

Certified Mail Number: 7007 0710 0005 3965 6794



DATE: April 15, 2008

TO: Interested Parties / Applicant

RE: Allison Transmission, Inc. - Eagle Creek Technology Center / F097-25120-00333

FROM: Timothy J. Method
Environmental Coordinator

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 501, Indianapolis, IN 46204, **within fifteen (15) calendar days of the receipt of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures



Air Quality Hotline: 317-327-4AIR | knozone.com

Department of Public Works
Office of Environmental Services

2700 Belmont Avenue
Indianapolis, IN 46221

317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw



**Federally Enforceable State Operating Permit Renewal
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
AND
OFFICE OF ENVIRONMENTAL SERVICES**

**Allison Transmission, Inc. - Eagle Creek Technology Center
6040 West 62nd Street
Indianapolis, Indiana 46278**

(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. 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 2-8 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 FESOP under 326 IAC 2-8.

Operation Permit No.: F097-25120-00333	
Issued by:	Issuance Date: April 15, 2008
Original Signed by	Expiration Date: April 15, 2018
Timothy J. Method	
Environmental Coordinator Department of Public Works	



Department of Public Works
Office of Environmental Services
 2700 Belmont Avenue | 317-327-2234
 Indianapolis, IN 46221 | Fax 327-2274
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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Office of Environmental Services (OES). 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 2-8-3(b)]

The Permittee owns and operates a stationary transmission testing facility for diesel, natural gas, and gasoline engines.

Source Address:	6040 West 62nd Street, Indianapolis, Indiana 46278
Mailing Address:	4700 West 10th Street, Mail Code: M-29, Indianapolis, IN 46222
General Source Phone Number:	(317) 242-7053
SIC Code:	8734
County Location:	Marion
Source Location Status:	Nonattainment for PM 2.5 standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD, Emission Offset Rules, and Nonattainment NSR 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 2-8-3(c)(3)]

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

- (a) Five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, each having the capability to use Diesel Fuel, Gasoline, or Natural Gas fired Reciprocating Engines. The emissions from each test cell, EC130 - EC134, are exhausted at stacks EC130 - EC134, respectively. Test cells EC131, EC132, EC133, and EC134 were constructed in 1992 and modified in 2002. Test cell EC130 was constructed in 2002

Engines of a fuel type and size up to the sizes listed in the table below can be used in any one of the individual test cells mentioned above.

Type of Fuel	Maximum Unit Capacity (HP)	Heat Input (MMBtu/hr)
Gasoline	500	5.32
Diesel	500	2.77
Natural Gas	425	2.47

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) Two (2) natural gas-fired boilers, identified as Emission Units B-1 and B-2, each with a maximum heat input capacity of 2.396 MMBtu/hr. [326 IAC 6-2-4]
- (b) Storage tanks emitting less than one (1) ton per year of a single HAP and less than fifteen (15) pounds per day of VOC:
 - (1) one (1) 6,200 gallon gasoline above ground storage tank, identified as GC-1;
 - (2) one (1) 3,000 gallon diesel oil underground storage tank, identified as DC-1.
- (c) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (d) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
- (e) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 325 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]
- (f) Soldering equipment.
- (g) Closed loop heating and cooling systems.
- (h) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
- (i) Noncontact cooling tower systems with forced and induced draft cooling tower systems not regulated under a NESHAP.
- (j) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4].
- (k) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including tanks.
- (l) Blowdown for any of the following: boiler; compressors; and cooling tower.
- (m) Purge double block and bleed valves.
- (n) Filter or coalescer media changeout.
- (o) Emissions from research and development activities as defined in 326 IAC 2-7-1(21)(E).
- (p) One (1) maintenance paint booth, identified as Paint-01, with a maximum paint usage of 180 ounces per day from aerosol cans, using dry filters for overspray control, exhausting at Stack/Vent ID Paint-01, installed in 2002.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, F097-25120-00333, is issued for a fixed term of ten (10) 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 and OES, 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, 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 2-8-6]

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

B.5 Severability [326 IAC 2-8-4(4)]

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 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ and OES, within a reasonable time, any information that IDEM, OAQ and OES may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ and OES 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 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (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 April 15 of each year to:

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

and

Indianapolis Office of Environmental Services
Air Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

- (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 and OES 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 2-8-4(3); and

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

The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ and OES may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ and OES upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and OES. IDEM, OAQ and OES may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

- (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 except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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, and OES within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865
Office of Environmental Services phone: (317) 327-2234; fax: (317) 327-2274

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

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

and

Indianapolis Office of Environmental Services
Air Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

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 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 and OES may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ and OES 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 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) 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.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

- (a) All terms and conditions of permits established prior to F097-25120-00333 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

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

and

Indianapolis Office of Environmental Services
Air Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

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

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ and OES 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 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ and OES 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 2-8-8(b)]

- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ and OES at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ and OES may provide a shorter time period in the case of an emergency.
[326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and OES and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

Indianapolis Office of Environmental Services
Air Permits
2700 South Belmont Avenue
Indianapolis, Indiana 46221

- (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 and OES 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 2-8 until IDEM, OAQ and OES takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ and OES any additional information identified as being needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

Indianapolis Office of Environmental Services
Air Permits
2700 South Belmont Avenue
Indianapolis, Indiana 46221

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) 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 approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

and

Indianapolis Office of Environmental Services
2700 South Belmont Avenue
Indianapolis, Indiana 46221

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 2-8-15(b) through (d). 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 and OES in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(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 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(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 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) 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 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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, and OES or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

and

Indianapolis Office of Environmental Services
Air Permits
2700 South Belmont Avenue
Indianapolis, Indiana 46221

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ and OES 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 and OES the applicable fee is due April 1 of each year.
- (b) 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 2-8-4(3)][326 IAC 2-8-5][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 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may

open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

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

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

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

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

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

and

Indianapolis Office of Environmental Services
Asbestos Section
2700 South Belmont Avenue
Indianapolis, Indiana 46221

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

Testing Requirements [326 IAC 2-8-4(3)]

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

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

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

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

and

Indianapolis Office of Environmental Services
Air Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and OES not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ and OES 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 2-8-4][326 IAC 2-8-5(a)(1)]

C.9 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

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

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

and

Indianapolis Office of Environmental Services
Air Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

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

The notification which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

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

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(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 2-8-4][326 IAC 2-8-5(a)(1)]

C.12 Risk Management Plan [326 IAC 2-8-4] [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 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ and OES, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;

- (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
- (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; 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 maintain the following records:
- (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or OES makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or OES within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

and

Indianapolis Office of Environmental Services
Air Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

- (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 and OES on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8-4(10)]:

- (a) Five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, each having the capability to use Diesel Fuel, Gasoline, or Natural Gas fired Reciprocating Engines. The emissions from each test cell, EC130 - EC134, are exhausted at stacks EC130 - EC134, respectively. Test cells EC131, EC132, EC133, and EC134 were constructed in 1992 and modified in 2002. Test cell EC130 was constructed in 2002.

Engines of a fuel type and size up to the sizes listed in the table below can be used in any one of the individual test cells mentioned above.

Type of Fuel	Maximum Unit Capacity (HP)	Heat Input (MMBtu/hr)
Gasoline	500	5.32
Diesel	500	2.77
Natural Gas	425	2.47

(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 2-8-4(1)]

D.1.1 Carbon Monoxide (CO) [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4:

- (a) CO emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.77 pounds of CO per gallon (lb/gal) of gasoline combusted.
- (b) CO emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.13 pounds of CO per gallon (lb/gal) of diesel combusted.
- (c) CO emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 3.91 pounds of CO per thousand cubic feet (lb/Mcf) of natural gas combusted.
- (d) The combined total Carbon Monoxide (CO) emissions from of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the potential emissions from all other units at this source, will limit the source-wide potential to emit of CO to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

D.1.2 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4:

- (a) VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.40 pounds of VOC per gallon (lb/gal) of gasoline combusted.
- (b) VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.05 pounds of VOC per gallon (lb/gal) of diesel combusted.
- (c) VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.12 pounds of VOC per thousand cubic feet (lb/Mcf) of natural gas combusted.
- (d) The combined total VOC emissions from of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the potential emissions from all other units at this source, will limit the source-wide potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

D.1.3 Nitrogen Oxides (NOx) [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4:

- (a) NOx emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.61 pounds of NOx per gallon (lb/gal) of diesel combusted.
- (b) NOx emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.47 pounds of NOx per gallon (lb/gal) of gasoline combusted.
- (c) NOx emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 4.28 pounds of NOx per thousand cubic feet (lb/Mcf) of natural gas combusted.
- (d) The combined total NOx emissions from of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the potential emissions from all other units at this source, will limit the source-wide potential to emit of NOx to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6:

- (a) VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.40 pounds of VOC per gallon (lb/gal) of gasoline combusted.
- (b) VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.05 pounds of VOC per gallon (lb/gal) of diesel combusted.
- (c) VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.12 pounds of VOC per thousand cubic feet (lb/Mcf) of natural gas combusted.
- (d) The VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, shall not exceed 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits will limit the VOC emissions of each test cell to less than 25 tons per twelve (12) consecutive month period. Therefore, 326 IAC 8-1-6 does not apply.

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the transmission test cells.

Compliance Determination Requirements

D.1.6 Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Nitrogen Oxides (NO_x) Emissions

- (a) Compliance with Condition D.1.1 shall be determined by the following equation:

$$E_{CO} = ((G_{\text{gasoline}} \times 0.77) + (G_{\text{diesel fuel}} \times 0.13) + (CF_{\text{natural gas}} \times 3.91)) / 2000$$

Where:

E_{CO} = Emissions of CO in tons per month
 G_{gasoline} = gallons of gasoline used each month
 $G_{\text{diesel fuel}}$ = gallons of diesel fuel used each month
 $CF_{\text{natural gas}}$ = thousand cubic feet of natural gas used each month

- (b) Compliance with Condition D.1.2 and D.1.4 shall be determined by the following equation:

$$E_{VOC} = ((G_{\text{gasoline}} \times 0.40) + (G_{\text{diesel fuel}} \times 0.05) + (CF_{\text{natural gas}} \times 0.12)) / 2000$$

Where:

E_{VOC} = Emissions of VOC in tons per month
 G_{gasoline} = gallons of gasoline used each month
 $G_{\text{diesel fuel}}$ = gallons of diesel fuel used each month
 $CF_{\text{natural gas}}$ = thousand cubic feet of natural gas used each month

- (c) Compliance with Condition D.1.3 shall be determined by the following equation:

$$E_{NOx} = ((G_{gasoline} \times 0.47) + (G_{diesel\ fuel} \times 0.61) + (CF_{natural\ gas} \times 4.28)) / 2000$$

Where:

E_{NOx} = Emissions of NOx in tons per month

$G_{gasoline}$ = gallons of gasoline used each month

$G_{diesel\ fuel}$ = gallons of diesel fuel used each month

$CF_{natural\ gas}$ = thousand cubic feet of natural gas used each month

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.7 Record Keeping Requirement

- (a) To document compliance with Condition D.1.1, D.1.2, and D.1.3 the Permittee shall maintain monthly records of the input of gasoline, diesel fuel, and natural gas used by the reciprocating engines in test cells EC130 - EC134.
- (b) To document compliance with Condition D.1.4, the Permittee shall maintain monthly records of the input of gasoline, diesel fuel, and natural gas used by each of the reciprocating engines in test cells EC130 - EC134.
- (c) To document compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.4, the Permittee shall maintain records of the monthly emissions as required by Conditions D.1.1(d), D.1.2(d), D.1.3(d), and D.1.4(d)
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.8 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.4 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8-4(10)]:

Insignificant Activity

- (a) Two (2) natural gas-fired boilers, identified as Emission Units B-1 and B-2, each with a maximum heat input capacity of 2.396 MMBtu/hr. [326 IAC 6-2-4]
- (g) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 325 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]

(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 2-8-4(1)]

D.2.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), PM emissions from the two (2) natural gas boilers identified as Emission Units B-1 and B-2, constructed after September 21, 1983, shall be limited to 0.6 lb/MMBtu.

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), 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.2.3 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 existing prior to January 1, 1980 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^oC) (one hundred degrees Fahrenheit (100^oF)), 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^oC) (one hundred degrees Fahrenheit (100^oF)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^oC) (one hundred twenty degrees Fahrenheit (120^oF)):
 - (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 or 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.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
and
OFFICE OF ENVIRONMENTAL SERVICES**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
FESOP Permit No.: F097-25120-00333

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:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

and

OFFICE OF ENVIRONMENTAL SERVICES

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
FESOP Permit No.: F097-25120-00333

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16 |
|---|

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

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

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 and
 OFFICE OF ENVIRONMENTAL SERVICES**

FESOP Quarterly Report

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
 Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
 Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
 FESOP Permit No.: F097-25120-00333
 Facility: Test cells EC130, EC131, EC132, EC133, and EC134
 Parameter: Carbon Monoxide (CO)
 Limit: CO Emissions shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month using the following equation:

$$E_{CO} = ((G_{gasoline} \times 0.77) + (G_{diesel\ fuel} \times 0.13) + (CF_{natural\ gas} \times 3.91)) / 2000$$

Where:

- E_{CO} = Emissions of CO in tons per month
- $G_{gasoline}$ = gallons of gasoline used each month
- $G_{diesel\ fuel}$ = gallons of diesel fuel used each month
- $CF_{natural\ gas}$ = thousand cubic feet of natural gas used each month

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	CO emissions (Tons This Month)	CO emissions (Tons Previous 11 Months)	CO emissions (12 Month Total inTons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 and
 OFFICE OF ENVIRONMENTAL SERVICES**

FESOP Quarterly Report

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
 Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
 Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
 FESOP Permit No.: F097-25120-00333
 Facility: Test cells EC130, EC131, EC132, EC133, and EC134
 Parameter: Nitrogen Oxides (NOx)
 Limit: NOx Emissions shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{NOx} = ((G_{gasoline} \times 0.47) + (G_{diesel\ fuel} \times 0.61) + (CF_{natural\ gas} \times 4.28)) / 2000$$

Where:

- E_{NOx} = Emissions of NOx in tons per month
- $G_{gasoline}$ = gallons of gasoline used each month
- $G_{diesel\ fuel}$ = gallons of diesel fuel used each month
- $CF_{natural\ gas}$ = thousand cubic feet of natural gas used each month

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	NOx emissions (Tons This Month)	NOx emissions (Tons Previous 11 Months)	NOx emissions (12 Month Total in Tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 and
 OFFICE OF ENVIRONMENTAL SERVICES**

FESOP Quarterly Report

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
 Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
 Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
 FESOP Permit No.: F097-25120-00333
 Facility: Test cells EC130, EC131, EC132, EC133, and EC134
 Parameter: Volatile Organic Compounds (VOC)
 Limit: VOC Emissions shall not exceed 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month from each test cell calculated using the following equation:

$$E_{VOC} = ((G_{gasoline} \times 0.40) + (G_{diesel\ fuel} \times 0.05) + (CF_{natural\ gas} \times 0.12)) / 2000$$

Where:

E_{VOC} = Emissions of VOC in tons per month
 $G_{gasoline}$ = gallons of gasoline used each month
 $G_{diesel\ fuel}$ = gallons of diesel fuel used each month
 $CF_{natural\ gas}$ = thousand cubic feet of natural gas used each month

Month: _____ Year: _____

Month	Column 1					Column 2					Column 1 + Column 2				
	VOC emissions (Tons This Month)					VOC emissions (Tons Previous 11 Months)					VOC emissions (12 Month Total in Tons)				
	EC 130	EC 131	EC 132	EC 133	EC 134	EC 130	EC 131	EC 132	EC 133	EC 134	EC 130	EC 131	EC 132	EC 133	EC 134
Month 1															
Month 2															
Month 3															

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 and
 OFFICE OF ENVIRONMENTAL SERVICES**

FESOP Quarterly Report

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
 Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
 Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
 FESOP Permit No.: F097-25120-00333
 Facility: Test cells EC130, EC131, EC132, EC133, and EC134
 Parameter: Volatile Organic Compounds (VOC)
 Limit: VOC Emissions shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{VOC} = ((G_{gasoline} \times 0.40) + (G_{diesel\ fuel} \times 0.05) + (CF_{natural\ gas} \times 0.12)) / 2000$$

Where:

- E_{VOC} = Emissions of VOC in tons per month
- $G_{gasoline}$ = gallons of gasoline used each month
- $G_{diesel\ fuel}$ = gallons of diesel fuel used each month
- $CF_{natural\ gas}$ = thousand cubic feet of natural gas used each month

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC emissions (Tons This Month)	VOC emissions (Tons Previous 11 Months)	VOC emissions (12 Month Total in Tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 and
 OFFICE OF ENVIRONMENTAL SERVICES**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
 Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
 Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
 FESOP Permit No.: F097-25120-00333

Months: _____ to _____ Year: _____

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked ANo deviations occurred this reporting period@.</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Quality
and
City of Indianapolis
Office of Environmental Services**

**Addendum to the Technical Support Document
for a Federally Enforceable State Operating Permit Renewal**

Source Name:	Allison Transmission, Inc. - Eagle Creek Technology Center
Source Location:	6040 West 62nd Street, Indianapolis, Indiana 46278
County:	Marion
SIC Code:	8734
Permit Renewal No.:	F097-25120-00333
Permit Reviewer:	A. Nguyen

On March 1, 2008, the Office of Air Quality (OAQ) and the Office of Environmental Services (OES) had a notice published in the Indianapolis Star, Indianapolis, Indiana, stating that Allison Transmission, Inc. Eagle Creek Technology Center had proposed to renew a Federally Enforceable State Operating Permit (FESOP) relating to the operation of a stationary transmission testing facility for diesel, natural gas, and gasoline engines. The notice also stated that OAQ and OES 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.

On March 31, 2008, Allison Transmission, Inc. Eagle Creek Technology Center submitted comments on the draft FESOP renewal. Upon further review, the OAQ and OES have decided to make the following revisions to the draft FESOP renewal. The TSD will remain as it originally appeared when published. Changes to the permit or technical support material that occur after the permit has published for public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. Bolded language has been added and the language with ~~strikeout~~ has been deleted. The Table of Contents has been modified to reflect these changes.

The comments and responses, including changes to the permit, are as follows:

Comment 1:

In Section A.2 the Maximum Unit Capacity (HP) for diesel and natural gas should be revised to 500 HP and 425 HP respectively.

Response 1:

The maximum unit capacity was listed incorrectly in condition A.2. The capacities proposed by the source have been accounted for in the emission calculations. As requested, permit condition A.2 has been revised as follows:

Type of Fuel	Maximum Unit Capacity (HP)	Heat Input (MMBtu/hr)
Gasoline	500	5.32
Diesel	400 500	2.77
Natural Gas	400 425	2.47

Comment 2:

In Section A.3, we request that Fuel Dispensing Activities and Machining Operations, listed at A.3(c) and A.3(f), respectively, be removed from the list of insignificant activities. Upon further review, these types of activities are not conducted at the Eagle Creek Technology Center. Also in Section A.3(k), there is a typo. The condition should read, "Noncontact cooling tower systems with forced and induced draft cooling tower systems not regulated under a NESHAP."

Response 2:

As requested, permit condition A.3 has been revised as follows:

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) Two (2) natural gas-fired boilers, identified as Emission Units B-1 and B-2, each with a maximum heat input capacity of 2.396 MMBtu/hr. [326 IAC 6-2-4]
- (b) Storage tanks emitting less than one (1) ton per year of a single HAP and less than fifteen (15) pounds per day of VOC:
 - (1) one (1) 6,200 gallon gasoline above ground storage tank, identified as GC-1;
 - (2) one (1) 3,000 gallon diesel oil underground storage tank, identified as DC-1.
- ~~(c) Fuel dispensing activities, including the following:~~
 - ~~(1) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons. Such storage tanks may be in a fixed location or on mobile equipment.~~
 - ~~(2) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity less than or equal to ten thousand five hundred (10,500) gallons, dispensing three thousand five hundred (3,500) gallons per day or less.~~
- ~~(d)~~ (c) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- ~~(e)~~ (d) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
- ~~(f) Machining where an aqueous cutting coolant continuously floods the machining interface.~~

- (g) (e) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 325 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]
- (h) (f) Soldering equipment.
- (i) (g) Closed loop heating and cooling systems.
- (j) (h) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
- (k) (i) Noncontact cooling tower systems with forced and induced draft cooling tower systems not regulated under a NESHAP.
- (l) (j) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4].
- (m) (k) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including tanks.
- (n) (l) Blowdown for any of the following: boiler; compressors; and cooling tower.
- (o) (m) Purge double block and bleed valves.
- (p) (n) Filter or coalescer media changeout.
- (q) (o) Emissions from research and development activities as defined in 326 IAC 2-7-1(21)(E).
- (r) (p) One (1) maintenance paint booth, identified as Paint-01, with a maximum paint usage of 180 ounces per day from aerosol cans, using dry filters for overspray control, exhausting at Stack/Vent ID Paint-01, installed in 2002.

Comment 3:

Under Section C.9, for the purposes of clarification, we understand that monitoring the individual test cells for gasoline, diesel and natural gas usage will be a new monitoring requirement for the site and as such, at least 90 days will be allowed to install new metering for this purpose.

Response 3:

Permit condition C.9 states that:

"Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. ..."

IDEM and OES agree that the requirement to record keep the individual test cells for gasoline, diesel and natural gas is considered a new record keeping requirement because it was not required in the previous FESOP. Therefore, pursuant to permit C.9, Allison Transmission, Inc. - Eagle Creek Technology shall implement the new recordkeeping requirement within 90 days of permit issuance.

Comment 4:

Under Section D.1, we request the following changes to the conditions that are intended to limit the potential to emit (PTE) carbon monoxide, volatile organic compounds, and nitrogen oxides from the test cells:

- (a) Fundamentally, we believe that establishing emission factors and fuel use limits as independently enforceable conditions is not necessary to limit PTE. We propose conditions that require that we keep records of fuel use and calculate actual emission on a monthly basis. At the end of each month we will total the past twelve consecutive months to demonstrate compliance with the appropriate annual limit. IDEM has accepted this approach to limiting PTE (see as an example Crawfordsville Electric Light & Power, IDEM permit number 107-22786-00003). We believe that this approach is more straightforward and prefer it instead of the use of equivalent gallons.
- (b) We request that the emission factors be changed to reflect AP-42 values, except where stack test emission factors are available. Specifically where stack test data is not available we request the use of AP-42 Table 3.3-1 for gasoline and diesel engines and 3.2-3 (worse case between four stroke lean burn and four stroke rich burn) for natural gas.
- (c) For VOC emission factors for gasoline and diesel engines we used the combined total of the tailpipe and evaporative sources (exhaust, evaporative, crankcase, & refueling) for each fuel from AP-42 Table 3.3-1.
- (d) We are requesting that conditions D.1.1, D.1.2 and D.1.3 limit all test cells in total to less than 75 tons per year. This limit will provide us more operational flexibility than having the PTE for the entire permit total too near 100 tons per year.
- (e) In Section D.1.5, we request that the title be changed to "Preventive Maintenance Plan" to be consistent with the rule.

Response 4:

IDEM and OES agree that using emission factors and fuel usage is an acceptable method of calculating emissions. The CO, VOC and NOx FESOP limits have been revised to 75 tons per year for the test cells. The limited potential to emit of source is revised as follows:

Process/emission unit	Potential To Emit (tons/year)						HAPs (single/combined)
	PM	PM10	SO ₂	VOC*	CO	NO _x	
Five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 using Diesel Fuel, Gasoline, or Natural Gas Reciprocating Engines	24.09	24.09	22.45	62.39 75.00	95.00 75.00	95.00 75.00	2.86/2.86
Insignificant Activities: Boilers B-1 and B-2	0.16	0.16	0.01	0.12	1.76	2.10	0.07/0.24
Maintenance Paint Booth	-	-	-	1.23	-	-	-
Total Emissions	24.25	24.25	22.46	< 100	< 100	< 100	2.93/3.10

Some of the AP-42 emission factors proposed by the source are more stringent than the ones originally used. Therefore, these proposed factors will be used in determining CO, VOC and NOx emissions.

The new AP-42 CO emission factor when burning natural gas is: 3.72 lb/MMbtu or 3.91 lb/Mcf
 The new AP-42 VOC emission factor when burning natural gas is: 0.118 lb/MMbtu or 0.12 lb/Mcf
 The new AP-42 NOx emission factor when burning natural gas is: 4.08 lb/MMbtu or 4.28 lb/Mcf

The new AP-42 VOC emission factor when burning gasoline is: 0.0216 lb/hp-hr or 0.40 lb/gal
The new AP-42 VOC emission factor when burning diesel is: 2.51 E-03 lb/hp-hr or 0.05 lb/gal
Pursuant to AP-42, Appendix A:

Heating value of natural gas = 1050 btu/cf
Heating value of gasoline = 130,000 btu/gal
Heating value of diesel = 137,000 btu/gal

To convert from lb/MMbtu to lb/Mcf, the following equation was used:

Pollutant emission factor (lb/MMbtu) x heating value of natural gas (btu/cf) ÷ 1000 = Pollutant emission factor (lb/Mcf)

To convert from lb/hp-hr to lb/gal the following equation was used:

Pollutant emission factor (lb/hp-hr) x 1 hp-hr/7,000 Btu x heating value of fuel (Btu/gal)

Section D.1 of the permit has been revised as follows:

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Carbon Monoxide (CO) [326 IAC 2-8-4] [326 IAC 2-2]

-
- ~~(a)~~ Pursuant to 326 IAC 2-8-4.7
- (a)** CO emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.77 pounds of CO per gallon (lb/gal) of gasoline combusted.
- (b)** CO emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.13 pounds of CO per gallon (lb/gal) of diesel combusted.
- (c)** CO emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 3.91 pounds of CO per thousand cubic feet (lb/Mcf) of natural gas combusted.
- ~~(b) (d)~~ The combined total input of gasoline and gasoline equivalents shall be limited to less than 246.75 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month.
The combined total Carbon Monoxide (CO) emissions from of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- ~~(c)~~ For purposes of determining compliance based on CO emissions:
- ~~(1)~~ Every gallon of diesel fuel shall be equivalent to 0.17 gallon of gasoline.
- ~~(2)~~ Every million cubic feet (MMCF) of natural gas shall be equivalent to 763.64 gallons of gasoline.

Compliance with these limits, combined with the potential emissions from all other units at this source, will limit the source-wide potential to emit of CO to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

D.1.2 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2]

- ~~(a)~~ Pursuant to 326 IAC 2-8-4.7;
- (a)** VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to ~~0.279~~ **0.40** pounds of VOC per gallon (lb/gal) of gasoline combusted.
- (b)** **VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.05 pounds of VOC per gallon (lb/gal) of diesel combusted.**
- (c)** **VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.12 pounds of VOC per thousand cubic feet (lb/Mcf) of natural gas combusted.**
- ~~(b)~~ ~~The combined total input of gasoline shall be limited to less than 246.75 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month.~~
- (d)** **The combined total VOC emissions from of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

Compliance with these limits, combined with the potential emissions from all other units at this source, will limit the source-wide potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

D.1.3 Nitrogen Oxides (NOx) [326 IAC 2-8-4] [326 IAC 2-2]

- ~~(a)~~ Pursuant to 326 IAC 2-8-4.7;
- (a)** NOx emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.61 pounds of NOx per gallon (lb/gal) of diesel combusted.
- (b)** **NOx emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.47 pounds of NOx per gallon (lb/gal) of gasoline combusted.**
- (c)** **NOx emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 4.28 pounds of NOx per thousand cubic feet (lb/Mcf) of natural gas combusted.**
- ~~(b)~~ ~~(d)~~ ~~The combined total input of diesel and diesel equivalents shall be limited to less than 247.85 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month.~~
- The combined total NOx emissions from of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**
- ~~(c)~~ ~~For purposes of determining compliance based on NOx emissions:~~
- ~~(1)~~ ~~Every gallon of gasoline fuel shall be equivalent to 0.77 gallon of diesel fuel.~~

~~(2) — Every million cubic feet (MMCF) of natural gas shall be equivalent to 1457.38 gallons of diesel fuel.~~

Compliance with these limits, combined with the potential emissions from all other units at this source, will limit the source-wide potential to emit of NO_x to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable.

D.1.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

~~(a)~~ Pursuant to 326 IAC ~~2-8-4~~, **8-1-6**:

(a) VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to ~~0.279~~ **0.40** pounds of VOC per gallon (lb/gal) of gasoline combusted.

(b) **VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.05 pounds of VOC per gallon (lb/gal) of diesel combusted.**

(c) **VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.12 pounds of VOC per thousand cubic feet (lb/Mcf) of natural gas combusted.**

~~(b)~~ ~~The total input of gasoline to each transmission test cell shall be limited of 172.31 kilogallons (kgal) per 12 consecutive month period with compliance determined at the end of each month.~~

(d) **The VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, shall not exceed 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

Compliance with these limits will limit the VOC emissions of each test cell to less than 25 tons per twelve (12) consecutive month period. Therefore, 326 IAC 8-1-6 does not apply.

D.1.5 Preventative Maintenance Plan [326 IAC 2-8-4(9)]

A Preventative Maintenance Plan, in accordance with Section B - Preventative Maintenance Plan, of this permit, is required for the transmission test cells.

Compliance Determination Requirements

D.1.6 Carbon Monoxide (CO), Volatile Organic Compounds (VOC), and Nitrogen Oxides (NO_x) Emissions

(a) **Compliance with Condition D.1.1 shall be determined by the following equation:**

$$E_{CO} = ((G_{\text{gasoline}} \times 0.77) + (G_{\text{diesel fuel}} \times 0.13) + (CF_{\text{natural gas}} \times 3.91)) / 2000$$

Where:

E_{CO} = Emissions of CO in tons per month

G_{gasoline} = gallons of gasoline used each month

G_{diesel fuel} = gallons of diesel fuel used each month

CF_{natural gas} = thousand cubic feet of natural gas used each month

- (b) Compliance with Condition D.1.2 and D.1.4 shall be determined by the following equation:

$$E_{VOC} = ((G_{\text{gasoline}} \times 0.40) + (G_{\text{diesel fuel}} \times 0.05) + (CF_{\text{natural gas}} \times 0.12)) / 2000$$

Where:

E_{VOC} = Emissions of VOC in tons per month

G_{gasoline} = gallons of gasoline used each month

$G_{\text{diesel fuel}}$ = gallons of diesel fuel used each month

$CF_{\text{natural gas}}$ = thousand cubic feet of natural gas used each month

- (c) Compliance with Condition D.1.3 shall be determined by the following equation:

$$E_{NOx} = ((G_{\text{gasoline}} \times 0.47) + (G_{\text{diesel fuel}} \times 0.61) + (CF_{\text{natural gas}} \times 4.28)) / 2000$$

Where:

E_{NOx} = Emissions of NOx in tons per month

G_{gasoline} = gallons of gasoline used each month

$G_{\text{diesel fuel}}$ = gallons of diesel fuel used each month

$CF_{\text{natural gas}}$ = thousand cubic feet of natural gas used each month

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.6 7 Record Keeping Requirement

- (a) ~~To document compliance with Condition D.1.1 and D.1.2, the Permittee shall maintain monthly records of the input of gasoline and gasoline equivalents used by the reciprocating engines in test cells EC130 - EC134.~~

To document compliance with Condition D.1.1, D.1.2, and D.1.3 the Permittee shall maintain monthly records of the input of gasoline, diesel fuel, and natural gas used by the reciprocating engines in test cells EC130 - EC134.

- (b) ~~To document compliance with Condition D.1.3, the Permittee shall maintain monthly records of the input of diesel and diesel equivalents used by the reciprocating engines in test cells EC130 - EC134.~~

To document compliance with Condition D.1.4, the Permittee shall maintain monthly records of the input of gasoline, diesel fuel, and natural gas used by each of the reciprocating engines in test cells EC130 - EC134.

- (c) ~~To document compliance with Condition D.1.4, the Permittee shall maintain monthly records of the input of gasoline used by the reciprocating engines in test cells EC130 - EC134.~~

To document compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.4, the Permittee shall maintain records of the monthly emissions as required by Conditions D.1.1(d), D.1.2(d), D.1.3(d), and D.1.4(d)

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

D.1.7 8 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.4 shall be submitted to the addresses listed in Section C - General Reporting

Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Quarterly Reports have been revised and a new VOC Quarterly report has been added as follows:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 and
 OFFICE OF ENVIRONMENTAL SERVICES**

FESOP Quarterly Report

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
 Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
 Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
 FESOP Permit No.: F097-25120-00333
 Facility: Test cells EC130, EC131, EC132, EC133, and EC134
 Parameter: ~~Gallons of gasoline and gasoline equivalents used in the test cells~~ **Carbon Monoxide (CO)**
 Limit: ~~The input of gasoline and gasoline equivalents shall be limited to less than 246.75 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month, where each gallon of diesel fuel is equivalent to 0.17 gallons of gasoline and each million cubic foot of natural gas is equivalent to 763.64 gallons of gasoline.~~
CO Emissions shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month using the following equation:

$$E_{CO} = ((G_{\text{gasoline}} \times 0.77) + (G_{\text{diesel fuel}} \times 0.13) + (CF_{\text{natural gas}} \times 3.91)) / 2000$$

Where:

- E_{CO}** = Emissions of CO in tons per month
- G_{gasoline}** = gallons of gasoline used each month
- G_{diesel fuel}** = gallons of diesel fuel used each month
- CF_{natural gas}** = thousand cubic feet of natural gas used each month

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Gallons of gasoline and equivalent burned CO emissions (Tons This Month)	Gallons of gasoline and equivalent burned CO emissions (Tons Previous 11 Months)	Gallons of gasoline and equivalent burned CO emissions (12 Month Total in Tons)
Month 1			
Month 2			

Month 3			
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- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
 Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
 Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
 FESOP Permit No.: F097-25120-00333
 Facility: Test cells EC130, EC131, EC132, EC133, and EC134
 Parameter: ~~Gallons of diesel and diesel equivalents used in the test cells~~ **Nitrogen Oxides (NOx)**
 Limit: ~~The input of diesel and diesel equivalents shall be limited to less than 247.85 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month, where each gallon of gasoline fuel is equivalent to 0.77 gallons of diesel and each million cubic foot of natural gas is equivalent to 1457.38 gallons of diesel.~~
NOx Emissions shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{NOx} = ((G_{gasoline} \times 0.47) + (G_{diesel\ fuel} \times 0.61) + (CF_{natural\ gas} \times 4.28)) / 2000$$

Where:

- E_{NOx} = Emissions of NOx in tons per month
- $G_{gasoline}$ = gallons of gasoline used each month
- $G_{diesel\ fuel}$ = gallons of diesel fuel used each month
- $CF_{natural\ gas}$ = thousand cubic feet of natural gas used each month

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Gallons of diesel and equivalent burned NOx emissions (Tons This Month)	Gallons of diesel and equivalent burned NOx emissions (Tons Previous 11 Months)	Gallons of diesel and equivalent burned NOx emissions (12 Month Total in Tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
 Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
 Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
 FESOP Permit No.: F097-25120-00333
 Facility: Test cells EC130, EC131, EC132, EC133, and EC134
 Parameter: ~~Gallons of gasoline used in the test cells~~ **Volatile Organic Compounds (VOC)**
 Limit: ~~The total input of gasoline to each transmission test cell shall be limited to less than 172.31 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month.~~
VOC Emissions shall not exceed 25 tons per twelve (12) consecutive month period with compliance determined at the end of each month from each test cell calculated using the following equation:

$$E_{VOC} = ((G_{gasoline} \times 0.40) + (G_{diesel\ fuel} \times 0.05) + (CF_{natural\ gas} \times 0.12)) / 2000$$

Where:

- E_{VOC} = Emissions of VOC in tons per month
- $G_{gasoline}$ = gallons of gasoline used each month
- $G_{diesel\ fuel}$ = gallons of diesel fuel used each month
- $CF_{natural\ gas}$ = thousand cubic feet of natural gas used each month

Month: _____ Year: _____

Month	Column 1					Column 2					Column 1 + Column 2				
	Gallons of gasoline VOC emissions (Tons This Month)					Gallons of gasoline VOC emissions (Tons Previous 11 Months)					Gallons of gasoline VOC emissions (12 Month Total in Tons)				
	EC 130	EC 131	EC 132	EC 133	EC 134	EC 130	EC 131	EC 132	EC 133	EC 134	EC 130	EC 131	EC 132	EC 133	EC 134
Month 1															
Month 2															
Month 3															

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION
 and
 OFFICE OF ENVIRONMENTAL SERVICES**

FESOP Quarterly Report

Source Name: Allison Transmission, Inc. - Eagle Creek Technology Center
Source Address: 6040 West 62nd Street, Indianapolis, Indiana 46278
Mailing Address: 4700 West 10th Street, Mail Code: M-29, Indianapolis, Indiana 46222
FESOP Permit No.: F097-25120-00333
Facility: Test cells EC130, EC131, EC132, EC133, and EC134
Parameter: Volatile Organic Compounds (VOC)
Limit: VOC Emissions shall not exceed 75 tons per twelve (12) consecutive month period with compliance determined at the end of each month calculated using the following equation:

$$E_{VOC} = ((G_{gasoline} \times 0.40) + (G_{diesel\ fuel} \times 0.05) + (CF_{natural\ gas} \times 0.12)) / 2000$$

Where:

- E_{VOC} = Emissions of VOC in tons per month
- $G_{gasoline}$ = gallons of gasoline used each month
- $G_{diesel\ fuel}$ = gallons of diesel fuel used each month
- $CF_{natural\ gas}$ = thousand cubic feet of natural gas used each month

Month: _____ Year: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC emissions (Tons This Month)	VOC emissions (Tons Previous 11 Months)	VOC emissions (12 Month Total in Tons)
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Quality
and Office of Environmental Services**

**Technical Support Document (TSD) for a
Federally Enforceable State Operating Permit Renewal**

Source Background and Description

Source Name:	Allison Transmission, Inc. - Eagle Creek Technology Center
Source Location:	6040 West 62nd Street, Indianapolis, Indiana 46278
County:	Marion
SIC Code:	8734
Permit Renewal No.:	F097-25120-00333
Permit Reviewer:	A. Nguyen

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and the Indianapolis Office of Environmental Services (OES) have reviewed the operating permit renewal application from Allison Transmission, Inc. - Eagle Creek Technology Center relating to the operation of a stationary transmission testing facility for diesel, natural gas, and gasoline engines.

History

IDEM, OAQ and OES received an application on August 9, 2007, from Allison Transmission, Inc. - Eagle Creek Technology Center requesting to renew its operating permit. Allison Transmission, Inc. - Eagle Creek Technology Center was issued a FESOP F097-15984-00333 on July 2, 2003. This is the first renewal for the source.

Permitted Emission Units and Pollution Control Equipment

- (a) Five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, each having the capability to use Diesel Fuel, Gasoline, or Natural Gas fired Reciprocating Engines. The emissions from each test cell, EC130 - EC134, are exhausted at stacks EC130 - EC134, respectively. Test cells EC131, EC132, EC133, and EC134 were constructed in 1992 and modified in 2002. Test cell EC130 was constructed in 2002.

Engines of a fuel type and size up to the sizes listed in the table below can be used in any one of the individual test cells mentioned above.

Type of Fuel	Maximum Unit Capacity (HP)	Heat Input (MMBtu/hr)
Gasoline	500	5.32
Diesel	500	2.77
Natural Gas	500	2.47

Insignificant Activities

- (a) Two (2) natural gas-fired boilers, identified as Emission Units B-1 and B-2, each with a maximum heat input capacity of 2.396 MMBtu/hr. [326 IAC 6-2-4]
- (b) Storage tanks emitting less than one (1) ton per year of a single HAP and less than fifteen (15) pounds per day of VOC:
 - (1) one (1) 6,200 gallon gasoline above ground storage tank, identified as GC-1;
 - (2) one (1) 3,000 gallon diesel oil underground storage tank, identified as DC-1.
- (c) Fuel dispensing activities, including the following:
 - (1) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons. Such storage tanks may be in a fixed location or on mobile equipment.
 - (2) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity less than or equal to ten thousand five hundred (10,500) gallons, dispensing three thousand five hundred (3,500) gallons per day or less.
- (d) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (e) Filling drums, pails or other packaging containers with lubricating oils, waxes, and greases.
- (f) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (g) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 325 IAC 20-6. [326 IAC 8-3-2] [326 IAC 8-3-5]
- (h) Soldering equipment.
- (i) Closed loop heating and cooling systems.
- (j) Any operation using aqueous solutions containing less than one percent (1%) by weight of VOCs excluding HAPs.
- (k) Noncontact cooling tower systems with forced and induced draft cooling tower systems no regulated under a NESHAP.
- (l) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4].
- (m) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including tanks.
- (n) Blowdown for any of the following: boiler; compressors; and cooling tower.
- (o) Purge double block and bleed valves.
- (p) Filter or coalescer media changeout.
- (q) Emissions from research and development activities as defined in 326 IAC 2-7-1(21)(E).

- (r) One (1) maintenance paint booth, identified as Paint-01, with a maximum paint usage of 180 ounces per day from aerosol cans, using dry filters for overspray control, exhausting at Stack/Vent ID Paint-01, installed in 2002.

Existing Approvals

Since the issuance of the FESOP (F097-15984-00333) on July 2, 2003, the source has constructed or has been operating under the following approvals:

- (a) First Administrative Amendment No. F097-19068-00333 issued on September 10, 2004;
- (b) Second Administrative Amendment No. F097-20241-00333 issued on March 17, 2005; and
- (c) First Significant Permit Revision No. F097-22681-00333 issued on July 17, 2006.

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

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (inches)	Flow Rate (acfm)	Temperature (°F)
EC130	EC130 - Diesel, Gasoline, and Natural Gas Engines Testing	43	8.5	1,100	90
EC131	EC131 - Diesel, Gasoline, and Natural Gas Engines Testing	43	8.5	1,100	90
EC132	EC132 - Diesel, Gasoline, and Natural Gas Engines Testing	43	8.5	1,100	90
EC133	EC133 - Diesel, Gasoline, and Natural Gas Engines Testing	43	8.5	1,100	90
EC134	EC134 - Diesel, Gasoline, and Natural Gas Engines Testing	43	8.5	1,100	90

Emission Calculations

See Appendix A (page 1 through 5) of this document for detailed emission calculations. The PTE for NOx and CO when using gasoline engines was derived from stack testing which was witnessed by the City of Indianapolis on March 30, 2005.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM10	attainment
PM2.5	nonattainment
SO ₂	maintenance attainment
NOx	attainment
8-hour Ozone*	attainment
CO	attainment
Lead	attainment

*Note: On November 8, 2007 the Indiana Air Pollution Control Board finalized a temporary emergency rule to redesignate Clark, Floyd, Elkhart, St. Joseph, LaPorte, Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, and Shelby Counties as attainment for the 8-hour ozone standard.

- (a) Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. Until U.S. EPA adopts specific New Source Review rules for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions pursuant to the Nonattainment New Source Review requirements. See the State Rule Applicability – Entire Source section.
- (b) Marion County has been classified as attainment or unclassifiable in Indiana for SO₂, NO₂, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (c) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone.

On November 8, 2007, a temporary emergency rule took effect redesignating Marion County to attainment for the eight-hour ozone standard. The Indiana Air Pollution Control Board has begun the process for a permanent rule revision to incorporate these changes into 326 IAC 1-4-1. The permanent revision to 326 IAC 1-4-1 should take effect prior to the expiration of the emergency rule. Therefore, VOC emissions and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (e) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD or Emission Offset applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	24.25

Pollutant	tons/year
PM10	24.25
SO ₂	22.46
VOC	165.60
CO	691.85
NO _x	423.32

HAPs	tons/year
formaldehyde	2.93
Total	3.10

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC, CO, and NO_x is equal to or greater than 100 tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit VOC, CO, and NO_x emissions to less than Title V levels. Therefore, the source will be issued a FESOP.
 - (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are each less than 100 tons per year.
 - (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.
- Fugitive Emissions
- (d) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/emission unit	Potential To Emit (tons/year)						HAPs (single/combined)
	PM	PM10	SO ₂	VOC*	CO	NO _x	
Five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 using Diesel Fuel, Gasoline, or Natural Gas Reciprocating Engines	24.09	24.09	22.45	62.39	95.00	95.00	2.86/2.86
Insignificant Activities: Boilers B-1 and B-2	0.16	0.16	0.01	0.12	1.76	2.10	0.07/0.24
Maintenance Paint Booth	-	-	-	1.23	-	-	-
Total Emissions	24.25	24.25	22.46	< 100	< 100	< 100	2.93/3.10

* VOC PTE for the transmission test cells includes Limited PTE from gasoline combustion and the PTE from diesel and natural gas combustion.

- (a) This existing stationary source is not major for PSD, under 326 IAC 2-2, because the emissions of each criteria pollutant are less than two hundred fifty (<250) tons per year, and it is not one of the twenty-eight (28) listed source categories.
- (b) **Fugitive Emissions**
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD or Emission Offset applicability.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this FESOP renewal.
- (b) The requirement of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR Part 60.40c, Subpart Dc are not included in the permit because the natural gas fired boilers identified as EU B-1 and B-2 each have a maximum heat input capacity less than 10 MMBtu/hr.
- (c) The requirement of New Source Performance Standards for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR Part 60.110b, Subpart Kb are not included in the permit because the storage tanks identified as GC-1 and DC-1 each have a storage capacity of less than 75 m³ (19,812 gallons).
- (d) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines (CI ICE), 40 CFR 60.4200, Subpart IIII are not included in the permit for the engines tested at this source because the provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand. The July 11, 2006 Federal Register also states that engines used at test cells/stands are exempt.
- (e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this FESOP renewal.
- (f) The requirements of the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63.6580, Subpart ZZZZ are not included in the permit because Allison Transmission, Inc. - Eagle Creek Technology Center is not a major source of HAPs emissions and the provisions of the subpart do not apply to engines being tested at a test cell/stand. On January 18, 2008, Subpart ZZZZ was amended with an effective date of March 18, 2008 to include area sources. Allison Transmission, Inc. - Eagle Creek Technology Center will not be affected by this amendment because engines tested at test cells/stands are exempt from the subpart.
- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands, 40 CFR 63.9280, Subpart PPPPP are not included in this permit because Allison Transmission, Inc. - Eagle Creek Technology Center is not a major source of HAPs emissions.

State Rule Applicability - Entire Source

326 IAC 2-1.1-5 (Nonattainment New Source Review)

This source is not major under nonattainment NSR because it has the potential to emit less than 100 tons of PM₁₀ (as a surrogate for PM_{2.5}). Therefore, the Nonattainment New Source Review requirements are not applicable.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) and 326 IAC 2-3 (Emission Offset)

This existing source is not a major stationary source because no attainment regulated pollutant emissions are equal to or greater than two hundred fifty (250) tons per year, this source is not one of the 28 listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and no nonattainment regulated pollutant emissions are equal to or greater than one hundred (100) tons per year. There have been no modifications or revisions to this source that were major modifications pursuant to 326 IAC 2-2 or 326 IAC 2-3. Therefore, 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) Requirements) and 326 IAC 2-3 (Emission Offset) are each not applicable to the source.

326 IAC 2-6 (Emission Reporting)

This source is located in Marion County, is not required to obtain a Part 70 permit, and does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 2-4.1 (Hazardous Air Pollutants)

The source will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-8-4 (FESOP)

The PTE of natural gas fired engines does not exceed major source thresholds, therefore, the PTE does not need to be limited when burning natural gas (see Appendix A page 1). When using diesel fired engines, the PTE of NO_x exceeds one hundred (100) tons per year (see Appendix A page 2). However, when using gasoline fired engines, the PTE of CO, VOC, and NO_x each exceeds one hundred (100) tons per year (see Appendix A page 3). Gasoline fired engines produce the highest CO, VOC, and NO_x emissions, therefore, gasoline is the limiting fuel. However, the source has requested that diesel fuel be used to limit NO_x emissions. Pursuant to 326 IAC 2-8-4, the following limits shall apply:

- (a) CO emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.77 pounds of CO per gallon (lb/gal) of gasoline combusted. The combined total input of gasoline and gasoline equivalents shall be limited to less than 246.75 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month. This is equivalent to CO emissions of 95 tons per twelve (12) consecutive month period (see Appendix A page 2).

For purposes of determining compliance based on CO emissions:

- (1) Every gallon of diesel fuel shall be equivalent to 0.17 gallon of gasoline (see Appendix A page 3).
 - (2) Every million cubic feet (MMCF) of natural gas shall be equivalent to 763.64 gallons of gasoline (see Appendix A page 3).
- (b) VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, shall be limited to 0.279 pounds of VOC per gallon (lb/gal) of gasoline combusted. The combined total input of gasoline shall

be limited to less than 246.75 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month. This is equivalent to VOC emissions of 34.37 tons per twelve (12) consecutive month period (See Appendix A page 2). This limit combined with the potential emissions from natural gas and diesel fuel combustion, and other activities will limit VOC emissions to less than 100 tons per twelve (12) consecutive month period.

- (c) NO_x emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.61 pounds of NO_x per gallon (lb/gal) of diesel combusted. The combined total input of diesel and diesel equivalents shall be limited to less than 247.85 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month. This is equivalent to NO_x emissions of 95 tons per twelve (12) consecutive month period (see Appendix A page 3).

For purposes of determining compliance based on NO_x emissions:

- (1) Every gallon of gasoline fuel shall be equivalent to 0.77 gallon of diesel fuel (see Appendix A page 3).
- (2) Every million cubic feet (MMCF) of natural gas shall be equivalent to 1457.38 gallons of diesel fuel (see Appendix A page 3).

Compliance with these limits, combined with the potential emissions from all other units at this source, will limit the source-wide potential to emit of CO, VOC, and NO_x to less than 100 tons per twelve (12) consecutive month period. Therefore, 326 IAC 2-7 does not apply.

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6 (Particulate Rules)

This source does not have potential particulate matter emissions greater than 100 tons per year. Based on the limited throughput of diesel (worse case fuel for PM) and the uncontrolled potential to emit of the boilers (See Appendix A, pages 3 and 4), actual emissions will be less than 10 tons per year. Therefore, 326 IAC 6.5-1 does not apply. This source is not specifically identified in 6.5-6. Therefore, 326 IAC 6.5-6 does not apply. This source does not have any processes that meet the definition of a manufacturing process. Therefore, 326 IAC 6-3 does not apply.

326 IAC 6-4-1 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4-1, the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5-1 (Fugitive Particulate Matter Emission Limitations)

The operation of this stationary transmission testing facility for natural gas, diesel, and gasoline engines does not have fugitive particulate emissions. Therefore, 326 IAC 6-5 does not apply.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

Neither the source or any individual emission units has potential to emit of SO₂ greater than 10 pounds per hour or 25 tons per year. Therefore, 326 IAC 7-1.1 does not apply.

State Rule Applicability – Individual Facilities

Test Cells

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

This rule applies to new facilities constructed after January 1, 1980 with the potential to emit of VOC of 25 tons per year or more. Only gasoline fired engines produce potential VOC emissions greater than 25 tons (See Appendix A, page 2). The potential to emit from diesel fuel and natural gas fired engines produce potential VOC emissions less than 25 tons (See Appendix A, pages 1 and 3).

The following limits shall apply to each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134, in order to render 326 IAC 8-1-6 not applicable:

- (a) The VOC emissions from each of the five (5) Transmission Test Cells, identified as Emission Units EC130, EC131, EC132, EC133, and EC134 shall be limited to 0.279 pounds of VOC per gallon (lb/gal) of gasoline combusted (see Appendix A page 2).
- (b) The total input of gasoline to each transmission test cell shall be limited of 172.31 kilo-gallons (kgal) per 12 consecutive month period with compliance determined at the end of each month. This is equivalent to VOC emissions of 24 tons per twelve (12) consecutive month period for each transmission test cell when combusting gasoline (see Appendix A page 2).

Compliance with these limits will limit the VOC emissions of each test cell to less than 25 tons per twelve (12) consecutive month period. Therefore, 326 IAC 8-1-6 does not apply.

Boilers

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

This source is subject to 326 IAC 6-2-4 because the two (2) natural gas fired boilers identified as B-1 and B-2 were constructed after September 21, 1983. Particulate emissions from B-1 and B-2 shall be limited to 0.60 pounds per MMBtu. The particulate emissions were based on the following equation:

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

Where:

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

Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used. Q for the B-1 and B-2 is 4.792 MMBtu/hr (2.396 + 2.396).

For Q less than 10 MMBtu/hr, Pt shall not exceed 0.6 pounds per MMBtu.

Degreasing Operations

326 IAC 8-3 (Organic Solvent Degreasing Operation)

Allison Transmission Inc. - Eagle Creek Technology Center was a new facility performing an organic solvent degreasing operation located in Marion County after January 1, 1980. Therefore, 326 IAC 8-3-2 is applicable. In addition, 326 IAC 8-3-5 applies because the source was a new facility with construction after July 1, 1990. These rules apply to the Insignificant Activities listed as degreasing operations.

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), 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.

Pursuant to 326 IAC 8-3-5 (Cold cleaner degreaser operation and control)

- (a) The owner or operator of a cold cleaner degreaser facility 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 used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

- (b) The owner or operator of a cold cleaning facility 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.

Paint Booth

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

Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with the potential emissions less than five hundred fifty-one thousandths (0.551) pounds per hour of PM shall be exempt from 326 IAC 6-3. The maintenance paint booth, identified as Paint-01, has potential PM emissions less than 0.551 (See Appendix A, page 4). Therefore, 326 IAC 6-3 does not apply.

326 IAC 8-2 (Surface Coating Emissions Limitations)

Pursuant to 326 IAC 8-2-1(4), this rule applies to facilities for which construction commences after July 1990, with actual emissions greater than fifteen (15) pounds of VOC per day before add on controls. The maintenance paint booth, identified as Paint-01 was installed in 2002, and has potential VOC emissions before controls at less than fifteen (15) pounds per day (see Appendix A, page 4). Therefore, 326 IAC 8-2 does not apply.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 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 2-8-4. 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.

There are no applicable compliance monitoring conditions applicable to this source. Compliance with the CO, VOC and NOx limits can be demonstrated by records of fuel consumption.

Recommendation

The staff recommends to the Commissioner that the FESOP Renewal be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on August 9, 2007 with additional information on November 11, 2007.

Conclusion

The operation of this stationary transmission testing facility for diesel, natural gas, and gasoline engines shall be subject to the conditions of the attached FESOP Renewal No. F097-25120-00333.

Appendix A: Emission Calculations

Company Name: Allison Transmission, Inc. - Eagle Creek Technology Center
Address, City IN Zip: 6040 W 62nd Street, Indianapolis, IN 46278
Permit: F097-25120-00333
Reviewer: Anh-tuan Nguyen
Date: 9/1/2007

Natural Gas

Emissions calculated based on heat input rating (MMBtu/hr)

Five (5) Internal Combustion Engines, 425hp, 2.47 MMBtu/hr each

One (1) Engine

Five (5) engines combined

Pollutant	Maximum Rate (MMBtu/hr)	Emission Factors (lbs/MMBtu)	Potential Emissions (tons/yr)	Pollutant	Maximum Rate (MMBtu/hr)	Emission Factors (lbs/MMBtu)	Potential Emissions (tons/yr)
PM	2.47	9.91E-03	0.11	PM	12.35	9.91E-03	0.54
PM10		7.71E-05	0.00	PM10		7.71E-05	0.00
SO ₂		5.88E-04	0.01	SO ₂		5.88E-04	0.03
NOx		0.847	9.16	NOx		0.847	45.82
VOC		0.118	1.28	VOC		0.118	6.38
CO		0.56	6.03	CO		0.56	30.13
Formaldehyde		5.28E-02	0.57	Formaldehyde		5.28E-02	2.86

Methodology

Emission Factors are from AP-42, Section 3.2 (4-cycle, lean burn).

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 8760 hr/yr x 1 ton/ 2,000 lbs

NOTE: Assume that the heating value of natural gas is 1,050 Btu/Cubic Foot. (AP-42, Appendix A)

To convert from CO emission factor from lb/MMBtu to lb/MMcf multiply emission factor by 1,050 Btu/cf :

$$0.56 \text{ lb/MMBtu} \times 1,020 \text{ Btu/cf} = \mathbf{588 \text{ lb/MMcf}}$$

To convert from NOx emission factor from lb/MMBtu to lb/MMcf multiply emission factor by 1,050 Btu/cf :

$$0.847 \text{ lb/MMBtu} \times 1,020 \text{ Btu/cf} = \mathbf{889 \text{ lb/MMcf}}$$

Five (5) 500 HP (5.32 MMBtu/hr) Gasoline Engines

Company Name: Allison Transmission, Inc. - Eagle Creek Technology Center
Address, City IN Zip: 6040 W 62nd Street, Indianapolis, IN 46278
Permit: F097-25120-00333
Reviewer: Anh-tuan Nguyen
Date: 9/1/2007

Horsepower Output (5 engines, 500 HP each)	Heat Input (5 engines, 5.32 MMBtu/hr each)	Gasoline Heat Input Value	Gasoline Potential Throughput	
Horsepower (hp)	MMBtu/hr	Btu/gal	kgal/year	
500.0	5.32	130,000	358.49	for 1 engine
2500.0	26.6		1,792.43	for 5 engines

	AP-42, Table 3.3-1			March 30, 2005 Stack Test Data	March 30, 2005 Stack Test Data
	PM/PM10	SO ₂	VOC	NO _x	CO
Emission Factor, lb/unit	7.21E-04	5.91E-04	0.015	0.470	0.770
Units	lb/hp-hr	lb/hp-hr	lb/hp-hr	lb/gal	lb/gal
Potential Emission in lb/hr	0.361	0.296	7.500	-	-
Potential Emissions in ton/yr (1 engine)	1.58	1.29	32.85	84.24	138.02
Potential Emissions in ton/yr (5 engines)	7.89	6.47	164.25	421.22	690.09

To convert VOC emission factor from lb/hp-hr to lb/gal: emission factor (lb/hp-hr) x 1 hp-hr/7,000 Btu x 130,000 Btu/gal = 0.279 lb/gal

To convert PM/PM10 emission factor from lb/hp-hr to lb/gal: emission factor (lb/hp-hr) x 1 hp-hr/7,000 Btu x 130,000 Btu/gal = 0.01 lb/gal

PM/PM10 actual emissions by gasoline throughput limit: PM/PM10 emission factor (lb/gal) x 1000 gal/kg x limited gasoline throughput (kg/yr) x 1 ton/2000lb: **1.65 ton/yr**

FESOP limit

Pollutants	CO	VOC
5 Gasoline Engines, limited (ton/yr)	95.00	34.37
Limited Gasoline throughput (kgal/yr):	246.75	

Source requested to limit CO to 95 tons to allow for insignificant combustion units expansion

VOC are also limited by CO gasoline throughput limit because it is the more stringent limit.

326 IAC 8-1-6 limit

Pollutant	VOC	24	Limit to render 326 IAC 8-1-6 not applicable (tons/yr)
		172.31	Limited Gasoline throughput for one (1) engine (kgal/yr)

To calculate limited gasoline throughput for one (1) engine (kgal/yr): 24 ton/yr x 2000 lb/ton / (VOC emission factor (lb/gal) x 1,000 gal/kgal) = 172.31 Kgal/yr

Methodology

Gasoline Heat Input Value is from AP42 Appendix A

When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr.

Emission Factors for PM/PM10, SO₂, and VOC are from AP42 (Supplement B 10/96), Table 3.3-1.

Emission Factors for NO_x and CO are based on stack testing witnessed by OES on March 30, 2005.

Potential Emissions PM/PM10, SO₂, & VOC (tons/yr) = Maximum horsepower (hp) x emission factor (lb/hp-hr) x 8760 hr/year x 1 ton/2000 lbs

Potential Emissions using Test Data (tons/yr) = Gasoline Potential Throughput (gal/yr) ÷ 8760 hr/year x Stack Test Data (lb/gal) x 8760 hr/yr x 1 ton/2000 lbs

Gasoline Potential Throughput (gal/yr) = Maximum Heat Input (MMBtu/hr) x 8760 hr/year x 10⁶ Btu/1 MMBtu ÷ Gasoline Heat Input Value (Btu/gal)

Limited Gasoline Throughput = [Limited CO or NO_x Emissions (ton/yr) ÷ Potential CO or NO_x Emissions (ton/yr)] x [Potential Fuel Throughput (gal/yr)] ÷ 1 kgal/1000 gallons

Limited VOC (tons/yr) = Limited Gasoline Throughput (kgal/yr) x emission factor (lb/gal) x 1,000 gal/kgal x 1 ton/2,000 lbs

**Appendix A: Emission Calculations
Internal Combustion Engines**

Five (5) 500 HP (2.77 MMBtu/hr) Diesel Engines

Company Name: Allison Transmission, Inc. - Eagle Creek Technology Center
Address, City IN Zip: 6040 W 62nd Street, Indianapolis, IN 46276
Permit: F097-25120-00333
Reviewer: Anh-tuan Nguyen
Date: 9/1/2007

Emissions calculated based on output rating (hp)

Horsepower (hp), (5 engines, 500 hp each)	Heat Input (5 engines, 2.77 MMBtu/hr ea)	Diesel Heat input value (Btu/gal)	Diesel Throughput (kgal/yr)
500.0	2.77	137,000	177.1
2500.0	13.85		885.6

for 1 engine
for 5 engines

Diesel Engines	PM/PM10	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	2.20E-03	2.05E-03	3.10E-02	2.47E-03	6.68E-03
Potential Emission in lb/hr	1.10	1.03	15.50	1.24	3.34
Potential Emission in ton/yr (1 engine)	4.82	4.49	67.89	5.41	14.63
Potential Emission in ton/yr (5 engines)	24.09	22.45	339.45	27.05	73.15

To convert CO emission factor from lb/hp-hr to lb/gal: 6.68E-03 (lb/hp-hr) x 1 hp-hr/7,000 Btu x 137,000 Btu/gal = 0.13 lb/gal
 To convert NOx emission factor from lb/hp-hr to lb/gal: 3.10E-02 (lb/hp-hr) x 1 hp-hr/7,000 Btu x 137,000 Btu/gal = 0.61 lb/gal
 To convert PM/PM10 emission factor from lb/hp-hr to lb/gal: 2.20E-03 (lb/hp-hr) x 1 hp-hr/7,000 Btu x 137,000 Btu/gal = 0.04 lb/gal
 PM/PM10 actual emissions by diesel throughput limit: PM/PM10 emission factor (lb/gal) x 1000 gal/kg x limited diesel throughput (kg/yr) x 1 ton/2000lbs = **5.34 ton/yr**

FESOP limit

Pollutants	NOx
5 Diesel Engines, limited (ton/yr)	95.00
Limited Diesel throughput (kgal/yr):	247.85

Source requested to limit NOx to 95 tons to allow for insignificant combustion units expansion

Gasoline is the limiting fuel for CO, VOC and Nox, however the source wanted to use Diesel fuel to limit NOx emissions.

Fuel Limits as Gasoline Equivalent: CO		
Fuel	CO Emission Rate	Limit
Natural Gas	588 lb/MMcf	763.64 gal /MMcf of natural gas
Diesel	0.13 lb/gal	0.17 gal /gal diesel
Gasoline	0.77 lb/gal	1.00 gal/gal gasoline

Fuel Limits as Diesel Equivalent: NOx		
Fuel	NOx Emission Rate	Limit
Natural Gas	889 lb/MMcf	1457.38 gal /MMcf of natural gas
Diesel	0.61 lb/gal	1.00 gal /gal diesel
Gasoline	0.47 lb/gal	0.77 gal/gal gasoline

Methodology

Diesel PTE calculated based on horsepower output rating produces higher emissions than those based on heat input capacity
 Emission Factors are from AP42, Tables 3.3-1.
 Diesel heat input value is 137,000 Btu/gal from AP-42 Appendix A
 When necessary, an average brake-specific fuel consumption (BSFC) of 7,000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr
 Potential Emissions (tons/yr) = Maximum horsepower (hp) x emission factor (lb/hp-hr) x 8760 hr/year x 1 ton/2000 lbs
 Fuel Limits as gasoline equivalents (gallons of gasoline /Fuel) = Fuel CO Emission Factor (lb/unit) ÷ Gasoline CO Emission Factor (lb/gal)
 Fuel Limits as diesel equivalents (gallons of diesel /Fuel) = Fuel NOx Emission Factor (lb/unit) ÷ Diesel Nox Emission Factor (lb/gal)

Company Name: Allison Transmission, Inc. - Eagle Creek Technology Center
Address, City IN Zip: 6040 W 62nd Street, Indianapolis, IN 46278
Permit: F097-25120-00333
Reviewer: Anh-tuan Nguyen
Date: 9/1/2007

Two (2) boilers identified as B-1 and B-2, each with a heat input capacity 2.396 MMBtu/hr.

Natural Gas

Heat Input Capacity Total MMBtu/hr	Potential Throughput MMcf/yr
4.792	41.98

	Pollutant					
	PM	PM10	SO ₂ *	NOx	VOC	CO
Emission Factor in lb/MMcf	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.16	0.16	0.01	2.10	0.12	1.76

Methodology

*Assumes sulfur content is natural gas of 2,000 grains/10⁶ scf. The SO₂ emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO₂ emission factor by the ratio of the site-specific sulfur content (grains/106 scf) to 2,000 grains/106 scf.

Potential Throughput (MMcf) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMcf/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

Emission (tons/yr) = Throughput (MMcf/yr) x Emission Factor (lb/MMcf)/2,000 lb/ton

HAPs

	Benzene	Butane	Ethane	Formaldehyde	Hexane	Pentane	Propane
Emission Factor in lb/MMcf	2.10E-03	2.1E+00	3.1E+00	7.5E-02	1.8E+00	2.6E+00	1.6E+00
Potential Emission in tons/yr	0.0000	0.0441	0.0651	0.0016	0.0378	0.0546	0.0336

	Toluene	Barium	Cadmium	Chromium	Molybdenum	Nickel	Vanadium	Zinc
Emission Factor in lb/MMBtu	3.4E-03	4.4E-03	1.1E-03	1.4E-03	1.1E-03	2.1E-03	2.3E-03	2.9E-02
Potential Emission in tons/yr	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0006

HAPs emissions were calculated from HAP emission factors greater than 10E-03

	HAPs - VOC	HAPs - Metals
Total, ton/yr:	0.23677	0.00078
Total, ton/yr:	0.23754	

One (1) Maintenance Paint Booth, identified as Paint-01

Maximum VOC content of spray can = 60%

Maximum spray can size = 12 ounces

Maximum density of paint = 8 lbs/gal

Maximum spray can usage = 15 cans/day

Pounds VOC emissions per can = Maximum VOC content of spray can (%) x Maximum spray can size (oz) x (1 gal / 128 oz) x Maximum density of paint (lbs/gal)
 = (0.60) x (12 oz) x (1 gal / 128 oz) x (8 lbs/gal) = **0.45 lbs VOC / can**

Potential VOC emissions (lbs/day) = Pounds VOC emissions per can x 15 cans per day
 = 0.45 lbs VOC / can x 15 cans/day = **6.75 lbs/day**

Potential VOC emissions (lbs/hr) = Maximum spray can usage (cans/day) x Pounds of VOC per can (lbs/can) x 1 day / 24 hours
 = 15 cans/day x 0.45 lbs VOC/can x 1 day/24 hours = **0.28 lbs/hr**

Potential VOC emissions (tons/yr) = Potential VOC emissions (lbs/hr) x 8760 hrs/year x 1 ton/2000 lbs
 = 0.28 lbs/hr x 8760 x 1 ton/2000 lbs = **1.23 tons/yr**

Appendix A: Summary of Potential Calculations

Company Name: Allison Transmission, Inc. - Eagle Creek Technology Center
 Address, City IN Zip: 6040 W 62nd Street, Indianapolis, IN 46278
 Permit: F097-25120-00333
 Reviewer: Anh-tuan Nguyen
 Date: 9/1/2007

Uncontrolled Potential Emissions

Emission Units	Pollutants (tons/yr)							Combined HAPs
	PM	PM-10	SO2	NOX	VOC	CO	Single HAPs	
Five (5) test cells using natural gas engines only	0.54	0.00	0.03	45.83	6.38	30.13	2.86	2.86
Five (5) test cells using gasoline engines only	7.89	7.89	6.47	421.22	164.25	690.09	-	-
Five (5) test cells using diesel engines only	24.09	24.09	22.45	339.45	27.05	73.15	-	-
Worst case PTE from Five (5) test cells	24.09	24.09	22.45	421.22	164.25	690.09	2.86	2.86
Insignificant Activities: Two (2) Boilers	0.16	0.16	0.01	2.10	0.12	1.76	0.07	0.24
Maintenance Paint Booth	-	-	-	-	1.23	-	-	-
Total	24.25	24.25	22.46	423.32	165.60	691.85	2.93	3.10

PTE was calculated based on the test cells using each specific engine type only.
 Diesel engines produced the highest PM, PM10 and SO2 emissions.
 Gasoline engines produced the highest NOx, VOC and CO emissions.

Limited Potential Emissions

Emission Units	Pollutants (tons/yr)							Combined HAPs
	PM	PM-10	SO2	NOX	VOC*	CO	Single HAPs	
Five (5) Transmission Test Cells, using Diesel Fuel, Gasoline, or Natural Gas Reciprocating Engines	24.09	24.09	22.45	95.00	62.39	95.00	2.86	2.86
Insignificant Activities: Two (2) Boilers	0.16	0.16	0.01	2.10	0.12	1.76	0.07	0.24
Maintenance Paint Booth	-	-	-	-	1.23	-	-	-
Total	24.25	24.25	22.46	97.10	63.74	96.76	2.93	3.10

Test cells using gasoline engines produces the highest CO and NOx emissions.
 Source voluntary limit CO and NOx to 95 tons using a gasoline throughput limit.
 VOC emissions are also limited by the CO gasoline throughput limit.
 * VOC limited PTE for the transmission test cells also include PTE from burning diesel and natural gas.