	35,853	0.18
Twenty two (22) Boilers	0.4	1.6	1.6	0.1	1.2	17.8	21.2	25498.4	0.4
Duct Burners	0.1	0.5	0.5	0	0.4	5.5	6.6	7902.4	0.12
Emergency Generator	0.26	0.15	0.15	0.0045	0.26	2.05	8.94	426.59	0.0041
Total Emissions	266.57	262.36	260.26	1.93	1261.21	1734.76	7416.63	392357.90	118.81

Appendix A: Emissions Calculations
Emission Summary
Source Name: Seymour Engine Plant (SEP)
Source Location: 800 East Third St., Seymour , IN 47274
Significant Source Modification: 071-30956-00015
Significant Permit Modification: 071-30962-00015
Permit Reviewer: Josiah Balogun
Date: 1-Dec-11

Limited Potential to Emit

	PM (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	GHGs as CO2e (tons/yr)	HAPs (tons/yr)
Emission Unit									
Diesel Storage Tank	0	0	0	0	0.072	0	0	0	0
New Paint Lines	1.65	1.65	1.65	0	248	0	0	0	Single HAP < 9 Combined HAPs < 24
HHP1	7.48	6.91	6.7	0.18		248	248	99,000	
HHP6	7.48	6.91	6.7	0.18					
HHP8	7.48	6.91	6.7	0.18					
HHP9	7.48	6.91	6.7	0.18					
Production 1	7.48	6.91	6.7	0.18					
Production 2	7.48	6.91	6.7	0.18					
Production 3	7.48	6.91	6.7	0.18					
Production 4	7.48	6.91	6.7	0.18					
HHP7	7.48	6.91	6.7	0.18					
HHP10	7.48	6.91	6.7	0.18					
Twenty two (22) Boilers	0.4	1.6	1.6	0.1					
Duct Burners	0.1	0.5	0.5	0					
Emergency Generator	0.26	0.15	0.15	0.0045					
Total Emissions	77.21	73.00	70.90	1.90	248.07	248.00	248.00	99000.00	Single HAP <10 Combined HAPs < 25

Appendix A: Emissions Calculations
Emission Summary
Source Name: Seymour Engine Plant (SEP)
Source Location: 800 East Third St., Seymour , IN 47274
Significant Source Modification: 071-30956-00015
Significant Permit Modification: 071-30962-00015
Permit Reviewer: Josiah Balogun
Date: 1-Dec-11

Sourcewide Potential to Emit

	PM (tons/yr)	PM_{10} (tons/yr)	$PM_{2.5}$ (tons/yr)	SO_2 (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NOx (tons/yr)	GHGs as CO2e (tons/yr)	HAPs (tons/yr)
Emission Unit									
Existing Test Cells	233.11	231.45	231.45	22.53	163.56	183.62	217.9	99,000	< 10 and < 25
Existing Boilers (B1 and B2)	0.3	1.4	1.4	0.1	1.0	15.4	18.3		
Total for Existing Units	**233.41**	**232.85**	**232.85**	**22.63**	**164.56**	**199.02**	**236.20**	**99000.00**	**Single HAP <10 Combined HAPs < 25**
2011 Modification									
Diesel Storage Tank	0	0	0	0	0.072	0	0	0	Single HAP <10 Combined HAPs < 25
New Paint Lines	1.65	1.65	1.65	0	248	0	0	0	
HHP1	7.48	6.91	6.7	0.18		248	248	99,000	
HHP6	7.48	6.91	6.7	0.18					
HHP8	7.48	6.91	6.7	0.18					
HHP9	7.48	6.91	6.7	0.18					
Production 1	7.48	6.91	6.7	0.18					
Production 2	7.48	6.91	6.7	0.18					
Production 3	7.48	6.91	6.7	0.18					
Production 4	7.48	6.91	6.7	0.18					
HHP7	7.48	6.91	6.7	0.18					
HHP10	7.48	6.91	6.7	0.18					
Twenty two (22) Boilers	0.4	1.6	1.6	0.1					
Duct Burners	0.1	0.5	0.5	0					
Emergency Generator	0.26	0.15	0.15	0.0045					
Total Emissions for 2011 Mod.	**77.21**	**73.00**	**70.90**	**1.90**	**248.07**	**248.00**	**248.00**	**99000.00**	
Total Emissions	**310.62**	**305.85**	**303.75**	**24.53**	**412.63**	**447.02**	**484.20**	**198000.00**	**Single HAP <10 Combined HAPs < 25**

Potential to Emit for Test Cells

Diesel

Test Cell Engine	Max. Fuel Usage (kgal/yr)[1]	Emission Factors (lb/gal)[2]												Emissions (tons/yr)												
		NOx[3]	SO2[4]	VOC	PM[5]	PM10[5]	PM2.5[5]	CO	Single HAP[6]	Total HAP[6]	CO2[7]	CH4[7]	N2O[7]	NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
HHP1	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP6	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP8	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP9	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Production 1	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Production 2	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Production 3	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Production 4	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP7	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP10	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Total Emissions														**2,816.00**	**1.83**	**108.53**	**74.76**	**69.10**	**67.05**	**1,024.98**	**0.94**	**1.76**	**198,012.64**	**8.03**	**1.61**	**198,679.29**

1. Max fuel usages evaluated based on testing of a 9,000 hp engine.
2. Emission Factors are based on AP-42 Section 3.4 (Tables 3.4-1, 3.4-2, 3.4-3, 3.4-4) and are calculated using an average heating value 19,300 Btu/lb and a density of 7.1 lb/gallon for diesel fuel per footnote a to Table 3.4-1.
3. Diesel NOx emission factor is 0.320 based on preliminary engine designs and anticipated testing regiment.
4. All SO2 emission factors based on use of ultra-low sulfur diesel (15 ppm max).
5. PM emission factor is for filterable PM. PM10/PM2.5 emission factor is for filterable PM10/PM2.5 and condensable particulate. Particle size < 3 um is used to determine filterable PM2.5.
6. Single HAP with highest emission factor is benzene. Total HAP includes pollutants with top 5 emission factors: benzene, toluene, xylenes, napthalene, and formaldehyde.
7. Emission factors for CO2, CH4, and N2O and diesel fuel heat content are based on 40 CFR 98 Subpart C (Tables C-1, C-2).

Methodology

Emissions (tons/yr) = Fuel Usage (kgal/yr) * 1000 (gal/kgal) * Emission Factor (lb/gal) * 1/2000 (ton/lb)

Biodiesel

Test Cell Engine	Max. Fuel Usage (kgal/yr)[1]	Emission Factors (lb/gal)[2]												Emissions (tons/yr)												
		NOx[3]	SO2[4]	VOC	PM[5]	PM10[5]	PM2.5[5]	CO	Single HAP[6]	Total HAP[6]	CO2[7]	CH4[7]	N2O[7]	NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
HHP1	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP6	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP8	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP9	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Production 1	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Production 2	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Production 3	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Production 4	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP7	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP10	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Total Emissions														**2,979.33**	**1.83**	**108.53**	**74.76**	**69.10**	**67.05**	**1,024.98**	**0.94**	**1.76**	**183,365.91**	**2.73**	**0.27**	**183,507.95**

1. Max fuel usages evaluated based on testing of a 9,000 hp engine.
2. Emission Factors are based on AP-42 Section 3.4 (Tables 3.4-1, 3.4-2, 3.4-3, 3.4-4) and are calculated using an average heating value 19,300 Btu/lb and a density of 7.1 lb/gallon for diesel fuel per footnote a to Table 3.4-1.
3. Based on "Biodiesel Handling and Use Guidelines," NREL/TP-580-30004, B100 blend of biodiesel increases NOx by 5.8%.
4. All SO2 emission factors based on use of ultra-low sulfur diesel (15 ppm max).
5. PM emission factor is for filterable PM. PM10/PM2.5 emission factor is for filterable PM10/PM2.5 and condensable particulate. Particle size < 3 um is used to determine filterable PM2.5.
6. Single HAP with highest emission factor is benzene. Total HAP includes pollutants with top 5 emission factors: benzene, toluene, xylenes, napthalene, and formaldehyde.
7. Emission factors for CO2, CH4, and N2O and biodiesel fuel heat content are based on 40 CFR 98 Subpart C (Tables C-1, C-2).

Methodology

Emissions (tons/yr) = Fuel Usage (kgal/yr) * 1000 (gal/kgal) * Emission Factor (lb/gal) * 1/2000 (ton/lb)

Natural Gas

Test Cell Engine	Heat Input[1] (MMBtu/yr)	Emission Factors (lb/MMBtu)[2]												Emissions (tons/yr)												
		NOx	SO2	VOC	PM[3]	PM10[3]	PM2.5[3]	CO	Single HAP[4]	Total HAP[4]	CO2[5]	CH4[5]	N2O[5]	NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
HHP1	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
HHP6	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
HHP8	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
HHP9	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Production 1	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Production 2	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Production 3	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Production 4	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
HHP7	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
HHP10	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.002205	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Total Emissions														**4,919.93**	**0.71**	**142.29**	**0.09**	**12.04**	**12.04**	**671.67**			**140,952.35**	**2.66**	**0.27**	**141,090.59**

1. Max fuel usage was based on testing of a 9,000 hp engine while using diesel. Diesel's heat content of 137.03 MMBtu/kgal was then used to estimate the maximum heat input capacity per test cell.
2. Emission factors from AP-42 Section 3.2 (Table 3.2-2 - uncontrolled emission factors for 4-stroke lean-burn engines), unless otherwise noted.
3. PM emission factor is for filterable PM. PM10/PM2.5 emission factor is for filterable PM10/PM2.5 and condensable particulate.
4. 071-21065-00015 states that Fuel Oil is worst case for HAPs so no calculations were completed for HAPs from Natural Gas.
5. Emission factors for CO2, CH4, and N2O are based on 40 CFR 98 Subpart C (Tables C-1, C-2).

Methodology

Heat Input (MMBtu/yr) = Max Diesel Usage (kgal/yr) * 1,000 (gal/kgal) * 7.1 (lb/gal) * 19,300 (Btu/lb) / 1,000,000 (Btu/MMBtu)

Emissions (tons/yr) = Heat Input (MMBtu/yr) * Emission Factor (lb/MMBtu) * 1/2000 (ton/lb)

Propane

Test Cell Engine	Max. Fuel Usage (kgal/yr)[1]	Emission Factors (lb/kgal)[2]												Emissions (tons/yr)												
		NOx	SO2	VOC	PM	PM10	PM2.5[3]	CO	Single HAP[4]	Total HAP[4]	CO2[5]	CH4[5]	N2O[5]	NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
HHP1	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP6	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP8	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP9	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Production 1	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Production 2	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Production 3	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Production 4	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP7	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP10	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Total Emissions														**1,841.92**	**4.64**	**1,099.85**	**66.26**	**66.26**	**66.26**	**1,709.41**			**163,389.88**	**7.98**	**1.60**	**164,051.84**

1. Max fuel usage was based on testing of a 9,000 hp engine while using diesel. Because propane's heat content is lower than natural gas, it takes 1.506 times more propane than natural gas to achieve the same annual heat input capacity.
2. Emission factors from Cummins CTC - Plant 5 engine test cell emission factors for LPG from TSD to permit T005-7466-00002, unless otherwise noted.
3. PM10 assumed equal to PM2.5 emission factor.
4. 071-21065-00015 states that Fuel Oil is worst case for HAPs so no calculations were completed for HAPs from Propane.
5. Emission factors for CO2, CH4, and N2O and propane heat content are based on 40 CFR 98 Subpart C (Tables C-1, C-2).

Methodology

Fuel Usage (kgal/yr) = Max Diesel Usage (kgal/yr) * 1,000 (gal/kgal) * 7.1 $(lb/gal)_{diesel}$ * 19,300 $(Btu/lb)_{diesel}$ / 1,000,000 (Btu/MMBtu) / [0.091 $(MMBtu/gal)_{propane}$ *1,000 (gal/kgal)]

Emissions (tons/yr) = Max Fuel Usage (kgal/yr) * Emission Factor (lb/kgal) * 1/2000 (ton/lb)

Hydrogen

Test Cell Engine	Heat Input[1] (MMBtu/yr)	Emission Factors (lb/MMBtu)[2]		Emissions (tons/yr)		
		NOx	N2O[3]	NOx	N2O	CO2e
HHP1	241,173	6.12	0.00033	737.99	0.040	12
HHP6	241,173	6.12	0.00033	737.99	0.040	12
HHP8	241,173	6.12	0.00033	737.99	0.040	12
HHP9	241,173	6.12	0.00033	737.99	0.040	12
Production 1	241,173	6.12	0.00033	737.99	0.040	12
Production 2	241,173	6.12	0.00033	737.99	0.040	12
Production 3	241,173	6.12	0.00033	737.99	0.040	12
Production 4	241,173	6.12	0.00033	737.99	0.040	12
HHP7	241,173	6.12	0.00033	737.99	0.040	12
HHP10	241,173	6.12	0.00033	737.99	0.040	12
Total Emissions				**7,379.89**	**0.40**	**123.62**

1. Max fuel usage was based on testing of a 9,000 hp engine while using diesel. Diesel's heat content of 137.03 MMBtu/kgal was then used to estimate the maximum heat input capacity per test cell.
2. Emission factors from AP-42 Section 3.2 (Table 3.2-2 - uncontrolled emission factors for 4-stroke lean-burn engines) assuming NOx emitted at a rate 50% greater than NG based on higher combustion temperature of hydrogen versus natural gas.
3. Emission factor for N2O is based on 40 CFR 98 Subpart C (Tables C-1, C-2) emitted at a rate 50% greater than NG based on higher combustion temperature of hydrogen versus natural gas.

Methodology

Heat Input (MMBtu/yr) = Max Diesel Usage (kgal/yr) * 1,000 (gal/kgal) * 7.1 (lb/gal) * 19,300 (Btu/lb) / 1,000,000 (Btu/MMBtu)

Emissions (tons/yr) = Heat Input (MMBtu/yr) * Emission Factor (lb/MMBtu) * 1/2000 (ton/lb)

Natural Gas/CO2

Test Cell Engine	Heat Input[1] (MMBtu/yr)	Emission Factor (lb/MMBtu)[2]			Emissions (tons/yr)			
		CO2[3]	CH4	N2O	CO2	CH4	N2O	CO2e
HHP1	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP6	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP8	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP9	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Production 1	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Production 2	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Production 3	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Production 4	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP7	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP10	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Total Emissions					**358,392.27**	**2.66**	**0.27**	**358,531**

1. Max fuel usage was based on testing of a 9,000 hp engine while using diesel. Diesel's heat content of 137.03 MMBtu/kgal was then used to estimate the maximum heat input capacity per test cell.
2. See natural gas combustion emission factors and calculations for all pollutants except CO2.
3. CO2 emission factor includes contribution from natural gas combustion and CO2 injected on a 60/40 CO2/NG ratio, by volume. See methodology below.

Methodology

Heat Input (MMBtu/yr) = Max Diesel Usage (kgal/yr) * 1,000 (gal/kgal) * 7.1 (lb/gal) * 19,300 (Btu/lb) / 1,000,000 (Btu/MMBtu)

Emission Factor $(lb/MMBtu_{NG})$ = Combustion Contribution (lb/MMBtu NG) + Injected CO2 (lb/MMBtu NG)

= Combustion EF (kg/MMBtu NG) / 0.45359237 (kg/lb) + 1/1020 (MMscf NG/MMBtu NG) * 1,000,000 (scf NG/MMscf NG) * (40 scf CO2/60 scf NG) * (lb-mol CO2/scf CO2) * CO2 Molecular Weight

Where, using the ideal gas law of n/V (lb-mol CO2/scf CO2) = P/RT = 1 (atm)/273.14 (K) / 1.314 ([atm*scf]/[K*lb-mol]) = 0.0028

CO2 Molecular Weight = 44.0095 lb/lb-mol

Emissions (tons/yr) = Heat Input (MMBtu NG/yr) * Emission Factor (lb/MMBtu NG) * 1/2000 (ton/lb)

Worst-case Emissions

NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
7,379.89	**4.64**	**1,099.85**	**74.76**	**69.10**	**67.05**	**1,709.41**	**0.94**	**1.76**	**358,392.27**	**8.03**	**1.61**	**358,530.51**
Hydrogen	Diesel/ Biodiesel	Propane	Diesel/ Biodiesel	Diesel/ Biodiesel	Diesel/ Biodiesel	Propane	Diesel/ Biodiesel	Diesel/ Biodiesel	Natural Gas/CO2	Diesel	Diesel	Natural Gas/CO2

Potential to Emit for Test Cells

Diesel

Test Cell Engine	Max. Fuel Usage (kgal/yr)[1]	Emission Factors (lb/gal)[2]												Emissions (tons/yr)												
		NOx[3]	SO2[4]	VOC	PM[5]	PM10[5]	PM2.5[5]	CO	Single HAP[6]	Total HAP[6]	CO2[7]	CH4[7]	N2O[7]	NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
HHP1	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP6	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP8	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP9	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Production 1	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Production 2	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Production 3	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Production 4	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP7	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
HHP10	1,760	0.320	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	22.50	9.13E-04	1.83E-04	281.60	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	19,801	0.80	0.16	19,868
Total Emissions														**2,816.00**	**1.83**	**108.53**	**74.76**	**69.10**	**67.05**	**1,024.98**	**0.94**	**1.76**	**198,012.64**	**8.03**	**1.61**	**198,679.29**

1. Max fuel usages evaluated based on testing of a 9,000 hp engine.
2. Emission Factors are based on AP-42 Section 3.4 (Tables 3.4-1, 3.4-2, 3.4-3, 3.4-4) and are calculated using an average heating value 19,300 Btu/lb and a density of 7.1 lb/gallon for diesel fuel per footnote a to Table 3.4-1.
3. Diesel NOx emission factor is 0.320 based on preliminary engine designs and anticipated testing regiment.
4. All SO2 emission factors based on use of ultra-low sulfur diesel (15 ppm max).
5. PM emission factor is for filterable PM. PM10/PM2.5 emission factor is for filterable PM10/PM2.5 and condensable particulate. Particle size < 3 um is used to determine filterable PM2.5.
6. Single HAP with highest emission factor is benzene. Total HAP includes pollutants with top 5 emission factors: benzene, toluene, xylenes, napthalene, and formaldehyde.
7. Emission factors for CO2, CH4, and N2O and diesel fuel heat content are based on 40 CFR 98 Subpart C (Tables C-1, C-2).

Methodology

Emissions (tons/yr) = Fuel Usage (kgal/yr) * 1000 (gal/kgal) * Emission Factor (lb/gal) * 1/2000 (ton/lb)

Biodiesel

Test Cell Engine	Max. Fuel Usage (kgal/yr)[1]	Emission Factors (lb/gal)[2]												Emissions (tons/yr)												
		NOx[3]	SO2[4]	VOC	PM[5]	PM10[5]	PM2.5[5]	CO	Single HAP[6]	Total HAP[6]	CO2[7]	CH4[7]	N2O[7]	NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
HHP1	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP6	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP8	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP9	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Production 1	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Production 2	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Production 3	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Production 4	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP7	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
HHP10	1,760	0.339	2.08E-04	0.012	0.0085	0.0079	0.0076	0.116	1.06E-04	2.00E-04	20.837	3.10E-04	3.10E-05	297.93	0.18	10.85	7.48	6.91	6.70	102.50	0.094	0.176	18,337	0.27	0.03	18,351
Total Emissions														**2,979.33**	**1.83**	**108.53**	**74.76**	**69.10**	**67.05**	**1,024.98**	**0.94**	**1.76**	**183,365.91**	**2.73**	**0.27**	**183,507.95**

1. Max fuel usages evaluated based on testing of a 9,000 hp engine.
2. Emission Factors are based on AP-42 Section 3.4 (Tables 3.4-1, 3.4-2, 3.4-3, 3.4-4) and are calculated using an average heating value 19,300 Btu/lb and a density of 7.1 lb/gallon for diesel fuel per footnote a to Table 3.4-1.
3. Based on "Biodiesel Handling and Use Guidelines," NREL/TP-580-30004, B100 blend of biodiesel increases NOx by 5.8%.
4. All SO2 emission factors based on use of ultra-low sulfur diesel (15 ppm max).
5. PM emission factor is for filterable PM. PM10/PM2.5 emission factor is for filterable PM10/PM2.5 and condensable particulate. Particle size < 3 um is used to determine filterable PM2.5.
6. Single HAP with highest emission factor is benzene. Total HAP includes pollutants with top 5 emission factors: benzene, toluene, xylenes, napthalene, and formaldehyde.
7. Emission factors for CO2, CH4, and N2O and biodiesel fuel heat content are based on 40 CFR 98 Subpart C (Tables C-1, C-2).

Methodology

Emissions (tons/yr) = Fuel Usage (kgal/yr) * 1000 (gal/kgal) * Emission Factor (lb/gal) * 1/2000 (ton/lb)

Natural Gas

Test Cell Engine	Heat Input[1] (MMBtu/yr)	Emission Factors (lb/MMBtu)[2]												Emissions (tons/yr)												
		NOx	SO2	VOC	PM[3]	PM10[3]	PM2.5[3]	CO	Single HAP[4]	Total HAP[4]	CO2[5]	CH4[5]	N2O[5]	NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
HHP1	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17			14,095	0.27	0.03	14,109
HHP6	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
HHP8	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
HHP9	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Production 1	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Production 2	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Production 3	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Production 4	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
HHP7	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
HHP10	241,173	4.08	5.88E-04	0.118	0.000077	0.009987	0.009987	0.557			116.8891	0.0022046	0.00022	491.99	0.07	14.23	0.01	1.20	1.20	67.17	-	-	14,095	0.27	0.03	14,109
Total Emissions														**4,919.93**	**0.71**	**142.29**	**0.09**	**12.04**	**12.04**	**671.67**			**140,952**	**2.66**	**0.27**	**141,091**

1. Max fuel usage was based on testing of a 9,000 hp engine while using diesel. Diesel's heat content of 137.03 MMBtu/kgal was then used to estimate the maximum heat input capacity per test cell.
2. Emission factors from AP-42 Section 3.2 (Table 3.2-2 - uncontrolled emission factors for 4-stroke lean-burn engines), unless otherwise noted.
3. PM emission factor is for filterable PM. PM10/PM2.5 emission factor is for filterable PM10/PM2.5 and condensable particulate.
4. 071-21065-00015 states that Fuel Oil is worst case for HAPs so no calculations were completed for HAPs from Natural Gas.
5. Emission factors for CO2, CH4, and N2O are based on 40 CFR 98 Subpart C (Tables C-1, C-2).

Methodology

Heat Input (MMBtu/yr) = Max Diesel Usage (kgal/yr) * 1,000 (gal/kgal) * 7.1 (lb/gal) * 19,300 (Btu/lb) / 1,000,000 (Btu/MMBtu)

Emissions (tons/yr) = Heat Input (MMBtu/yr) * Emission Factor (lb/MMBtu) * 1/2000 (ton/lb)

Propane

Test Cell Engine	Max. Fuel Usage (kgal/yr)[1]	Emission Factors (lb/kgal)[2] NOx	SO2	VOC	PM	PM10	PM2.5[3]	CO	Single HAP[4]	Total HAP[4]	CO2[5]	CH4[5]	N2O[5]	Emissions (tons/yr) NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
HHP1	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP6	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP8	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP9	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Production 1	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Production 2	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Production 3	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Production 4	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP7	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
HHP10	2,650	139.0	0.350	83.0	5.0	5.0	5.0	129.0			12330.15	0.602	0.120	184.19	0.46	109.99	6.63	6.63	6.63	170.94	-	-	16,339	0.80	0.16	16,405
Total Emissions														**1,841.92**	**4.64**	**1,099.85**	**66.26**	**66.26**	**66.26**	**1,709.41**			**163,389.88**	**7.98**	**1.60**	**164,051.84**

1. Max fuel usage was based on testing of a 9,000 hp engine while using diesel. Because propane's heat content is lower than natural gas, it takes 1.506 times more propane than natural gas to achieve the same annual heat input capacity.
2. Emission factors from Cummins CTC - Plant 5 engine test cell emission factors for LPG from TSD to permit T005-7466-00002, unless otherwise noted.
3. PM10 assumed equal to PM2.5 emission factor.
4. 071-21065-00015 states that Fuel Oil is worst case for HAPs so no calculations were completed for HAPs from Propane.
5. Emission factors for CO2, CH4, and N2O and propane heat content are based on 40 CFR 98 Subpart C (Tables C-1, C-2).

Methodology

Fuel Usage (kgal/yr) = Max Diesel Usage (kgal/yr) * 1,000 (gal/kgal) * 7.1 $(lb/gal)_{diesel}$ * 19,300 $(Btu/lb)_{diesel}$ / 1,000,000 (Btu/MMBtu) / [0.091 $(MMBtu/gal)_{propane}$ *1,000 (gal/kgal)]

Emissions (tons/yr) = Max Fuel Usage (kgal/yr) * Emission Factor (lb/kgal) * 1/2000 (ton/lb)

Hydrogen

Test Cell Engine	Heat Input[1] (MMBtu/yr)	Emission Factors (lb/MMBtu)[2] NOx	N2O[3]	Emissions (tons/yr) NOx	N2O	CO2e
HHP1	241,173	6.12	0.00033	737.99	0.040	12
HHP6	241,173	6.12	0.00033	737.99	0.040	12
HHP8	241,173	6.12	0.00033	737.99	0.040	12
HHP9	241,173	6.12	0.00033	737.99	0.040	12
Production 1	241,173	6.12	0.00033	737.99	0.040	12
Production 2	241,173	6.12	0.00033	737.99	0.040	12
Production 3	241,173	6.12	0.00033	737.99	0.040	12
Production 4	241,173	6.12	0.00033	737.99	0.040	12
HHP7	241,173	6.12	0.00033	737.99	0.040	12
HHP10	241,173	6.12	0.00033	737.99	0.040	12
Total Emissions				**7,379.89**	**0.40**	**123.62**

1. Max fuel usage was based on testing of a 9,000 hp engine while using diesel. Diesel's heat content of 137.03 MMBtu/kgal was then used to estimate the maximum heat input capacity per test cell.
2. Emission factors from AP-42 Section 3.2 (Table 3.2-2 - uncontrolled emission factors for 4-stroke lean-burn engines) assuming NOx emitted at a rate 50% greater than NG based on higher combustion temperature of hydrogen versus natural gas.
3. Emission factor for N2O is based on 40 CFR 98 Subpart C (Tables C-1, C-2) emitted at a rate 50% greater than NG based on higher combustion temperature of hydrogen versus natural gas.

Methodology

Heat Input (MMBtu/yr) = Max Diesel Usage (kgal/yr) * 1,000 (gal/kgal) * 7.1 (lb/gal) * 19,300 (Btu/lb) / 1,000,000 (Btu/MMBtu)

Emissions (tons/yr) = Heat Input (MMBtu/yr) * Emission Factor (lb/MMBtu) * 1/2000 (ton/lb)

Natural Gas/CO2

Test Cell Engine	Heat Input[1] (MMBtu/yr)	Emission Factor (lb/MMBtu)[2] CO2[3]	CH4	N2O	Emissions (tons/yr) CO2	CH4	N2O	CO2e
HHP1	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP6	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP8	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP9	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Production 1	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Production 2	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Production 3	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Production 4	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP7	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
HHP10	241,173	297.21	0.00220	0.000220	35,839	0.27	0.03	35,853
Total Emissions					**358,392.27**	**2.66**	**0.27**	**358,531**

1. Max fuel usage was based on testing of a 9,000 hp engine while using diesel. Diesel's heat content of 137.03 MMBtu/kgal was then used to estimate the maximum heat input capacity per test cell.
2. See natural gas combustion emission factors and calculations for all pollutants except CO2.
3. CO2 emission factor includes contribution from natural gas combustion and CO2 injected on a 60/40 CO2/NG ratio, by volume. See methodology below.

Methodology

Heat Input (MMBtu/yr) = Max Diesel Usage (kgal/yr) * 1,000 (gal/kgal) * 7.1 (lb/gal) * 19,300 (Btu/lb) / 1,000,000 (Btu/MMBtu)

Emission Factor $(lb/MMBtu_{NG})$ = Combustion Contribution (lb/MMBtu NG) + Injected CO2 (lb/MMBtu NG)

= Combustion EF (kg/MMBtu NG) / 0.45359237 (kg/lb) + 1/1020 (MMscf NG/MMBtu NG) * 1,000,000 (scf NG/MMscf NG) * (40 scf CO2/60 scf NG) * (lb-mol CO2/scf CO2) * CO2 Molecular Weight

Where, using the ideal gas law of n/V (lb-mol CO2/scf CO2) = P/RT = 1 (atm)/273.14 (K) / 1.314 ([atm*scf]/[K*lb-mol]) = 0.0028

CO2 Molecular Weight = 44.0095 lb/lb-mol

Emissions (tons/yr) = Heat Input (MMBtu NG/yr) * Emission Factor (lb/MMBtu NG) * 1/2000 (ton/lb)

Worst-case Emissions

NOx	SO2	VOC	PM	PM10	PM2.5	CO	Single HAP	Total HAP	CO2	CH4	N2O	CO2e
7,379.89	**4.64**	**1,099.85**	**74.76**	**69.10**	**67.05**	**1,709.41**	**0.94**	**1.76**	**358,392.27**	**8.03**	**1.61**	**358,530.51**
Hydrogen	Diesel/ Biodiesel	Propane	Diesel/ Biodiesel	Diesel/ Biodiesel	Diesel/ Biodiesel	Propane	Diesel/ Biodiesel	Diesel/ Biodiesel	Natural Gas/CO2	Diesel	Diesel	Natural Gas/CO2

Updated SO_2 Potential to Emit for Existing Test Cells

Test Cell Engine	Fuel Usage gal/hr	Heat Input MMBtu/hr	Rating hp	Emission Factors[1,2] (lb/gal)	Emissions (lb/hr)	Emissions (ton/yr)
801	47	6.41	1,000	2.08E-04	0.01	0.043
802	47	6.41	1,000	2.08E-04	0.01	0.043
803	77	10.57	1,650	2.08E-04	0.02	0.070
804	77	10.57	1,650	2.08E-04	0.02	0.070
805	77	10.57	1,650	2.08E-04	0.02	0.070
808	77	10.57	1,650	2.08E-04	0.02	0.070
806	92	12.60	1,800	2.08E-04	0.02	0.084
807	92	12.60	1,800	2.08E-04	0.02	0.084
HHP3	210	28.82	4,500	2.08E-04	0.04	0.191
HHP5	103	14.09	2,200	2.08E-04	0.02	0.093
Test Pad 11	86	11.85	1,850	2.08E-04	0.02	0.079
Test Pad 9	230	31.50	4,500	2.08E-04	0.05	0.209
HHP2 - 1,000 ppm S	210	28.82	4,500	1.38E-02	2.91	12.749
HHP2 - 15 ppm S	210	28.82	4,500	2.08E-04	0.04	0.191
HHP4 - 2,000 ppm S	103	14.09	2,200	2.77E-02	2.85	12.466
HHP4 - 1,000 ppm S	103	14.09	2,200	1.38E-02	1.42	6.233
HHP4 - 15 ppm S	103	14.09	2,200	2.08E-04	0.02	0.093
Test Pad 8 - 2,000 ppm S	140	19.22	3,000	2.77E-02	3.88	17.005
Test Pad 8 - 1,000 ppm S	140	19.22	3,000	1.38E-02	1.94	8.503
Test Pad 8 - 15 ppm S	140	19.22	3,000	2.08E-04	0.03	0.128
Test Pad 10 - 2,000 ppm S	86	11.85	1,850	2.77E-02	2.39	10.484
Test Pad 10 - 1,000 ppm S	86	11.85	1,850	1.38E-02	1.20	5.242
Test Pad 10 - 15 ppm S	86	11.85	1,850	2.08E-04	0.02	0.079
Total[3]:					5.14	22.529

1. Emission Factors are based on AP-42 Section 3.4 (Tables 3.4-1, 3.4-2) and are calculated using an average heating value 19,300 Btu/lb and a density of 7.1 lb/gallon for diesel fuel per footnote a to Table 3.4-1.

2. HHP2 may burn fuel containing up to 1,000 ppm sulfur. HHP4, Test Pad 8, and Test Pad 10 may burn fuel containing up to 2,000 ppm sulfur. All all other units burn ultra-low sulfur diesel (15 ppm max).

3. Only 2 of the 4 test cell engines, HHP2, HHP4, Test Pad 8, and Test Pad 10, may burn 1,000 ppm sulfur fuel at one time. Only 1 of the 3 test cell engines, HHP4, Test Pad 8, and Test Pad 10, may burn 2,000 ppm sulfur fuel at or
Therefore, total PTE is based on the highest emitting scenario of HHP2 and Test Pad 8 burning 1,000 ppm sulfur fuel and HHP4 and Test Pad 10 burning ultra-low sulfur diesel (15 ppm max).

Methodology

Heat Input (MMBtu/hr) = Rating (hp) * 7,000 (Btu/hp-hr) / 1,000,000 (Btu/MMBtu)

Fuel Usage (gal/hr) = Heat Input (MMBtu/hr) / [19,300 (Btu/lb) * 7.1 (lb/gal) / 1,000,000 (Btu/MMBtu)]

Emissions (lb/hr) = Fuel Usage (gal/hr) * Emission Factor (lb/gal)

Potential to Emit for Paint Booths

Material[1]	Density[1] (lb/gal)	Weight % Volatile[1] (H_20 & Organics)	Weight % Water[1]	Weight % Organics[1]	Volume % Water[1]	Volume % Non-Vol[1] (solids)	Material Usage[2] (gal/unit)	Maximum Throughput[2] (unit/hour)	VOC Content[1] lb/gal of coating less water	VOL Content lb/gal of coating	Potential Per Booth VOC (lbs/hr)	VOC (lbs/day)	VOC (t/yr)	PM (t/yr)	VOC Content per vol. Solids lb/gal solids	Trans. Eff. (%)
New Paint Lines (2 Topcoat & 1 Offline Booth)																
91 Beige Aqua-Zen Primer (06532TWP)	10.24	53.96%	35.88%	18.08%	43.24%	33.36%	1.50	3	3.50	1.85	8.33	199.95	36.49	**46.46**	5.55	50%
Natural Yellow Aqua-Zen Gloss Enamel (09631YWA)	9.13	65.50%	45.44%	20.06%	48.73%	27.36%	1.50	3	3.50	1.83	8.24	197.80	36.10	31.04	6.69	50%
91 Beige Semi-Gloss Aqua-Zen Gloss Enamel (09677TWA-1)	9.85	59.93%	41.06%	18.87%	47.56%	29.13%	1.50	3	3.47	1.86	8.36	200.74	36.63	38.90	6.38	50%
Euclid Green Aqua-Zen Gloss Enamel (09727GWA)	9.18	67.64%	51.81%	15.83%	55.89%	26.08%	1.50	3	3.50	1.45	6.54	156.94	28.64	29.28	5.57	50%
91 Marine Gray Aqua-Zen Gloss Enamel (09790AWA-1)	10.10	56.63%	37.15%	19.48%	44.15%	31.16%	1.50	3	3.50	1.97	**8.85**	**212.49**	**38.78**	43.17	6.31	50%
Onan Green Aqua-Zen Gloss Enamel (09799GWA)	9.35	65.05%	48.16%	16.89%	52.88%	27.47%	1.50	3	3.50	1.58	7.11	170.56	31.13	32.20	5.75	50%
94 Titanium Black Aqua-Zen Gloss Enamel (09994KWA-1)	8.92	70.98%	54.14%	16.84%	56.65%	23.93%	1.50	3	3.39	1.50	6.76	162.23	29.61	25.51	6.28	50%
Rotary Drill Beige Aqua-Zen Gloss Enamel (10032TWA)	9.81	57.67%	38.16%	19.51%	44.02%	31.30%	1.50	3	3.50	1.91	8.61	206.70	37.72	40.92	6.11	50%
60 Red Aqua-Zen Gloss Engine Enamel (16663RWA-1)	8.75	71.77%	53.41%	18.36%	54.84%	24.38%	1.50	3	3.48	1.61	7.23	173.50	31.66	24.34	6.59	50%
Taxi Yellow Aqua-Zen Gloss Enamel (17168NWA)	8.77	70.84%	53.15%	17.69%	54.77%	25.25%	1.50	3	3.50	1.55	6.98	167.55	30.58	25.20	6.14	50%
Suede Grey Aqua-Zen Enamel (18134AWA)	9.82	59.07%	39.22%	19.85%	45.38%	30.24%	1.50	3	3.50	1.95	8.77	210.52	38.42	39.61	6.45	50%
Frank Mohn Fusa Aqua-Zen Gloss Enamel (18938GWA)	10.15	55.43%	36.13%	19.30%	43.24%	32.18%	1.50	3	3.50	1.96	8.82	211.57	38.61	44.58	6.09	50%
										Worst Case Coating:	**8.85**	**212.49**	**38.78**	**46.46**		

[1]Information obtained from client-provided Technical Bulletins unless otherwise noted; see 8/10/2011 email from S. Thompkins to D. Dempsey. Note that density is the high-end of the given range.
[2]Information obtained from client; see 8/10/2011 from S. Thompkins to D. Dempsey

	VOC (lbs/hr)	VOC (lbs/day)	VOC (t/yr)	PM (t/yr)
Total Potential Emissions (worst case coating) from all 3 booths:	**26.56**	**637.46**	**116.34**	**139.38**

Dry Filter PM Control Efficiency =	**99.0%**
Total Controlled Particulate Emissions (worst case coating) from EU-01:	**1.39**

Material[1]	Density[1] (lb/gal)	Weight % Volatile[1] (H_20 & Organics)	Weight % Water[1]	Weight % Organics[1]	Volume % Water[1]	Volume % Non-Vol[1] (solids)	Material Usage[2] (gal/unit)	Maximum Throughput[2] (unit/hour)	VOC Content[1] lb/gal of coating less water	VOL Content lb/gal of coating	Potential Per Booth VOC (lbs/hr)	VOC (lbs/day)	VOC (t/yr)	PM (t/yr)	VOC Content per vol. Solids lb/gal solids	Trans. Eff. (%)
New Paint Lines (2 Hedgehog Booths)																
91 Beige Aqua-Zen Primer (06532TWP)	10.24	53.96%	35.88%	18.08%	43.24%	33.36%	5.00	0.5	3.50	1.85	4.63	111.08	20.27	**25.81**	5.55	50%
Natural Yellow Aqua-Zen Gloss Enamel (09631YWA)	9.13	65.50%	45.44%	20.06%	48.73%	27.36%	5.00	0.5	3.50	1.83	4.58	109.89	20.05	17.25	6.69	50%
91 Beige Semi-Gloss Aqua-Zen Gloss Enamel (09677TWA-1)	9.85	59.93%	41.06%	18.87%	47.56%	29.13%	5.00	0.5	3.47	1.86	4.65	111.52	20.35	21.61	6.38	50%
Euclid Green Aqua-Zen Gloss Enamel (09727GWA)	9.18	67.64%	51.81%	15.83%	55.89%	26.08%	5.00	0.5	3.50	1.45	3.63	87.19	15.91	16.26	5.57	50%
91 Marine Gray Aqua-Zen Gloss Enamel (09790AWA-1)	10.10	56.63%	37.15%	19.48%	44.15%	31.16%	5.00	0.5	3.50	1.97	**4.92**	**118.05**	**21.54**	23.98	6.31	50%
Onan Green Aqua-Zen Gloss Enamel (09799GWA)	9.35	65.05%	48.16%	16.89%	52.88%	27.47%	5.00	0.5	3.50	1.58	3.95	94.75	17.29	17.89	5.75	50%
94 Titanium Black Aqua-Zen Gloss Enamel (09994KWA-1)	8.92	70.98%	54.14%	16.84%	56.65%	23.93%	5.00	0.5	3.39	1.50	3.76	90.13	16.45	14.17	6.28	50%
Rotary Drill Beige Aqua-Zen Gloss Enamel (10032TWA)	9.81	57.67%	38.16%	19.51%	44.02%	31.30%	5.00	0.5	3.50	1.91	4.78	114.84	20.96	22.74	6.11	50%
60 Red Aqua-Zen Gloss Engine Enamel (16663RWA-1)	8.75	71.77%	53.41%	18.36%	54.84%	24.38%	5.00	0.5	3.48	1.61	4.02	96.39	17.59	13.52	6.59	50%
Taxi Yellow Aqua-Zen Gloss Enamel (17168NWA)	8.77	70.84%	53.15%	17.69%	54.77%	25.25%	5.00	0.5	3.50	1.55	3.88	93.08	16.99	14.00	6.14	50%
Suede Grey Aqua-Zen Enamel (18134AWA)	9.82	59.07%	39.22%	19.85%	45.38%	30.24%	5.00	0.5	3.50	1.95	4.87	116.96	21.34	22.01	6.45	50%
Frank Mohn Fusa Aqua-Zen Gloss Enamel (18938GWA)	10.15	55.43%	36.13%	19.30%	43.24%	32.18%	5.00	0.5	3.50	1.96	4.90	117.54	21.45	24.77	6.09	50%
										Worst Case Coating:	**4.92**	**118.05**	**21.54**	**25.81**		

[1]Information obtained from client-provided Technical Bulletins unless otherwise noted; see 8/10/2011 email from S. Thompkins to D. Dempsey. Note that density is the high-end of the given range.
[2]Information obtained from client; see 8/10/2011 from S. Thompkins to D. Dempsey

	VOC (lbs/hr)	VOC (lbs/day)	VOC (t/yr)	PM (t/yr)
Total Potential Emissions (worst case coating) from all 2 booths:	**9.84**	**236.10**	**43.09**	**51.62**

Dry Filter PM Control Efficiency =	**99.0%**
Total Controlled Particulate Emissions (worst case coating) from EU-01:	**0.26**

Methodology:
Volatile Content (lb/gal) = Density (lb/gal) x Weight % Organics

VOC Emissions (lb/hr) = VOC Content (lb/gal) x Usage (gal/unit) x Throughput (units/hr)
VOC Emissions (lb/day) = VOC Content (lb/gal) x Usage (gal/unit) x Throughput (units/hr) x 24 (hr/day)
VOC Emissions (ton/yr) = VOC Content (lb/gal) x Usage (gal/unit) x Throughput (units/hr) x 8760 (hr/yr) / 2000 (lb/ton)
PM Emissions (ton/yr) = Density (lb/gal) x Usage (gal/unit) x Throughput (units/hr) x (1- Weight % Volatiles) x (1-Transfer efficiency) x 8760 (hrs/yr) / 2000 (lb/ton)
VOC Content per unit volume of Solids (lb/gal solids) = Density (lbs/gal) x Weight % organics / Volume % solids
Total = Worst Case Coating * number of spray booths with identical paint usages

Potential to Emit for Paint Booths - HAP

Material[1]	Density[1] (lb/gal)	Gal of Mat[1] (gal/unit)	Maximum[1] (unit/hour)	Weight %[1] Glycol Ethers	Weight %[1] Cobalt	Weight %[1] Ethyl Benzene	Emissions Per Booth (tons/yr) Glycol Ethers	Emissions Per Booth (tons/yr) Cobalt	Emissions Per Booth (tons/yr) Ethyl Benzene	Emissions Per Booth (tons/yr) Total HAP	Trans. Eff. (%)
New Paint Lines (2 Topcoat & 1 Offline Booth)											
91 Beige Aqua-Zen Primer (06532TWP)	10.24	1.50	3	11.07%	0.00%	0.00%	22.34	0.00	0.00	22.34	50%
Natural Yellow Aqua-Zen Gloss Enamel (09631YWA)	9.13	1.50	3	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	50%
91 Beige Semi-Gloss Aqua-Zen Gloss Enamel (09677TWA-1)	9.85	1.50	3	14.60%	0.00%	0.00%	28.34	0.00	0.00	28.34	50%
Euclid Green Aqua-Zen Gloss Enamel (09727GWA)	9.18	1.50	3	10.35%	0.00%	0.00%	18.73	0.00	0.00	18.73	50%
91 Marine Gray Aqua-Zen Gloss Enamel (09790AWA-1)	10.10	1.50	3	13.26%	0.00%	0.08%	26.40	0.00	0.16	26.55	50%
Onan Green Aqua-Zen Gloss Enamel (09799GWA)	9.35	1.50	3	11.78%	0.00%	0.00%	21.71	0.00	0.00	21.71	50%
94 Titanium Black Aqua-Zen Gloss Enamel (09994KWA-1)	8.92	1.50	3	0.00%	0.00%	0.10%	0.00	0.00	0.18	0.18	50%
Rotary Drill Beige Aqua-Zen Gloss Enamel (10032TWA)	9.81	1.50	3	9.45%	0.00%	0.11%	18.27	0.00	0.21	18.48	50%
60 Red Aqua-Zen Gloss Engine Enamel (16663RWA-1)	8.75	1.50	3	0.00%	0.00%	0.10%	0.00	0.00	0.17	0.17	50%
Taxi Yellow Aqua-Zen Gloss Enamel (17168NWA)	8.77	1.50	3	0.00%	0.00%	0.10%	0.00	0.00	0.17	0.17	50%
Suede Grey Aqua-Zen Enamel (18134AWA)	9.82	1.50	3	13.92%	0.00%	0.08%	26.94	0.00	0.15	27.10	50%
Frank Mohn Fusa Aqua-Zen Gloss Enamel (18938GWA)	10.15	1.50	3	13.29%	0.00%	0.08%	26.59	0.00	0.16	26.75	50%
						Worst Case HAPs Coating:	**28.34**	**0.00**	**0.21**	**28.34**	

[1]Information obtained from client-provided Technical Bulletins unless otherwise noted; see 8/10/2011 email from S. Thompkins to D. Dempsey. Note that density is the high-end of the given range.

[2]Information obtained from client; see 8/10/2011 from S. Thompkins to D. Dempsey

	Glycol Ethers (ton/yr)	Cobalt (ton/yr)	Ethyl Benzene (ton/yr)	Total HAP (ton/yr)
Total Potential Emissions (worst case coating) from all 3 booths:	**85.03**	**0.00**	**0.64**	**85.03**

Methodology:

HAP Emissions (ton/yr) = Density (lb/gal) x Usage (gal/unit) x Throughput (units/hr) x Weight % x 8760 (hr/yr) / 2000 (lb/ton)

Single Worst Case HAP Potential Total: 85.03 Glycol Ethers

Combined Worst Case HAPs Potential Total: 85.03

Material[1]	Density[1] (lb/gal)	Gal of Mat[1] (gal/unit)	Maximum[1] (unit/hour)	Weight %[1] Glycol Ethers	Weight %[1] Cobalt	Weight %[1] Ethyl Benzene	Emissions Per Booth (tons/yr) Glycol Ethers	Emissions Per Booth (tons/yr) Cobalt	Emissions Per Booth (tons/yr) Ethyl Benzene	Emissions Per Booth (tons/yr) Total HAP	Trans. Eff. (%)
New Paint Lines (2 Hedgehog Booths)											
91 Beige Aqua-Zen Primer (06532TWP)	10.24	5.00	0.5	11.07%	0.00%	0.00%	12.41	0.00	0.00	12.41	50%
Natural Yellow Aqua-Zen Gloss Enamel (09631YWA)	9.13	5.00	0.5	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	50%
91 Beige Semi-Gloss Aqua-Zen Gloss Enamel (09677TWA-1)	9.85	5.00	0.5	14.60%	0.00%	0.00%	15.75	0.00	0.00	15.75	50%
Euclid Green Aqua-Zen Gloss Enamel (09727GWA)	9.18	5.00	0.5	10.35%	0.00%	0.00%	10.40	0.00	0.00	10.40	50%
91 Marine Gray Aqua-Zen Gloss Enamel (09790AWA-1)	10.10	5.00	0.5	13.26%	0.00%	0.08%	14.66	0.00	0.09	14.75	50%
Onan Green Aqua-Zen Gloss Enamel (09799GWA)	9.35	5.00	0.5	11.78%	0.00%	0.00%	12.06	0.00	0.00	12.06	50%
94 Titanium Black Aqua-Zen Gloss Enamel (09994KWA-1)	8.92	5.00	0.5	0.00%	0.00%	0.10%	0.00	0.00	0.10	0.10	50%
Rotary Drill Beige Aqua-Zen Gloss Enamel (10032TWA)	9.81	5.00	0.5	9.45%	0.00%	0.11%	10.15	0.00	0.12	10.27	50%
60 Red Aqua-Zen Gloss Engine Enamel (16663RWA-1)	8.75	5.00	0.5	0.00%	0.00%	0.10%	0.00	0.00	0.10	0.10	50%
Taxi Yellow Aqua-Zen Gloss Enamel (17168NWA)	8.77	5.00	0.5	0.00%	0.00%	0.10%	0.00	0.00	0.10	0.10	50%
Suede Grey Aqua-Zen Enamel (18134AWA)	9.82	5.00	0.5	13.92%	0.00%	0.08%	14.97	0.00	0.09	15.05	50%
Frank Mohn Fusa Aqua-Zen Gloss Enamel (18938GWA)	10.15	5.00	0.5	13.29%	0.00%	0.08%	14.77	0.00	0.09	14.86	50%
						Worst Case HAPs Coating:	**15.75**	**0.00**	**0.12**	**15.75**	

[1]Information obtained from client-provided Technical Bulletins unless otherwise noted; see 8/10/2011 email from S. Thompkins to D. Dempsey. Note that density is the high-end of the given range.

[2]Information obtained from client; see 8/10/2011 from S. Thompkins to D. Dempsey

	Glycol Ethers (ton/yr)	Cobalt (ton/yr)	Ethyl Benzene (ton/yr)	Total HAP (ton/yr)
Total Potential Emissions (worst case coating) from all 2 booths:	**31.49**	**0.00**	**0.24**	**31.49**

Methodology:

HAP Emissions (ton/yr) = Density (lb/gal) x Usage (gal/unit) x Throughput (units/hr) x Weight % x 8760 (hr/yr) / 2000 (lb/ton)

Single Worst Case HAP Potential Total: 31.49 Glycol Ethers

Combined Worst Case HAPs Potential Total: 31.49

Emergency Generator Potential to Emit

Output Horsepower Rating (hp-hr)	1490.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	745,000
Sulfur Content (S) of Fuel (% by weight)	0.0015

	Pollutant										
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO	CO2	CH4***	N2O***	CO2e***
Emission Factor in lb/hp-hr	7.00E-04	4.01E-04	4.01E-04	1.21E-05 *(.00809S)*	2.40E-02 **see below	7.05E-04	5.50E-03	1.14E+00	4.63E-05	9.26E-06	-
Potential Emission in tons/yr	0.26	0.15	0.15	4.52E-03	8.94	0.26	2.05	425.16	0.02	0.00	426.59

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).
**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr
***CO2, CH4, and N2O emission factors calculated using emission factors in kg/MMBtu from 40 CFR 98 Subpart C, converted using a brake specific fuel consumption of 7,000 Btu/hp-hr (AP-42 Table 3.3-1).

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs*
Emission Factor in lb/hp-hr**	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	2.02E-03	7.33E-04	5.03E-04	2.06E-04	6.57E-05	2.05E-05	5.53E-04

*PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
**Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	**4.10E-03**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Duct Burner Potential to Emit

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
15.0	131.4

	Pollutant									
	PM*	PM10*	SO2	NOx	VOC	CO	CO2***	CH4***	N2O***	CO2e
Emission Factor in lb/MMCF	1.9	7.6	0.6	100 **see below	5.5	84	120,162	2.27	0.23	
Potential Emission in tons/yr	0.1	0.5	0.0	6.6	0.4	5.5	7,894.6	0.1	0.0	7,902.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
*** Emission factors based on 40 CFR 98 Subpart C, Table C-1 emission factors and 1,028 MMBtu/MMscf for natural gas.

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.380E-04	7.884E-05	4.928E-03	1.183E-01	2.234E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.285E-05	7.227E-05	9.198E-05	2.497E-05	1.380E-04

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

Methodology

All emission factors are based on normal firing.
Based on one 1.5 MMBtu/hr duct burner for each new test cell stack.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Natural Gas Boilers Potential to Emit

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
48.4	424.0

	Pollutant									
	PM*	PM10*	SO2	NOx	VOC	CO	CO2***	CH4***	N2O***	CO2e
Emission Factor in lb/MMCF	1.9	7.6	0.6	100 **see below	5.5	84	120,162	2.27	0.23	
Potential Emission in tons/yr	0.4	1.6	0.1	21.2	1.2	17.8	25,473.4	0.5	0.0	25,498.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
*** Emission factors based on 40 CFR 98 Subpart C, Table C-1 emission factors and 1,028 MMBtu/MMscf for natural gas.

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.452E-04	2.544E-04	1.590E-02	3.816E-01	7.208E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.060E-04	2.332E-04	2.968E-04	8.056E-05	4.452E-04

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

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

PTE for SO2 based on worse case conditions for 1000 ppm S fuel used in HHP 2, HHP 4, TP 8 and TP 10 using conditions in section D.2.3 of permit (only two test cells using 1000 PPM S)

Hourly Potential to Emit for Air Dispersion Modeling

Diesel Usage										
	Fuel Usage	Heat Input	Rating	Emission Factors[1] (lb/gal)			Emissions (lb/hr)			Emissions (ton/yr)
Test Cell Engine	gal/hr	MMBtu/hr	hp	PM	PM_{10}	SO_2[2]	PM	PM_{10}	SO_2	SO_2
801	47	6.41	1,000	8.50E-03	7.85E-03	2.08E-04	0.397	0.367	0.010	0.043
802	47	6.41	1,000	8.50E-03	7.85E-03	2.08E-04	0.397	0.367	0.010	0.043
803	77	10.57	1,650	8.50E-03	7.85E-03	2.08E-04	0.655	0.606	0.016	0.070
804	77	10.57	1,650	8.50E-03	7.85E-03	2.08E-04	0.655	0.606	0.016	0.070
805	77	10.57	1,650	8.50E-03	7.85E-03	2.08E-04	0.655	0.606	0.016	0.070
808	77	10.57	1,650	8.50E-03	7.85E-03	2.08E-04	0.655	0.606	0.016	0.070
806	92	12.60	1,800	8.50E-03	7.85E-03	2.08E-04	0.781	0.722	0.019	0.084
807	92	12.60	1,800	8.50E-03	7.85E-03	2.08E-04	0.781	0.722	0.019	0.084
HHP1	296	40.60	5,800	8.50E-03	7.85E-03	2.08E-04	2.517	2.326	0.062	0.269
HHP2	210	28.82	4,500	8.50E-03	7.85E-03	1.38E-02	1.787	1.651	2.911	12.749
HHP3	210	28.82	4,500	8.50E-03	7.85E-03	2.08E-04	1.787	1.651	0.044	0.191
HHP4	103	14.09	2,200	8.50E-03	7.85E-03	2.08E-04	0.874	0.807	0.021	0.093
HHP5	103	14.09	2,200	8.50E-03	7.85E-03	2.08E-04	0.874	0.807	0.021	0.093
Test Pad 8	140	19.22	3,000	8.50E-03	7.85E-03	1.38E-02	1.192	1.101	1.941	8.503
Test Pad 10	86	11.85	1,850	8.50E-03	7.85E-03	2.08E-04	0.735	0.679	0.018	0.079
Test Pad 11	86	11.85	1,850	8.50E-03	7.85E-03	2.08E-04	0.735	0.679	0.018	0.079
Test Pad 9	230	31.50	4,500	8.50E-03	7.85E-03	2.08E-04	1.953	1.805	0.048	0.209
HHP6	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
HHP8	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
HHP9	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Production 1	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Production 2	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Production 3	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Production 4[3]	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
HHP7	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
HHP10	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Total:							52.585	48.598	6.064	22.799

Maximum hp and heat input when combusting diesel specified in Title V permit 071-29636-00015

Maximum hp when combusting diesel specified in Title V permit 071-29636-00015, or 9,000 hp for all HH Test Cells. Maximum heat input calculated.

Modified capacity

1 hp-hr =	7,000	Btu
1 lb =	19,300	Btu
1 gal diesel =	7.1	lb
1 gal diesel =	137,030	Btu

1. Emission Factors are based on AP-42 Section 3.4 (Tables 3.4-1, 3.4-2) and are calculated using an average heating value 19,300 Btu/lb and a density of 7.1 lb/gallon for diesel fuel per footnote a to Table 3.4-1.

2. HHP2, HHP4, Test Pad 8, and Test Pad 10 may burn fuel containing up to 1,000 ppm sulfur. All all other units burn ultra-low sulfur diesel (15 ppm max).

3. Production 4 parameters assumed to be same as Production 3.

Methodology

Heat Input (MMBtu/hr) = Rating (hp) * 7,000 (Btu/hp-hr) / 1,000,000 (Btu/MMBtu)

Fuel Usage (gal/hr) = Heat Input (MMBtu/hr) / [19,300 (Btu/lb) * 7.1 (lb/gal) / 1,000,000 (Btu/MMBtu)]

Emissions (lb/hr) = Fuel Usage (gal/hr) * Emission Factor (lb/gal)

PTE for SO2 based on worse case conditions for 2000 ppm S fuel used in HHP 4, TP 8 and TP 10 using conditions in section D.2.3 of permit (only one test cells using 2000 PPM S)

Hourly Potential to Emit for Air Dispersion Modeling

Diesel Usage										
	Fuel Usage	Heat Input	Rating	Emission Factors[1] (lb/gal)			Emissions (lb/hr)			Emissions (ton/yr)
Test Cell Engine	gal/hr	MMBtu/hr	hp	PM	PM_{10}	SO_2[2]	PM	PM_{10}	SO_2	SO_2
801	47	6.41	1,000	8.50E-03	7.85E-03	2.08E-04	0.397	0.367	0.010	0.043
802	47	6.41	1,000	8.50E-03	7.85E-03	2.08E-04	0.397	0.367	0.010	0.043
803	77	10.57	1,650	8.50E-03	7.85E-03	2.08E-04	0.655	0.606	0.016	0.070
804	77	10.57	1,650	8.50E-03	7.85E-03	2.08E-04	0.655	0.606	0.016	0.070
805	77	10.57	1,650	8.50E-03	7.85E-03	2.08E-04	0.655	0.606	0.016	0.070
808	77	10.57	1,650	8.50E-03	7.85E-03	2.08E-04	0.655	0.606	0.016	0.070
806	92	12.60	1,800	8.50E-03	7.85E-03	2.08E-04	0.781	0.722	0.019	0.084
807	92	12.60	1,800	8.50E-03	7.85E-03	2.08E-04	0.781	0.722	0.019	0.084
HHP1	296	40.60	5,800	8.50E-03	7.85E-03	2.08E-04	2.517	2.326	0.062	0.269
HHP2	210	28.82	4,500	8.50E-03	7.85E-03	2.08E-04	1.787	1.651	0.044	0.191
HHP3	210	28.82	4,500	8.50E-03	7.85E-03	2.08E-04	1.787	1.651	0.044	0.191
HHP4	103	14.09	2,200	8.50E-03	7.85E-03	2.08E-04	0.874	0.807	0.021	0.093
HHP5	103	14.09	2,200	8.50E-03	7.85E-03	2.08E-04	0.874	0.807	0.021	0.093
Test Pad 8	140	19.22	3,000	8.50E-03	7.85E-03	2.77E-02	1.192	1.101	3.882	17.005
Test Pad 10	86	11.85	1,850	8.50E-03	7.85E-03	2.08E-04	0.735	0.679	0.018	0.079
Test Pad 11	86	11.85	1,850	8.50E-03	7.85E-03	2.08E-04	0.735	0.679	0.018	0.079
Test Pad 9	230	31.50	4,500	8.50E-03	7.85E-03	2.08E-04	1.953	1.805	0.048	0.209
HHP6	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
HHP8	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
HHP9	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Production 1	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Production 2	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Production 3	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Production 4[3]	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
HHP7	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
HHP10	460	63.00	9,000	8.50E-03	7.85E-03	2.08E-04	3.906	3.610	0.095	
Total:							52.585	48.598	5.138	18.743

Maximum hp and heat input when combusting diesel specified in Title V permit 071-29636-00015

Maximum hp when combusting diesel specified in Title V permit 071-29636-00015, or 9,000 hp for all HH Test Cells. Maximum heat input calculated.

Modified capacity

1 hp-hr =	7,000	Btu
1 lb =	19,300	Btu
1 gal diesel =	7.1	lb
1 gal diesel =	137,030	Btu

1. Emission Factors are based on AP-42 Section 3.4 (Tables 3.4-1, 3.4-2) and are calculated using an average heating value 19,300 Btu/lb and a density of 7.1 lb/gallon for diesel fuel per footnote a to Table 3.4-1.

2. HHP2, HHP4, Test Pad 8, and Test Pad 10 may burn fuel containing up to 1,000 ppm sulfur. All all other units burn ultra-low sulfur diesel (15 ppm max).

3. Production 4 parameters assumed to be same as Production 3.

Methodology

Heat Input (MMBtu/hr) = Rating (hp) * 7,000 (Btu/hp-hr) / 1,000,000 (Btu/MMBtu)

Fuel Usage (gal/hr) = Heat Input (MMBtu/hr) / [19,300 (Btu/lb) * 7.1 (lb/gal) / 1,000,000 (Btu/MMBtu)]

Emissions (lb/hr) = Fuel Usage (gal/hr) * Emission Factor (lb/gal)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: David Wehrkamp
Seymour Engine Plant
800 E 3rd St, MC 30125
Seymour, IN 47274

DATE: March 8, 2012

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

SUBJECT: Final Decision
Title V - Significant Permit Modification
071 - 30962 - 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, SEP Plant Mgr
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Toll Free (800) 451-6027
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March 8, 2012

TO: Jackson Co Public Library

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

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

Applicant Name: Seymour Engine Plant
Permit Number: 071 - 30962 - 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 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: March 8, 2012

RE: Seymour Engine Plant / 071 - 30962 - 00015

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

In order to conserve paper and reduce postage costs, IDEM's Office of Air Quality is now sending many permit decisions on CDs in Adobe PDF format. The enclosed CD contains information regarding the company named above.

This permit is also available on the IDEM website at:
http://www.in.gov/ai/appfiles/idem-caats/

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

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

Please Note: *If you feel you have received this information in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV.*

Enclosures
CD Memo.dot 11/14/08

Mail Code 61-53

IDEM Staff	LPOGOST 3/8/2012 Seymour Engine Plant (SEP) 071 - 30962 - 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**	

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2		Darren Wildman SEP Plant Mgr Seymour Engine Plant (SEP) 800 E 3rd St, MC 30125 Seymour IN 47274 *(RO CAATS)*									
3		Jackson County Commissioner Jackson County Courthouse Brownstown IN 47220 *(Local Official)*									
4		Mr. Wendell Hibdon Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 *(Affected Party)*									
5		Mr. Tome Earnhart 3960 N. CR 300 W. North Vernon IN 47265 *(Affected Party)*									
6		Seymour City Council and Mayors Office 301 North Chestnut Street Seymour IN 47274 *(Local Official)*									
7		Jackson County Health Department 801 West 2nd Street Seymour IN 47274-2711 *(Health Department)*									
8		Jackson Co Public Library 303 W 2nd Street Seymour IN 47274-2184 *(Library)*									
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