



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: June 10, 2008

RE: Vectren Corp. Dolan Gas Storage / 105-23891-00017

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

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
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100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(317) 232-8603
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Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated,
Dolan Gas Storage Field
3592 East Boltinghouse Road
Bloomington, Indiana 47408**

(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.: F105-23891-00017	
Issued by: Original signed by:	Issuance Date: June 10, 2008
Alfred C. Dumauual Ph. D., Section Chief Permits Branch Office of Air Quality	Expiration Date: June 10, 2018

TABLE OF CONTENTS

A. SOURCE SUMMARY	4
A.1 General Information [326 IAC 2-8-3(b)]	
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]	
A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]	
A.4 FESOP Applicability [326 IAC 2-8-2]	
B. GENERAL CONDITIONS	6
B.1 Definitions [326 IAC 2-8-1]	
B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.3 Term of Conditions [326 IAC 2-1.1-9.5]	
B.4 Enforceability [326 IAC 2-8-6]	
B.5 Severability [326 IAC 2-8-4(4)]	
B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	
B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]	
B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]	
B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	
B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]	
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]	
B.12 Emergency Provisions [326 IAC 2-8-12]	
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]	
B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]	
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]	
B.17 Permit Renewal [326 IAC 2-8-3(h)]	
B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]	
B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]	
B.20 Source Modification Requirement [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]	
B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]	
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]	
B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]	
C. SOURCE OPERATION CONDITIONS	15
Emission Limitations and Standards [326 IAC 2-8-4(1)]	
C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2 Overall Source Limit [326 IAC 2-8]	
C.3 Opacity [326 IAC 5-1]	
C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6 Fugitive Dust Emissions [326 IAC 6-4]	
C.7 Stack Height [326 IAC 1-7]	
C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
Testing Requirements [326 IAC 2-8-4(3)]	
C.9 Performance Testing [326 IAC 3-6]	

Compliance Requirements [326 IAC 2-1.1-11]

- C.10 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

- C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]
- C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]
- C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)]
[326 IAC 2-8-5(1)]

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

- C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]
- C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]

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

- C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]
- C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

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

D.1. EMISSIONS UNIT OPERATION CONDITIONS..... 22

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

- D.1.1 FESOP Emission Limitations and PSD Minor Source [326 IAC 2-8-4] [326 IAC2-2]
- D.1.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

- D.1.3 Record Keeping Requirement
- D.1.4 Reporting Requirements

D.2. EMISSIONS UNIT OPERATION CONDITIONS..... 24

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

- D.2.1 FESOP Emission Limitations and PSD Minor Source [326 IAC 2-8-4] [326 IAC2-2]
- D.2.2 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]
- D.2.3 New Source Performance Standard (NSPS) for Onshore Natural Gas Processing
[326 IAC 12] [40 CFR 60.640, Subpart LLL]
- D.2.4 Preventive Maintenance Plant [326 IAC 2-8-4(9)]
- D.2.5 Particulate [326 IAC 6-2-4]

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

- D.2.6 Record Keeping Requirement
- D.2.7 Reporting Requirements

Certification Form 28
Emergency Occurrence Form 29
Quarterly Report Form 31
Quarterly Deviation and Compliance Monitoring Report Form 33

SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary engine driven compressor station from natural gas distribution.

Source Address:	3592 East Boltinghouse Road, Bloomington, Indiana 47408
Mailing Address:	P.O. Box 209, Evansville, Indiana 47702
General Source Phone Number:	(812) 491-4562
SIC Code:	4924
County Location:	Monroe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules 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) One (1) 1100 brake horsepower, four (4) cycle natural-gas fired, lean burn reciprocating internal combustion engine, identified as CE-1, constructed in 1988 with a natural gas compressor.
- (b) One (1) 2000 brake horsepower, four (4) cycle natural gas-fired, lean burn reciprocating internal combustion engine, identified as CE-2, constructed in 1993 with an intercooler, prechambered cylinder head and natural gas compressor.
- (c) One (1) natural gas desulfurization process consisting of:
 - (1) Two (2) enclosed amine contact towers, constructed in 1996 with H₂S emissions from the natural gas routed to the flare, identified as IF-4.
 - (2) Two (2) natural gas-fired reboilers, identified as FCU-4 and FCU-5, constructed in 1996, each with a heat input capacity of 2.5 million British thermal units per hour (higher heating value (HHV)), and exhausting to stacks FCU-4 and FCU-5.
 - (3) One (1) natural gas-fired flare, identified as IF-4, constructed in 1996 with a heat input capacity of 0.25 million British thermal units per hour (higher heating value (HHV)).

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

- (1) Three (3) natural gas-fired reboilers used for glycol dewatering system, identified as FCU-1, FCU-2 and FCU-3, heat input capacities: 0.325, 0.75 and 0.375 million British thermal units per hour (higher heating value (HHV)), respectively. [326 IAC 6-2-4]
- (2) One (1) natural gas- fired flare used for the glycol dewatering system, identified as IF-1, heat input capacity: 0.025 million British thermal units per hour (higher heating value (HHV)). [326 IAC 6-2-4]
- (b) Combustion source flame safety purging on startup.
- (c) The following VOC and HAP storage containers: Storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (d) The following VOC and HAP storage containers: Vessels storing lubricating oil, hydraulic oils, machining oils and machining fluids.
- (e) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- (f) Closed loop heating and cooling systems.
- (g) Heat exchanger cleaning and repair.
- (h) Process vessel degassing and cleaning to prepare for internal repairs.
- (i) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment.
- (j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (k) Purge double block and bleed valves.
- (l) Filter or coalescer media changeout.
- (m) Numerous valves and flanges.

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, F105-23891-00017, 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, 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]

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

B.5 Severability [326 IAC 2-8-4(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, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-8-3(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 July 1 of each year to:

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by 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 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 upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by 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, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

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

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

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

The notice fulfills the requirement of 326 IAC 2-8-4(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 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 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 F105-23891-00017 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

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 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 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 at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(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 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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the

deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 Permit Amendment or 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

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

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 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, 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

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 within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) 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 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

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

C.2 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 one hundred (100) 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.3 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 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.5 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.6 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.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by 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.9 Performance Testing [326 IAC 3-6]

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by 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 not later than forty-five (45) days after the completion of the testing. An extension may be granted

by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 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.11 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

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.12 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.13 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.14 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.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records;
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.16 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, 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).

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

C.17 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 makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.18 General Reporting Requirements [326 IAC 2-8-4(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
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by 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.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

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

- (a) One (1) 1100 brake horsepower, four (4) cycle natural-gas fired, lean burn reciprocating internal combustion engine, identified as CE-1, constructed in 1988 with a natural gas compressor.
- (b) One (1) 2000 brake horsepower, four (4) cycle natural gas-fired, lean burn reciprocating internal combustion engine, identified as CE-2, constructed in 1993 with an intercooler, prechambered cylinder head and natural gas compressor.

(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 FESOP Emission Limitations and PSD Minor Source [326 IAC 2-8-4] [326 IAC 2-2]

- (a) The throughput of natural gas delivered to the two (2) engines (CE-1 and CE-2) shall be limited to less than a total of 46.37 million cubic feet per twelve (12) consecutive month period with compliance to be determined at the end of each month.

Compliance with this limit, combined with the potential to emit NO_x from other emissions units at the source, shall limit the NO_x from the entire source to less than 100 tons per twelve (12) consecutive month period.

- (b) Pursuant to FESOP 105-6133-00017, issued on December 13, 1996, the two (2) engines (CE-1 and CE-2) shall use natural gas only.

D.1.2 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 these facilities.

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

D.1.3 Record Keeping Requirement

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records of the natural gas delivered to the two (2) engines (CE-1 and CE-2). The Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the NO_x emission limit established in Condition D.1.1

(1) The amount of natural gas delivered to the two (2) engines (CE-1 and CE-2) each month; and

(2) NO_x emission from the total of the two (2) engines (CE-1 and CE-2).

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

D.1.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30)

days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "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)]:

- (c) One (1) natural gas desulfurization process, consisting of:
- (1) Two (2) enclosed amine contact towers, constructed in 1996 with H₂S emissions from the natural gas routed to the flare, identified as IF-4.
 - (2) Two (2) natural gas-fired reboilers, identified as FCU-4 and FCU-5, constructed in 1996, each with a heat input capacity of 2.5 million British thermal units per hour (higher heating value (HHV)), and exhausting to stacks FCU-4 and FCU-5.
 - (3) One (1) natural gas-fired flare, identified as IF-4, constructed in 1996 with a heat input capacity of 0.25 million British thermal units per hour (higher heating value (HHV)).

Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million British thermal units per hour.
- (1) Three (3) natural gas-fired reboilers used for glycol dewatering system, identified as FCU-1, FCU-2 and FCU-3, heat input capacities: 0.325, 0.75 and 0.375 million British thermal units per hour (higher heating value (HHV)), respectively. [326 IAC 6-2-4]
 - (2) One (1) natural gas-fired flare used for the glycol dewatering system, identified as IF-1, heat input capacity: 0.250 million British thermal units per hour (higher heating value (HHV)). [326 IAC 6-2-4]

(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 FESOP Emission Limitations and PSD Minor Source [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to the First Significant Permit Revision, F105-11259-00017, issued October 28, 1999, the total combined throughput of natural gas desulfurized in the two (2) amine contact towers shall not exceed 4,575 million cubic feet per twelve (12) consecutive month period. This will limit the SO₂ from the desulfurization process to 89.4 tons per year from the entire source with compliance to be determined by the end of each month. Since the potential to emit SO₂ is less than 100 tons per year, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) are not included in this permit.

D.2.2 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

The Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, for the one (1) natural gas desulfurization process, except when otherwise specified in 40 CFR Part 60, Subpart LLL.

D.2.3 New Source Performance Standard (NSPS) for Onshore Natural Gas Processing [326 IAC 12] [40 CFR 60.640, Subpart LLL]

Pursuant to 40 CFR Part 60, Subpart LLL, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart LLL, which are incorporated by reference as 326 IAC 12 for the one (1) natural gas desulfurization process, as specified as follows:

§ 60.640 *Applicability and designation of affected facilities.*

- (a) The provisions of this subpart are applicable to the following affected facilities that process natural gas: each sweetening unit, and each sweetening unit followed by a sulfur recovery unit.
- (b) Facilities that have a design capacity less than 2 long tons per day (LT/D) of hydrogen sulfide (H₂S) in the acid gas (expressed as sulfur) are required to comply with §60.647(c) but are not required to comply with §§60.642 through 60.646.
- (c) The provisions of this subpart are applicable to facilities located on land and include facilities located onshore which process natural gas produced from either onshore or offshore wells.
- (d) The provisions of this subpart apply to each affected facility identified in paragraph (a) of this section which commences construction or modification after January 20, 1984.
- (e) The provisions of this subpart do not apply to sweetening facilities producing acid gas that is completely reinjected into oil-or-gas-bearing geologic strata or that is otherwise not released to the atmosphere.

§ 60.641 *Definitions.*

All terms used in this subpart not defined below are given the meaning in the Act and in subpart A of this part.

Acid gas means a gas stream of hydrogen sulfide (H₂S) and carbon dioxide (CO₂) that has been separated from sour natural gas by a sweetening unit.

Natural gas means a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface. The principal hydrocarbon constituent is methane.

Onshore means all facilities except those that are located in the territorial seas or on the outercontinental shelf.

Reduced sulfur compounds means H₂S, carbonyl sulfide (COS), and carbon disulfide (CS₂).

Sulfur production rate means the rate of liquid sulfur accumulation from the sulfur recovery unit.

Sulfur recovery unit means a process device that recovers element sulfur from acid gas.

Sweetening unit means a process device that separates the H₂S and CO₂ contents from the sour natural gas stream.

Total SO₂ equivalents means the sum of volumetric or mass concentrations of the sulfur compounds obtained by adding the quantity existing as SO₂ to the quantity of SO₂ that would be obtained if all reduced sulfur compounds were converted to SO₂ (ppmv or kg/dscm (lb/dscf)).

E The sulfur emission rate expressed as elemental sulfur, kilograms per hour (kg/hr) [pounds per hour (lb/hr)], rounded to one decimal place.

R The sulfur emission reduction efficiency achieved in percent, carried to one decimal place.

S The sulfur production rate, kilograms per hour (kg/hr) [pounds per hour (lb/hr)], rounded to one decimal place.

XThe sulfur feed rate from the sweetening unit (i.e., the H₂S in the acid gas), expressed as sulfur, Mg/D(LT/D), rounded to one decimal place.

YThe sulfur content of the acid gas from the sweetening unit, expressed as mole percent H₂S (dry basis) rounded to one decimal place.

ZThe minimum required sulfur dioxide (SO₂) emission reduction efficiency, expressed as percent carried to one decimal place. Z_i refers to the reduction efficiency required at the initial performance test. Z_c refers to the reduction efficiency required on a continuous basis after compliance with Z_i has been demonstrated.

[50 FR 40160, Oct. 1, 1985, as amended at 65 FR 61773, Oct. 17, 2000]

60.647 Recordkeeping and reporting requirements.

(a) Records of the calculations and measurements required in §60.642 (a) and (b) and §60.646 (a) through (g) must be retained for at least 2 years following the date of the measurements by owners and operators subject to this subpart. This requirement is included under §60.7(d) of the General Provisions.

(b) Each owner or operator shall submit a written report of excess emissions to the Administrator semiannually. For the purpose of these reports, excess emissions are defined as:

(1) Any 24-hour period (at consistent intervals) during which the average sulfur emission reduction efficiency (R) is less than the minimum required efficiency (Z).

(2) For any affected facility electing to comply with the provisions of §60.646(b)(2), any 24-hour period during which the average temperature of the gases leaving the combustion zone of an incinerator is less than the appropriate operating temperature as determined during the most recent performance test in accordance with the provisions of §60.646(b)(2). Each 24-hour period must consist of at least 96 temperature measurements equally spaced over the 24 hours.

(c) To certify that a facility is exempt from the control requirements of these standards, each owner or operator of a facility with a design capacity less than 2 LT/D of H₂S in the acid gas (expressed as sulfur) shall keep, for the life of the facility, an analysis demonstrating that the facility's design capacity is less than 2 LT/D of H₂S expressed as sulfur.

(d) Each owner or operator who elects to comply with §60.646(e) shall keep, for the life of the facility, a record demonstrating that the facility's design capacity is less than 150 LT/D of H₂S expressed as sulfur.

(e) The requirements of paragraph (b) of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of obligation to comply with paragraph (b) of this section, provided that they comply with the requirements established by the State.

D.2.4 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 this facility.

D.2.5 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(e), for indirect heating units constructed after September 1, 1983 and having a total source input capacity less than 10 million British thermal units per hour, the PM emissions from the five (5) natural gas-fired reboilers (FCU-1 through FCU-5), shall not exceed 0.6 pounds per million British thermal unit.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 Iac 2-8-16]

D.2.6 Record Keeping Requirement

- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records of the natural gas processed in the two (2) amine contact towers. The Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in Condition D.2.1.
 - (1) The amount of the natural gas processed in the two (2) amine contact towers each month; and
 - (2) SO₂ emissions from the desulfurization process.
- (b) Pursuant to 40 CFR 60.647(c), to certify that a facility is exempt from the control requirements of 40 CFR 60.642 through 60.646, the owner or operator shall keep, for the life of the facility, an analysis demonstrating that the facility's design capacity is less than 2 LT/D of hydrogen sulfide (H₂S) expressed as sulfur.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.7 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(a).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Vectren Corporation, d.b.a Indiana Gas Company, Incorporated,
Dolan Gas Storage Field
Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
Mailing Address: P.O. Box 209, Evansville, Indiana 47702
FESOP Permit No.: F105-23891-00017

**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**

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

Source Name: Vectren Corporation, d.b.a Indiana Gas Company, Incorporated,
Dolan Gas Storage Field
Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
Mailing Address: P.O. Box 209, Evansville, Indiana 47702
FESOP Permit No.: F105-23891-00017

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**

FESOP Quarterly Report

Source Name: Vectren Corporation, d.b.a Indiana Gas Company, Incorporated,
Dolan Gas Storage Field
Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
Mailing Address: P.O. Box 209, Evansville, Indiana 47702
FESOP Permit No.: F105-23891-00017
Facility: Two (2) internal combustion engines (CE-1 and CE-2)
Parameter: Natural gas throughput
Limit: Less than 46.37 million cubic feet per consecutive twelve (12) month period, total

YEAR: _____

Month	Natural gas throughput (million cubic feet)	Natural gas throughput (million cubic feet)	Natural gas throughput (million cubic feet)
	This Month	Previous 11 Months	12 Month Total
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

FESOP Quarterly Report

Source Name: Vectren Corporation, d.b.a Indiana Gas Company, Incorporated,
 Dolan Gas Storage Field
 Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
 Mailing Address: P.O. Box 209, Evansville, Indiana 47702
 FESOP Permit No.: F105-23891-00017
 Facility: One (1) natural gas desulfurization process
 Parameter: Throughput of natural gas desulfurized in the two (2) amine contact towers
 Limit: Less than 4,575 million cubic feet per consecutive twelve (12) month period, total

YEAR: _____

Month	Natural gas throughput (million cubic feet)	Natural gas throughput (million cubic feet)	Natural gas throughput (million cubic feet)
	This Month	Previous 11 Months	12 Month Total
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
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Vectren Corporation, d.b.a Indiana Gas Company, Incorporated,
Dolan Gas Storage Field
Source Address: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
Mailing Address: P.O. Box 209, Evansville, Indiana 47702
FESOP Permit No.: F105-23891-00017

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 No deviations occurred this reporting period.</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Addendum to the Technical Support Document (ATSD) for a
Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field
Source Location: 3592 East Boltinghouse Road, Bloomington, Indiana 46480
County: Monroe
SIC Code: 4924
Operation Permit Renewal No.: F 105-23891-00017
Permit Reviewer: Marcia Earl

On April 10, 2008, the Office of Air Quality (OAQ) had a notice published in the Herald Times, Bloomington, Indiana, stating that Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field had applied for a Federally Enforceable State Operating Permit (FESOP) to operate an engine driven compressor station for natural gas distribution. The notice also stated that the OAQ proposed to issue a Federally Enforceable State Operating Permit (FESOP) for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

On May 8, 2008, Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field submitted comments to IDEM, OAQ on the draft Federally Enforceable State Operating Permit (FESOP) renewal.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

Section D.1 Emissions Unit Operation Conditions.
Change the emissions unit description for each internal combustion to "lean-burn" instead of "clean burn".

Response to Comment 1:

IDEM agrees with the recommended changes. The permit has been revised as follows:

A.2 Emission Units and Pollution Control Equipment Summary (326 IAC 2-8-3(c)(3))

- (a) One (1) 1100 brake horsepower, four (4) cycle natural-gas fired, ~~clean~~ **lean** burn reciprocating internal combustion engine, identified as CE-1, constructed in 1988 with a natural gas compressor.
- (b) One (1) 2000 brake horsepower, four (4) cycle natural gas-fired, ~~clean~~ **lean** burn reciprocating internal combustion engine, identified as CE-2, constructed in 1993

with an intercooler, prechambered cylinder head and natural gas compressor.

These changes have also been made in the emission unit description in Section D.1 and throughout the permit where it states "~~clean~~ lean burn".

Comment 2:

Revise the throughput of natural gas annual consumption restriction so that either the fuel flow (46.37 MM ft³) or the fuel heat input (47,304 MMBtu) appears only. This condition is unenforceable and burdensome.

Response to Comment 2:

IDEM agrees that dual limits are not required. The permit has been revised as follows:

D.1.1 FESOP Emission Limitations and PSD Minor Source [326 IAC 2-8-4] [326 IAC 2-2]

- (a) The throughput of natural gas delivered to the two (2) engines (CE-1 and CE-2) shall be limited to less than a total of 46.37 million cubic feet (~~47,304 million British thermal units~~), per twelve (12) consecutive month period with compliance to be determined at the end of each month.

Comment 3:

Delete the NO_x air emission rate limit of 4.08 lb/MMBtu. Specifically, this value is based on a generic AP-42 air emission factor. It has no regulatory basis per the reference citations (unenforceable). It imposes an unnecessary short-term limit (burdensome).

Response to Comment 3:

The source has provided IDEM, OAQ with the actual throughput of natural gas to the two (2) combustion engines (CE-1 and CE-2) for the last 3 years. The average throughput of natural gas to the two (2) combustion engines (CE-1 and CE-2) is 16.827 MMCF per consecutive twelve (12) month period. This average throughput is considerably below the throughput limit of 46.37 MMCF per twelve (12) consecutive month period for the two (2) combustion engines (CE-1 and CE-2). Therefore, IDEM, OAQ has agreed to remove the short term limit. The permit has been revised as follows:

D.1.1 FESOP Emission Limitations and PSD Minor Source [326 IAC 2-8-4] [326 IAC 2-2]

- (a) The throughput of natural gas delivered to the two (2) engines (CE-1 and CE-2) shall be limited to less than a total of 46.37 million cubic feet, per twelve (12) consecutive month period with compliance to be determined at the end of each month.
- (b) ~~The NO_x emission rate shall not exceed 4.08 pounds per million British thermal units, this will limit the potential to emit NO_x from the two (2) engines (CE-1 and CE-2) to less than 96.5 tons per year.~~

Compliance with ~~these~~ **this** limits, combined with the potential to emit NO_x from other emission units at the source, shall limit the NO_x from the entire source to less than 100 tons per twelve (12) consecutive month period.

Comment 4:

Delete reference to the fuel heating value, this condition also imposes a fuel quality condition that is unenforceable and burdensome.

Response to Comment 4:

Upon further review, the permit has been revised as follows:

D.1.3 Record Keeping Requirement

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records of the natural gas delivered to the two (2) engines (CE-1 and CE-2). The Permittee shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the NOx emission limit established in Condition D.1.1.
- (1) The amount ~~and heating value~~ of the natural gas delivered to the two (2) engines (CE-1 and CE-2) each month; and

Comment 5:

Please qualify any and all fuel heating values and fuel heat input ratings to HHV (higher heating value) as so to differentiate them from LHV (lower heating value).

Response to Comment 5:

Throughout the permit any and all fuel heating values and fuel heat input ratings will reflect the higher heating value (HHV)

IDEM Contact

- (a) Questions regarding this proposed Federally Enforceable State Operating Permit (FESOP) renewal can be directed to Marcia Earl at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-0863 or toll free at 1-800-451-6027 extension 3-0863.
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

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

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

Source Background and Description

Source Name:	Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field
Source Location:	3592 East Boltinghouse Road, Bloomington, Indiana 46480
County:	Monroe
SIC Code:	4924
Operation Permit No.:	F105-14156-00017
Operation Permit Issuance Date:	September 13, 2001
Permit Renewal No.:	F105-23891-00017
Permit Reviewer:	Marcia Earl

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field relating to the operation of an engine driven compressor station for natural gas distribution.

History

On November 13, 2006, Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field submitted applications to the OAQ requesting to renew its operating permit. Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field was issued a FESOP permit F105-14156-00017 on September 13, 2001.

Permitted Emission Units and Pollution Control Equipment

- (a) One (1) 1100 brake horsepower, four (4) cycle natural-gas fired, clean burn reciprocating internal combustion engine, identified as CE-1, constructed in 1988 with a natural gas compressor.
- (b) One (1) 2000 brake horsepower, four (4) cycle natural-gas fired, clean burn reciprocating internal combustion engine, identified as CE-02, constructed in 1993 with an intercooler, pre-chambered cylinder head and natural gas compressor.
- (c) One (1) natural gas desulfurization process, consisting of:
 - (1) Two (2) enclosed amine contact towers, constructed in 1996 with H₂S emissions from the natural gas routed to the flare, identified as IF-4.
 - (2) Two (2) natural gas-fired reboilers, identified as FCU-4 and FCU-5, constructed in 1996, each with a heat input capacity of 2.5 million British thermal units per hour, and exhausting to stacks FCU-4 and FCU-5.

- (3) One (1) natural gas-fired flare, identified as IF-4, constructed in 1996 with a heat input capacity of 0.25 million British thermal units per hour.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million British thermal units per hour:
 - (1) Three (3) natural gas-fired reboilers used for glycol dewatering system, identified as FCU-1, FCU-2 and FCU-3, heat input capacities: 0.325, 0.75 and 0.375 million British thermal units per hour, respectively. [326 IAC 6-2-4]
 - (2) One (1) natural gas-fired flare used for the glycol dewatering system, identified as IF-1, heat input capacity: 0.250 million British thermal units per hour. [326 IAC 6-2-4]
- (b) Combustion source flame safety purging on startup.
- (c) The following VOC and HAP storage containers: Storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (d) The following VOC and HAP storage containers: Vessels storing lubricating oil, hydraulic oils, machining oils and machining fluids.
- (e) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- (f) Closed loop heating and cooling systems.
- (g) Heat exchanger cleaning and repair.
- (h) Process vessels degassing and cleaning to prepare for internal repairs.
- (i) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks and fluid handling equipment.
- (j) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.
- (k) Purge double block and bleed valves.
- (l) Filter or coalescer media changeout.
- (m) Numerous valves and flanges.

Existing Approvals

The source has been operating under the previous FESOP 105-14156-00017 issued on September 13 2001, with an expiration date of September 13, 2006, with no amendments or revisions.

Enforcement Issue

An Agreed Order has been entered into for the violation of Condition B.5 (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 this source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9. The Agreed Order was approved on October 4, 2007.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
FCU-4	Reboiler	26.5	1.67	N/A*	1000
FCU-5	Reboiler	26.5	1.67	N/A*	1000

* Not Applicable

Emission Calculations

See Appendix A, pages 1 - 7 of this document for detailed emission calculations.

County Attainment Status

The source is located in Monroe County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM _{2.5}	

(a) Ozone Standards

- (1) 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.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) 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. Monroe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) Monroe County has been classified as unclassifiable or attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM_{2.5} emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulated PM₁₀ emissions as a surrogate for PM_{2.5} emissions.
- (c) Monroe County has been classified as attainment or unclassifiable in Indiana for PM₁₀, SO₂, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) 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 particulate matter (PM) and volatile organic compounds (VOC) emissions are not counted toward determination of PSD applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	1.39
PM ₁₀	0.24
SO ₂	89.50
VOC	16.07
CO	45.16
NO _x	552.05

HAPs	Unrestricted Potential Emissions (tons/yr)
Acetaldehyde	0.20
Acrolein	0.12
Benzene	Negligible
Formaldehyde	1.25
Methanol	Negligible
n-Hexane	0.07
Xylene	Negligible
Dichlorobenzene	Negligible
Lead	Negligible
Cadmium	Negligible
Chromium	Negligible
Manganese	Negligible
Nickel	Negligible
Total	1.77

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of 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 their 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 PM₁₀, SO₂, VOC, and CO are 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 equal to or 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.
- (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.

Actual Emissions

No previous emission data has been received from the source.

Potential to Emit After Issuance

This source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission unit. 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)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPS
Two (2) engines (CE-3 and CE-4)	0.23	0.00	0.01	2.79	7.50	96.50	1.71
Flare (IF-1 and IF-4)	0.00	0.02	0.00	0.01	0.18	0.22	0.00
Reboilers (FCU-1 through FCU-5)	0.05	0.22	0.02	0.16	2.37	2.83	0.05
Desulfurization process	0.000	0.00	89.40	0.000	0.000	0.00	0.00
Total	0.29	0.24	89.43	2.96	10.05	99.55	1.77
Title V Major Threshold	100	100	100	100	100	100	10 tons per year single HAP 25 tons per year total HAPs

- (a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than one hundred (< 100) tons per year, and it is not one of the twenty-eight (28) listed source categories.
- (b) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Federal Rule Applicability

- (a) 40 CFR Part 60, Subpart Db (Standards of Performance for Small Industrial-Commercial Institutional Steam Generating Units), which is incorporated by reference 326 IAC 12,

does not apply to this source, because the five (5) natural gas-fired reboilers (FCU-1 through FCU-5), have input rates less than 100 MMBtu/hr.

- (b) 40 CFR Part 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial Institutional Steam Generating Units), which is incorporated by reference 326 IAC 12, does not apply to this source, because the five (5) natural gas-fired reboilers (FCU-1 through FCU-5) have input rates less than 10 MMBtu/hr.
- (c) The requirements of the New Source Performance Standard for Equipment Leaks of VOC from On Shore Natural Gas Processing Plants (40 CFR 60.630-636, Subpart KKK) are not applicable to this source. This NSPS applies only to emission units located at "natural gas processing plants," which are defined in the rule as "any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products or both." No extraction or fractionation of natural gas liquids (such as ethane, propane, or butane) will be conducted at this source.
- (d) The desulfurization process is subject to the requirements of the New Source Performance Standard (NSPS) for Onshore Natural Gas Processing. Pursuant to 40 CFR 60.640, Subpart LLL, the provisions of this subpart are applicable to each sweetening unit, and each sweetening unit followed by a sulfur recovery unit located on land and include facilities located onshore which process natural gas produced from either onshore or offshore wells which commences construction or modification after January 20, 1984. Since this facility has a design capacity less than two (2) long tons per day (LT/D) of hydrogen sulfide (H₂S) in the acid gas (expressed as sulfur), the facility is required to comply with Sec. 60.647(c), but is not required to comply with Sections 60.642 through 60.646. Pursuant to 40 CFR 60.647(c), to certify that a facility is exempt from the control requirements of these standards, the owner or operator shall keep, for the life of the facility, an analysis demonstrating that the facility's design capacity is less than 2 LT/D of hydrogen sulfide (H₂S) expressed as sulfur.

Nonapplicable portions of the NSPS will not be included in this permit. The affected source is subject to the following portions of 40 CFR 60, Subpart LLL.

- (1) 40 CFR 60.640
- (2) 40 CFR 60.641
- (3) 40 CFR 60.647(c)

The provisions of 40 CFR 60 Subpart A - General Provisions apply to the facilities described in this section except when otherwise specified in 40 CFR 60, Subpart LLL.

- (a) This source is not subject to the requirements of 40 CFR 63, Subpart ZZZZ (National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines), which is incorporated by reference as 326 IAC 20, because this source is not a major source of HAPs.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR 61 and 40 CFR Part 63) included in this permit.
- (c) This source is a FESOP source and is not a major Part 70 source. Therefore, the requirements of 40 CFR Part 64 (Compliance Assurance Monitoring), are not included in this permit.

State Rule Applicability – Entire Source

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

This stationary source is not a major source for PSD purposes because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not one of the 28 listed source categories.

326 IAC 2-6 (Emission Reporting)

This source is located in Monroe County and it is not required to operate under a Part 70 permit because the Permittee has taken limits under 326 IAC 2-8 (FESOP). Therefore, 326 IAC 2-6 is not included in this permit.

326 IAC 2-8 (FESOP)

Pursuant to this rule, the amount of NO_x shall be limited to less than one hundred (100) tons per year. The source shall comply as follows:

- (a) The throughput of natural gas delivered to the two (2) engines (CE-1 and CE-2) shall be limited to less than a total of 46.37 million cubic feet (47,304 million British thermal units) per twelve (12) consecutive month period with compliance to be determined at the end of each month.
- (b) The NO_x emission rate shall not exceed 4.08 pounds per million British thermal units, this will limit the potential to emit NO_x from the two (2) engines (CE-1 and CE-2) to less than 96.5 tons per year.

Compliance with these limits, combined with the potential to emit NO_x from other emissions units at the source, shall limit the NO_x from the entire source to less than 100 tons per twelve (12) consecutive month period.

- (c) Pursuant to FESOP 105-6133-00017, issued on December 13, 1996, the two (2) engines (CE-1 and CE-2) shall use natural gas only.
- (d) Pursuant to the First Significant Permit Revision, F105-11259-00017, issued on October 28, 1999, the total combined throughput of natural gas desulfurized in the two (2) amine contact towers shall not exceed 4,575 million cubic feet per twelve (12) consecutive month period. This will limit the SO₂ from the desulfurization process to 89.4 tons per year with compliance to be determined at the end of each month. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 Prevention of Significant Deterioration (PSD) is not included in this permit for this source.

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of forty percent (40%) 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.

State Rule Applicability – Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the two (2) engines, identified as CE-1 and CE-2, will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 is not included in this permit for this source.

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

(a) The five (5) gas-fired reboilers (FCU-1 through FCU-5) and the two (2) natural gas-fired flares (IF-1 and IF-4), all constructed after September 21, 1983, must comply with the requirements of 326 IAC 6-2-4. The emission limitations are based on the following equation given in 326 IAC 6-2-4:

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

where:

Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu) heat input

Q = Total source maximum operating capacity rating in million British thermal units per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

The heat input capacity of the five (5) gas-fired reboilers (FCU-1 through FCU-5) and the two (2) flares (IF-1 and IF-4) is 6.95 MMBtu/hr total.

$$Pt = 1.09/(6.95)^{0.26} = 0.66 \text{ lb/MMBtu heat input.}$$

Pursuant to 326 IAC 6-2-4(a), for Q less than ten (10) MMBtu/hr, Pt shall not exceed 0.6 lb/MMBtu. Therefore, the particulate matter emissions from the five (5) gas-fired reboilers (FCU-1 through FCU-5) and the two (2) flares (IF-1 and IF-4) is limited to 0.6 pound per MMBtu heat input total.

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

Reciprocating internal combustion engines are not specifically identified in 326 IAC 6-3-2(b) through (d). Pursuant to 326 IAC 1-2-59, "Process weight; weight rate", states that liquid and gaseous fuels will not be considered as part of the process rate. Therefore, the 2 internal combustion engines, identified as CE-1 and CE-2 are not subject to 326 IAC 6-3.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

This source is located in Monroe County and is not one of the specifically listed counties and does not have the potential to emit (PTE) over 100 tons or more of particulate matter (PM) Therefore, 326 IAC 6.5 is not applicable to this source.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

(a) The potential to emit SO₂ from the combination of the two (2) engines (CE-1 and CE-2) is less than twenty-five (25) tons per year and ten (10) pounds per hour, Therefore, the requirements of 326 IAC 7 are not included in this permit.

- (b) The potential to emit SO₂ from the desulfurization process is greater than twenty-five (25) tons per year. Since there is no coal or oil combustion at this facility, there are no applicable requirements in 326 IAC 7-1.1-2 for this facility.

Testing Requirements

There are no emissions testing requirements in this permit.

Compliance 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 compliance monitoring requirements applicable to this source.

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 administratively complete FESOP renewal application for the purposes of this review was received on November 13, 2006.

Conclusion

The operation of this stationary engine driven compressor station for natural gas distribution shall be subject to the conditions of the **FESOP 105-23891-00017**.

Appendix A: Emission Summary

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field
Address City IN Zip: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
Permit No: F105-23891-00017
Reviewer: Marcia Earl
Date: October 2007

Uncontrolled Emissions

Emission Units	PM	PM₁₀	SO₂	VOC	CO	NOx	HAPs
Two (2) clean burn engines (CE-1 and CE-2)	1.33	0.01	0.079	15.90	42.60	549.00	1.71
Flares (IF-1 and IF-4)	0.004	0.017	0.001	0.012	0.184	0.22	0.004
Reboilers (FCU-1 through FCU-5)	0.054	0.215	0.017	0.155	2.373	2.83	0.053
Desulfurization	0.00	0.00	89.40	0.00	0.00	0.00	0.00
Total	1.388	0.242	89.497	16.067	45.157	552.05	1.77

Controlled Emissions

Emission Units	PM	PM₁₀	SO₂	VOC	CO	NOx	HAPs
Two (2) clean burn engines (CE-1 and CE-2)	0.234	0.002	0.014	2.79	7.50	96.50	1.71
Flares (IF-1 and IF-4)	0.004	0.017	0.001	0.012	0.184	0.220	0.004
Reboilers (FCU-1 through FCU05)	0.054	0.215	0.017	0.155	2.373	2.83	0.053
Desulfurization	0.00	0.00	89.40	0.00	0.00	0.00	0.00
Total	0.292	0.234	89.432	2.957	10.057	99.55	1.77

Appendix A: Emission Summary

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field
Address City IN Zip: 3592 East Boltinghouse Road, Bloomington, Indiana 47408

Permit No: F105-23891-00017

Reviewer: Marcia Earl

Date: October 2007

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

Four stroke Lean Burn Engines (CE-1 and CE-2)
 Heat Input Capacity
 MMBtu/hr

30.70

 Unrestricted potential emissions based on design capacity.

	Pollutant					
	PM	PM ₁₀	SO ₂	NOx	VOC	CO
Emission Factor in lb/MMBtu	9.91E-03	7.71E-05	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emission in tons/yr	1.33	0.01	0.079	549	15.9	42.6

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

Four stroke Lean Burn Engines (CE-1 and CE-2)
 Heat Input Capacity
 MMBtu/hr

5.40

 Equivalent of limit and operating at the maximum allowable capacity for 8,760 hours per year to not exceed limit

	Pollutant					
	PM	PM ₁₀	SO ₂	NOx	VOC	CO
Emission Factor in lb/MMBtu	9.91E-03	7.71E-05	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emission in tons/yr	0.234	0.002	0.014	96.5	2.79	7.5

HAP	Emission Factor four stroke lean burn engines (lb/MMBtu)	Potential to Emit (tons/yr)
1,1,2,2-Tetrachloroethane	4.00E-05	9.64E-04
1,1,2-Trichloroethane	3.18E-05	7.52E-04
1,1-Dichloroethane	2.36E-05	5.58E-04
1,2-Dichloroethane	2.36E-05	5.58E-04
1,2-Dichloropropane	2.69E-05	6.36E-04
1,3-Butadiene	2.67E-04	6.32E-03
1,3-Dichloropropene	2.64E-05	6.24E-04
2,2,4-Trimethylpentane	2.50E-04	5.91E-03
Acetaldehyde	8.36E-03	1.98E-01
Acrolein	5.14E-03	1.22E-01
Benzene	4.40E-04	1.04E-02
Biphenyl	2.12E-04	5.01E-03
Carbon Tetrachloride	3.67E-05	8.68E-04
Chlorobenzene	3.04E-05	7.19E-04
Chloroethane	1.87E-06	4.42E-05
Chloroform	2.85E-05	6.74E-04
Ethylbenzene	3.97E-05	9.39E-04
Ethylene Dibromide	4.43E-05	1.05E-03
Formaldehyde	5.28E-02	1.25E+00
Methanol	2.50E-03	5.91E-02
Methylene Chloride	2.00E-05	4.73E-04
n-Hexane	1.11E-03	2.63E-02
Naphthalene	7.44E-05	1.76E-03
Phenol	2.40E-05	5.68E-04
Styrene	2.36E-05	5.58E-04
Toluene	4.08E-04	9.65E-03
Vinyl Chloride	1.49E-05	3.52E-04
Xylene	1.84E-04	4.35E-03
Total HAPs		1.71

Methodology

Emission Factors are from AP 42 Tables 3.2-1, 3.2-2 and 3.2-3, revised July 2000

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

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

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field
Address City IN Zip: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
Permit Number: F105-23891-00017
Reviewer: Marcia Earl
Date: October 2007

Heat Input Capacity
MMBtu/hr

0.5

Potential Throughput
MMCF/yr

4.4

Unit ID	MMBtu
IF-4	0.25
IF-1	0.25
Total	0.50

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.004	0.017	0.001	0.22	0.012	0.184

*PM emission factor is filterable PM only. PM₁₀ emission factor is filterable and condensable PM₁₀ combined.

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

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

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field
Address City IN Zip: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
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Reviewer: Marcia Earl
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HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	4.599E-06	2.628E-06	1.643E-04	3.942E-03	7.446E-06

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.095E-06	2.409E-06	3.066E-06	8.322E-07	4.599E-06

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

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

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field
Address City IN Zip: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
Permit Number: F105-23891-00017
Reviewer: Marcia Earl
Date: October 2007

Heat Input Capacity
MMBtu/hr

6.5

Potential Throughput
MMCF/yr

56.5

Unit ID	MMBtu/hr
FCU-1	0.325
FCU-2	0.75
FCU-3	0.375
FCU-4	2.5
FCU-5	2.5
Total	6.45

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.054	0.215	0.017	2.83	0.155	2.373

*PM emission factor is filterable PM only. PM₁₀ emission factor is filterable and condensable PM₁₀ combined.

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

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

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

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field
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Reviewer: Marcia Earl
Date: October 2007

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	5.933E-05	3.390E-05	2.119E-03	5.085E-02	9.605E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.413E-05	3.108E-05	3.955E-05	1.074E-05	5.933E-05

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology

All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

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

Company Name: Vectren Corporation, d.b.a. Indiana Gas Company, Incorporated, Dolan Gas Storage Field
Address City IN Zip: 3592 East Boltinghouse Road, Bloomington, Indiana 47408
Permit Number: F2105-23891-00017
Reviewer: Marcia Earl
Date: October 2007

Process Emissions from Desulfurization

Daily H₂S throughput based on maximum daily natural gas throughput capacity and maximum daily H₂S content of fuel.

H ₂ S (cubic ft/MMCf natural gas)	Density H ₂ S (lb/cubic ft.)	Maximum Natural Gas Throughput (MMCF/day)	H ₂ S in the acid gas (tons/day)	H ₂ S in the acid gas (LT/D)
400	0.091	90	1.64	1.46

Annual SO₂ emissions based on maximum annual average H₂S content of the natural gas and annual natural gas throughput

H ₂ S (cubic ft/MMCf natural gas)	Density H ₂ S (lb/cubic ft.)	SO ₂ Emission Rate (lbs SO ₂ /lb H ₂ S)	SO ₂ content in fuel (lbs SO ₂ /MMCF)	Natural gas throughput (MMCF/yr)	SO ₂ Emissions (lb/yr)	SO ₂ Emissions (tons/yr)
400	0.091	90	1.64	1.46	178,873	89.4

Methodology

For daily H₂S throughput in long tons per day (LT/D) = H₂S content of fuel (cub.ft/MMCF) x Density H₂S (lb/cub.ft) x Maximum natural gas throughput (MMCF/day)/2000 lbs/short ton / 1.12 short tons/long ton

Annual SO₂ emissions (tons/yr) = maximum annual average H₂S content of fuel (cub. ft /MMCF) x Density H₂S (lb/cub.ft) x SO₂ emissions rate (lbs SO₂/lb H₂S) x SO₂/MMCF X MMCF/yr / 2000 (lb/ton)