



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: March 28, 2014

RE: Atlas Energy Indiana – E. Knox / 083-33760-00054

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.dot 6/13/13



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Michael R. Pence
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**Minor Source Operating Permit Renewal
OFFICE OF AIR QUALITY**

**Atlas Energy Indiana - E. Knox
NW1/4, SW1/4 Sec 26, T5N, R8W (Compressor Station) and
Freelandville Rd, NE1/4, NE1/4, Sec 22, T5N, R8W (Gas Treating
Facility)
Edwardsport, Indiana 47528**

(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.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

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 MSOP under 326 IAC 2-6.1.

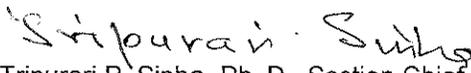
Operation Permit No.: M083-33760-00054	
Issued by:  Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: March 28, 2014 Expiration Date: March 28, 2024

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 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 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary natural gas compression and treating station.

Source Address:	NW1/4, SW1/4 Sec 26, T5N, R8W (Compressor Station) and Freelandville Rd, NE1/4, NE1/4, Sec 22, T5N, R8W (Gas Treating Facility), Edwardsport, Indiana 47528
General Source Phone Number:	412-489-0006
SIC Code:	1311
County Location:	Knox
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

Compressor Station Site located at NW1/4, SW1/4, Sec. 26, T5N, R8W, Edwardsport, Indiana 47528

- (a) One (1) natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG01, with a rated heat input capacity of 9.92 MMBtu per hour, approved for construction in 2009, and exhausting to stack SVENG01.

Under the NSPS for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ) and NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), internal combustion engine EUENG01 is considered an affected facility.

- (b) One (1) natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG02, approved for construction in 2010, with a rated heat input capacity of 9.92 MMBtu per hour, and exhausting to stack SVENG02.
- (c) One (1) triethylene glycol/natural dehydration unit, identified as EUDHY03, constructed in 2011, at the Compressor Station, which exhausts stripped gases (primarily water vapor) to SVDHY08, and includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.25 MMBtu/hr, exhausting to SVDHY07, and permitted in 2013.
- (d) One (1) triethylene glycol/natural dehydration unit identified as EUDHY02, approved for construction in 2009, that exhausts stripped gases (primarily water vapor) to SVDHY06, and which includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.2 MMBtu per hour, and exhausting combustion gases to SVDHY05.
- (e) One (1) brine storage tank, identified as EUTNK03, with a maximum capacity of 400 BBL (16,800 gallons), approved for construction in 2009, and venting via SVTNK03.

(f) Fugitive emissions from unpaved roads and parking lots.

Gas Treating Facility located at Freelandville Road, NE1/4, NE1/4, Section 22, T5N, R8W, Edwardsport, Indiana 47528

- (a) One (1) amine/natural gas treating unit identified as EUAMINE, approved for construction in 2009, that exhausts stripped acid gases (primarily carbon dioxide) to SVAMN02, and which includes a natural gas fired amine reboiler with a rated heat input capacity of 2.25 MMBtu per hour, and exhausting combustion gases to SVAMN01.
- (b) One (1) 60 gpm amine regeneration unit, identified as EUAMN60, approved for construction in 2010 that exhaust stripped acid gases (primarily carbon dioxide) to SVAMN08, which includes a natural gas fired amine reboiler with a rated heat input capacity of 5.5 MMBtu per hour that exhausts combustion gases to SVAMN07.
- (c) One (1) triethylene glycol/natural dehydration unit identified as EUDEHY, approved for construction in 2009, that exhausts stripped gases (primarily water vapor) to SVDHY04, and which includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.6 MMBtu per hour, and exhausting combustion gases to SVDHY03.

Under the NESHAP for Oil and Natural Gas Production Facilities (40 CRF 63, Subpart HH), unit EUDEHY is considered an affected facility.

- (d) One (1) brine storage tank, identified as EUTANK, with a maximum capacity of 210 BBL (8,820 gallons), approved for construction in 2009 and venting via SVTNK05.
- (e) One (1) natural gas fired maintenance flare, identified as (MAINTFLR06), with a maximum natural gas usage rate of 11.03 MMBtu/hr, approved for construction in 2009, used to burn gases from blowdown of piping or vessels during maintenance and emergency periods, during flaring, and exhausting to stack SVFLR06.
- (f) Fugitive emissions from unpaved roads and parking lots.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

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 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

- (a) This permit, M083-33760-00054, 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

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

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

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

B.7 Duty to Provide Information

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

B.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

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

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.
- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M083-33760-00054 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.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

- (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 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least one hundred twenty (120) days 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 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

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

B.15 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][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 permitted 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.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.
- (b) 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.18 Credible Evidence [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 2-6.1-5(a)(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 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

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

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

C.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 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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 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.

- (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 Licensed 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 Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.8 Performance Testing [326 IAC 3-6]

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

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

no later than thirty-five (35) days prior to the intended test date.
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.
- (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.9 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 2-6.1-5(a)(2)]

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

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11]

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

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

Corrective Actions and Response Steps

C.12 Response to Excursions or Exceedances

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

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

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

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:

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

- (b) 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.

- (c) 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.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Compressor Station

- (a) One (1) triethylene glycol/natural dehydration unit identified as EUDHY02, approved for construction in 2009, that exhausts stripped gases (primarily water vapor) to SVDHY06, and which includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.3 MMBtu per hour, and exhausting combustion gases to SVDHY05.

Under the NESHAP for Oil and Natural Gas Production Facilities (40 CFR 63, Subpart HH), unit EUDHY02 is considered an affected facility.

- (b) One (1) triethylene glycol/natural dehydration unit, identified as EUDHY03, constructed in 2011, at the Compressor Station, which exhausts stripped gases (primarily water vapor) to SVDHY08, and includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.25 MMBtu/hr, exhausting to SVDHY07, and permitted in 2013.

Under the NESHAP for Oil and Natural Gas Production Facilities (40 CFR 63, Subpart HH), units EUDHY02 and EUDHY03 are considered affected facilities.

Gas Treating Facility

- (a) One (1) amine/natural gas treating unit identified as EUAMINE, approved for construction in 2009, that exhausts stripped acid gases (primarily carbon dioxide) to SVAMN02, and which includes a natural gas fired amine reboiler with a rated heat input capacity of 2.25 MMBtu per hour, and exhausting combustion gases to SVAMN01.

- (b) One (1) triethylene glycol/natural dehydration unit identified as EUDEHY, approved for construction in 2009, that exhausts stripped gases (primarily water vapor) to SVDHY04, and which includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.6 MMBtu per hour, and exhausting combustion gases to SVDHY03.

Under the NESHAP for Oil and Natural Gas Production Facilities (40 CFR 63, Subpart HH), unit EUDEHY is considered an affected facility.

- (c) One (1) amine regeneration unit, identified as EUAMIN60, approved for construction in 2010, that exhausts stripped acid gases (primarily carbon dioxide) to SVAMN08, and which includes a natural gas fired amine reboiler with a rated heat input capacity of 5.50 MMBtu per hour, and exhausting combustion gases to SVAMN07.

(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 2-6.1-5(a)(1)]

D.1.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, the allowable particulate emissions from two (2) amine reboilers and the two (2) glycol reboilers shall each not exceed 0.6 pounds per million British thermal units.

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for the two (2) amine reboilers and the two (2) glycol reboilers. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Compressor Station

- (a) Three (3) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engines (RICE), identified as EUENG01, and EUENG02, and EUENG03, constructed in 2009, constructed in 2010, and approved for construction in 2010, respectively, each with a maximum rated output of 1340 hp-hr, and exhausting to stacks SVENG01, SVENG02, and SVENG03, respectively.

Under the NSPS for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ) and NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), internal combustion engines EUENG01, EUENG02, and EUENG03 are each considered an affected facility.

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

E.1.1 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.4246, 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, except when otherwise specified in 40 CFR Part 60, Subpart JJJJ (included as Attachment A of this permit).

E.1.2 New Source Performance Standards (NSPS) for Stationary Spark Ignition Internal Combustion Engines [326 IAC 12][40 CFR Part 60, Subpart JJJJ]

The Permittee which operates a natural gas compressor and natural gas treating station shall comply with the following provisions of 40 CFR Part 60, Subpart JJJJ (included as Attachment A of this permit):

- (1) 40 CFR 60.4230(a)(4)(ii)
- (2) 40 CFR 60.4230(c)
- (3) 40 CFR 60.4233(e)
- (4) 40 CFR 60.4234
- (5) 40 CFR 60.4236(b)
- (6) 40 CFR 60.4243(b)
- (7) 40 CFR 60.4244
- (8) 40 CFR 60.4245(a)(d)
- (9) 40 CFR 60.4246
- (10) 40 CFR 60.4248

SECTION E.2

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Compressor Station

- (a) Three (3) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engines (RICE), identified as EUENG01, and EUENG02, and EUENG03, constructed in 2009, constructed in 2010, and approved for construction in 2010, respectively, each with a maximum rated output of 1340 hp-hr, and exhausting to stacks SVENG01, SVENG02, and SVENG03, respectively.

Under the NSPS for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ) and NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), internal combustion engines EUENG01, EUENG02, and EUENG03 are each considered an affected facility.

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

National Emissions Standard for Hazardous Air Pollutants [326 IAC 20] [40 CFR 63, Subpart ZZZZ]

- E.2.1 General Provisions Relating to National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-1][40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.6590, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1 for the affected source, as specified in Appendix A of 40 CFR Part 63, Subpart ZZZZ, in accordance with the schedule in 40 CFR 63 Subpart ZZZZ.

- E.2.2 Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ, which are incorporated by reference as 326 IAC 20-82, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ (included as Attachment C) of this permit:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
- (4) 40 CFR 63.6595(a)(6)
- (5) 40 CFR 63.6665
- (6) 40 CFR 63.6670
- (7) 40 CFR 63.6675

SECTION E.3

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Compressor Station

- (d) One (1) triethylene glycol/natural dehydration unit identified as EUDHY02, approved for construction in 2009, that exhausts stripped gases (primarily water vapor) to SVDHY06, and which includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.3 MMBtu per hour, and exhausting combustion gases to SVDHY05.

Under the NESHAP for Oil and Natural Gas Production Facilities (40 CFR 63, Subpart HH), unit EUDHY02 is considered an affected facility.

- (c) One (1) triethylene glycol/natural dehydration unit, identified as EUDHY03, constructed in 2011, at the Compressor Station, which exhausts stripped gases (primarily water vapor) to SVDHY08, and includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.25 MMBtu/hr, exhausting to SVDHY07, and permitted in 2013.

Under the NESHAP for Oil and Natural Gas Production Facilities (40 CFR 63, Subpart HH), units EUDHY02 and EUDHY03 are considered affected facilities.

Gas Treating Facility

- (c) One (1) triethylene glycol/natural dehydration unit identified as EUDEHY, approved for construction in 2009, that exhausts stripped gases (primarily water vapor) to SVDHY04, and which includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.6 MMBtu per hour, and exhausting combustion gases to SVDHY03.

Under the NESHAP for Oil and Natural Gas Production Facilities (40 CFR 63, Subpart HH), unit EUDEHY is considered an affected facility.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [40 CFR 63]

E.3.1 General Provisions Relating to NESHAP Subpart HH [326 IAC 20-1][40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63, Subpart HH, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, Appendix C of 40 CFR Part 63, Subpart HH in accordance with the schedule in 40 CFR 63 Subpart HH (included as Attachment B of this permit).

E.3.2 NESHAP Subpart HH Requirements [40 CFR Part 63, Subpart HH][326 IAC 20-30]

The Permittee which operates a natural gas compressor and natural gas treating station shall comply with the following provisions of 40 CFR Part 63, Subpart HH (included as Attachment B of this permit):

- (1) 40 CFR 63.760(a)(1) and (3), (b)(2), (f)(3) through (6), (h)
- (2) 40 CFR 63.761
- (3) 40 CFR 63.762(a), (c), (e)
- (4) 40 CFR 63.764(a), (b), (e)(1)(ii)
- (5) 40 CFR 63.772(b)(2)(i) or (ii)
- (6) 40 CFR 63.774(a), (d)(1)(i) or (ii)
- (7) 40 CFR 63.775(a), (c)(8)

(8) 40 CFR 63.776

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Atlas Energy Indiana - E. Knox
Address:	NW1/4, SW1/4 Sec 26, T5N, R8W (Compressor Station) and Freelandville Rd, NE1/4, NE1/4, Sec 22, T5N, R8W (Gas Treating Facility)
City:	Edwardsport, Indiana 47528
Phone #:	412-489-0006
MSOP #:	M083-33760-00054

I hereby certify that Atlas Energy Indiana - E. Knox is : still in operation.
 no longer in operation.
I hereby certify that Atlas Energy Indiana - E. Knox is : in compliance with the requirements of MSOP M083-33760-00054.
 not in compliance with the requirements of MSOP M083-33760-00054.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management
Office of Air Quality
Technical Support Document (TSD) for a Minor Source Operating Permit Renewal

Source Background and Description

Source Name:	Atlas Energy Indiana- E. Knox
Source Location:	NW1/4, SW1/4 Sec 26, T5N, R8W (Compressor Station) and Freelandville Rd, NE1/4, NE1/4, Sec 22, T5N, R8W (Gas Treating Facility), Edwardsport, IN 47528
County:	Knox
SIC Code:	1311
Permit Renewal No.:	M083-33760-00054
Permit Reviewer:	Diya Bhattacharjee

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Atlas Energy Indiana- E. Knox relating to the operation of a stationary natural gas compression and treating station. On October 8, 2013, Atlas Energy Indiana- E. Knox submitted an application to the OAQ requesting to renew its operating permit Atlas Energy Indiana- E. Knox was issued its first MSOP M083-27388-00054 on March 24, 2009.

Source Definition

This source consists of the following plants:

- (a) Atlas Energy Indiana - E. Knox Compression Station (CS) is located at NW1/4, SW1/4, Sec. 26, T5N, R8W, Edwardsport, Indiana 47528, Plant ID: 083-00054; and
- (b) Atlas Energy Indiana - E. Knox Gas Treatment Facility (GTF) is located at Freelandville Road, NE1/4, NE1/4, Section 22, T5N, R8W, Edwardsport, Indiana 47528, Plant ID: 083-00054.

IDEM has examined whether these two plants should be considered one "source" as defined in 326 IAC 1-2-73. In order for these two plants to be considered one source, they must meet all three of the following criteria:

- (1) The plants must have common ownership/control;
- (2) The plants must have the same SIC code; and
- (3) The plants must be located on contiguous or adjacent properties.

IDEM, OAQ first looked at whether the two plants will be under common ownership or common control. The two plants will be owned by Atlas, therefore, common ownership exists and the first element of the definition is met.

Next, IDEM, OAQ looked at whether the plants have the same two-digit Standard Industrial Classification (SIC) Code, or if one serves as a support facility for the other. The SIC Codes can be found at <http://www.osha.gov/pls/imis/sicsearch.html> on the United States Department of Labor, Occupational Safety and Health Administration website. The proper two-digit code for both plants is Major Group 13: Oil and Gas Extraction. The two plants have the same two-digit SIC Code.

A plant is considered a support facility if at least 50% of its total output is dedicated to another plant. All of the natural gas compressed at the Knox CS plant will travel to and be treated at the Knox GTF plant. Therefore, the Knox GTF plant will be a support facility to the Knox CS plant. Since the two plants will have the same two-digit SIC code and a support relationship, the two plants meet the second element of

the definition of a major source.

Finally, IDEM, OAQ looked at whether the two plants will be located on contiguous or adjacent properties. The plants are located on properties 1.25 miles apart and connected by a dedicated pipeline. The U.S. EPA's Office of Air and Radiation issued a memorandum regarding major source determinations for oil and gas plants in January 2007. This guidance can be found at: <http://www.epa.gov/region07/programs/artd/air/title5/t5memos/oilgas.pdf> on the internet.

The guidance is used to determine whether two or more oil and gas activities are one "major stationary source" for the purposes of major New Source Review and the Title V permitting programs. The guidance recommends that all oil gas facilities be considered "adjacent" only if they are in "close proximity". The term "close proximity" means that one plant is within a one quarter mile radius of the other oil and gas plant(s).

IDEM, OAQ does not feel this guidance applies to Atlas's situation. The guidance is for applying the "major source" definition found in the major NSR and Title V programs. Neither program applies to the current permitting issue as Atlas's sites are not large enough to meet the initial emission threshold for either program. Instead, IDEM, OAQ is applying the "source" definition pursuant to 326 IAC 1-2-73, which is applicable to Indiana's minor permitting programs. IDEM, OAQ has determined that the term "close proximity" cannot be substituted for the term "adjacent" in the definition of "source" pursuant to 326 IAC 1-2-73.

Since the plants are 1.25 miles apart, are connected by a dedicated pipeline, and 100% of the output of the Knox CS plant will go to the Knox GTF plant, the plants are adjacent and the third element of the definition is met. IDEM, OAQ has determined that the two plants meet all the elements of the definition and will be part of the same source.

These plants are located on adjacent properties, have the same SIC codes of (1311 codes) and are under common control; therefore they will be considered one (1) source, as defined by 326 IAC 1-2-73. This determination was made after reviewing application No. 083-27388-00054 for the Atlas Energy Indiana - E. Knox GS, received on January 21, 2009.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

Compressor Station Site located at NW1/4, SW1/4, Sec. 26, T5N, R8W, Edwardsport, Indiana 47528

- (a) One (1) natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG01, with a rated heat input capacity of 9.92 MMBtu per hour, approved for construction in 2009, and exhausting to stack SVENG01.

Under the NSPS for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ) and NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), internal combustion engine EUENG01 is considered an affected facility.
- (b) One (1) natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG02, approved for construction in 2010, with a rated heat input capacity of 9.92 MMBtu per hour, and exhausting to stack SVENG02.
- (c) One (1) triethylene glycol/natural dehydration unit, identified as EUDHY03, constructed in 2011, at the Compressor Station, which exhausts stripped gases (primarily water vapor) to SVDHY08, and includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.25 MMBtu/hr, exhausting to SVDHY07, and permitted in 2013.
- (d) One (1) triethylene glycol/natural dehydration unit identified as EUDHY02, approved for

construction in 2009, that exhausts stripped gases (primarily water vapor) to SVDHY06, and which includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.2 MMBtu per hour, and exhausting combustion gases to SVDHY05.

- (e) One (1) brine storage tank, identified as EUTNK03, with a maximum capacity of 400 BBL (16,800 gallons), approved for construction in 2009, and venting via SVTNK03.
- (f) Fugitive emissions from unpaved roads and parking lots.

Gas Treating Facility located at Freelandville Road, NE1/4, NE1/4, Section 22, T5N, R8W, Edwardsport, Indiana 47528

- (a) One (1) amine/natural gas treating unit identified as EUAMINE, approved for construction in 2009, that exhausts stripped acid gases (primarily carbon dioxide) to SVAMN02, and which includes a natural gas fired amine reboiler with a rated heat input capacity of 2.25 MMBtu per hour, and exhausting combustion gases to SVAMN01.
- (b) One (1) 60 gpm amine regeneration unit, identified as EUAMN60, approved for construction in 2010 that exhaust stripped acid gases (primarily carbon dioxide) to SVAMN08, which includes a natural gas fired amine reboiler with a rated heat input capacity of 5.5 MMBtu per hour that exhausts combustion gases to SVAMN07.
- (c) One (1) triethylene glycol/natural dehydration unit identified as EUDEHY, approved for construction in 2009, that exhausts stripped gases (primarily water vapor) to SVDHY04, and which includes a natural gas fired glycol reboiler with a rated heat input capacity of 0.6 MMBtu per hour, and exhausting combustion gases to SVDHY03.

Under the NESHAP for Oil and Natural Gas Production Facilities (40 CRF 63, Subpart HH), unit EUDEHY is considered an affected facility.

- (d) One (1) brine storage tank, identified as EUTANK, with a maximum capacity of 210 BBL (8,820 gallons), approved for construction in 2009 and venting via SVTNK05.
- (e) One (1) natural gas fired maintenance flare, identified as (MAINTFLR06), with a maximum natural gas usage rate of 11.03 MMBtu/hr, approved for construction in 2009, used to burn gases from blowdown of piping or vessels during maintenance and emergency periods, during flaring, and exhausting to stack SVFLR06.
- (f) Fugitive emissions from unpaved roads and parking lots.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

The source does not have emission units that were constructed and/or are operating without a permit.

Emission Units and Pollution Control Equipment Removed From the Source

No emission units or pollution control equipment has been removed from the source.

Existing Approvals

Since the issuance of the MSOP No. M083-27388-00054 on March 24, 2009, the source has constructed or has been operating under the following additional approvals:

- (a) Notice-Only Change No. 083-27997-00054, issued on June 18, 2009.

- (b) Minor Permit Revision No. 083-28914-00054, issued on March 22, 2010.
- (c) Second Minor Permit Revision No. 083-29764-00054, issued December 14, 2010.
- (d) Administrative Amendment No. 083-32883-00054, issued on May 7, 2013.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Knox County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment as of June 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Unclassifiable or attainment effective April 5, 2005, for the annual PM _{2.5} standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM _{2.5} standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

- (a) **Ozone Standards**
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Knox County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
 Knox County has been classified as attainment for PM_{2.5}. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective June 28, 2011. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**
 Knox County has been classified as attainment or unclassifiable in Indiana for SO₂, CO, PM₁₀, NO₂. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	1
PM ₁₀	2
PM _{2.5}	2
SO ₂	0.1
VOC	13
CO	81
NO _x	78
GHGs as CO ₂ e	28310
Single HAP	9.70, Formaldehyde
Total HAP	12

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all regulated pollutants, excluding GHGs, is less than 100 tons per year. However, NO_x is equal to or greater than twenty-five (25) tons per year. The source is not subject to the provisions of 326 IAC 2-7. Therefore, the source will be issued an MSOP Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or 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. Therefore, the source will be issued an MSOP Renewal.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this MSOP 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 of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM ₁₀ *	PM _{2.5} **	SO ₂	NO _x	VOC	CO	GHGs	Total HAPs	Worst Single HAP
EUENG01, EUENG02, EUENG03	0.010	1.32	1.32	0.077	69.87	12.03	73.37	18081.06	12.20	9.70, Formaldehyde
Reboilers (EUDHY02, EUAMINE, EUAMIN60, EUDHY01, & EUDHY03)	0.07	0.28	0.28	0.02	3.74	0.21	3.14	4,510	0.07	0.07, Hexane
Flare	9.00E-02	3.60E-01	3.60E-01	2.84E-02	4.74	2.61E-01	3.98	5,718	0.09	0.09, Hexane
Brine Storage Tanks (EUTANK, EUTNK02 & EUTNK03)	-	-	-	-	-	<3.0	-	-	-	-
Unpaved Roads	0.49	0.12	0.01	-	-	-	-	-	-	-
Total PTE of Entire Source	0.66	2.09	1.98	0.13	78.34	12.50	80.48	28310	12.35	9.70, Formaldehyde
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO ₂ e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO ₂ e	NA	NA

negl. = negligible

* Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".

**PM_{2.5} listed is direct PM_{2.5}.

- (a) This existing stationary source is not major for PSD because the emissions of each pollutant, excluding GHGs, are less than two hundred fifty (<250) tons per year and it is not in one of the twenty-eight (28) listed source categories.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.

Federal Rule Applicability

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants, 40 CFR 60, 60.630, Subpart KKK (326 IAC 12), are not included in the permit because this source does not have equipment to extract natural gas liquids (NGL) from the gas stream and does not meet the definition of an "onshore natural gas processing plant." This source consists of treating field gas in order to remove carbon dioxide and water vapor, but does not include the extraction natural gas liquids (hydrocarbons consisting

primarily of ethane, propane, butane, and pentane, which have a higher molecular weight than methane and have a higher freezing point than methane) from the field gas. In addition, this source does not include the fractionation of mixed natural gas liquids to natural gas products.

- (b) The requirements of the New Source Performance Standard for Standards of Performance for Onshore Natural Gas Processing; SO₂ Emissions, 40 CFR 60.640, Subpart LLL (326 IAC 12), are not included in the permit because the facilities at this source does not meet the definition of a "sweetening unit" because they will not separate H₂S and CO₂ from sour natural gas streams. In addition, the raw gas extracted at this facility is not considered "sour" or "acid" because it contains non-detectable quantities of H₂S (less than 4 ppmv). Therefore, this plant does not operate any sweetening units at this location.
- (c) The two (2) natural gas-fired 4-cycle lean burn reciprocating internal combustion engines (RICE), identified as EUENG01 and EUENG02, are subject to the New Source Performance Standards for Standards of Performance for Stationary Spark Ignition Internal combustion Engines (40 CFR 60.4230, Subpart JJJJ), because these units were constructed after January 1, 2008, and are lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP each.

Applicable portions of the NSPS are the following:

- (1) 40 CFR 60.4230(a)(4)(ii)
- (2) 40 CFR 60.4230(c)
- (3) 40 CFR 60.4233(e)
- (4) 40 CFR 60.4234
- (5) 40 CFR 60.4236(b)
- (6) 40 CFR 60.4243(b)
- (7) 40 CFR 60.4244
- (8) 40 CFR 60.4245(a) and (d)
- (9) 40 CFR 60.4246
- (10) 40 CFR 60.4248

The requirements of 40 CFR Part 60, Subpart A - General Provision, which are incorporated as 326 IAC 12-1, apply to the natural gas-fired 4-cycle lean burn reciprocating internal combustion engines (RICE), identified as EUENG01 and EUENG02, except as otherwise specified in 40 CFR 60, Subpart JJJJ.

- (d) The natural gas-fired reboiler, EUDHY03, is not subject to the New Source Performance Standards for Small Industrial Commercial-Institutional Steam Generating Units (40 CFR 60, Subpart Dc), which is incorporated by reference as 326 IAC 12, because it has a maximum heat input capacity less than 10 MMBtu/hr.
- (e) The one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03, is subject to the requirements of the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines (40 CFR 60, Subpart JJJJ) (326 IAC 12) because this unit is a stationary spark ignition (SI) internal combustion engines (ICE) that was constructed after January 1, 2008.

Applicable portions of the NSPS are the following:

- (1) 40 CFR 60.4230(a)(4)(ii)
- (2) 40 CFR 60.4230(c)
- (3) 40 CFR 60.4233(e)
- (4) 40 CFR 60.4234
- (5) 40 CFR 60.4236(b)
- (6) 40 CFR 60.4243(b)

- (7) 40 CFR 60.4244
- (8) 40 CFR 60.4245(a) and (d)
- (9) 40 CFR 60.4246
- (10) 40 CFR 60.4248

The requirements of 40 CFR Part 60, Subpart A - General Provision, which are incorporated as 326 IAC 12-1, apply to the one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03, except as otherwise specified in 40 CFR 60, Subpart JJJJ.

- (f) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (a) The one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03, is subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) (326 IAC 20-82) because it is a stationary reciprocating internal combustion engines (RICE) located at an area source of HAP emissions. Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
- (4) 40 CFR 63.6595(a)(6)
- (5) 40 CFR 63.6665
- (6) 40 CFR 63.6670
- (7) 40 CFR 63.6675

Pursuant to 40 CFR 63.6665, the one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03, does not have to meet the requirements of 40 CFR 63, Subpart A (General Provisions) since it is considered a new stationary RICE located at an area source of HAP emissions.

- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Natural Gas Transmission and Storage Facilities, 40 CFR 63.1270, Subpart HHH (326 IAC 20-31-1), are not included in the permit, since this source does not have the potential to emit 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.
- (c) The one (1) triethylene glycol/natural dehydration unit identified as EUDEHY is subject to the National Emission Standards for Hazardous Air Pollutants for Oil and Natural Gas Production Facilities (40 CFR 63.760, Subpart HH), because the source is an area source that has a triethylene glycol dehydration unit.

Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63.760(a)(1) and (3), (b)(2), (f)(3) through (6), (h)
- (2) 40 CFR 63.761
- (3) 40 CFR 63.762(a), (c), (e)
- (4) 40 CFR 63.764(a), (b), (e)(1)(ii)
- (5) 40 CFR 63.772(b), (2)(i) or (ii)
- (6) 40 CFR 63.774(a), (d)(1)(i) or (ii)
- (7) 40 CFR 63.775(a), (c)(8)
- (8) 40 CFR 63.776

The requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the one (1) triethylene glycol/natural dehydration unit, identified as EUDEHY, except as otherwise specified in 40 CFR 63, Subpart HH.

- (d) The two (2) natural gas-fired 4-cycle lean burn reciprocating internal combustion engines (RICE), identified as EUENG01 and EUENG02 are subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63.6580, Subpart ZZZZ), because the source operates two (2) stationary RICE at an area source of HAP emissions.

Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(2)(iii)
- (4) 40 CFR 63.6590(c)

The requirements of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the two (2) natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG01 and EUENG02, except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

- (e) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability - Entire Source

- (a) 326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3
- (b) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.
- (c) 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
This source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of all attainment regulated pollutants are less than 250 tons per year and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the source is a minor source for PSD.
- (d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The natural gas-fired reboiler identified as EUDHY03, is not subject to the requirements of 326 IAC 2-4.1 because the unlimited potential to emit of HAPs from this unit is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (e) 326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3

- (f) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or La Porte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (g) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) 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.
 - (2) 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 non overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (h) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (i) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

State Rule Applicability – Individual Facilities

The following state rules are applicable to the source:

Reciprocating Internal Combustion Engine Compressors

- (a) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The three (3) natural gas-fired reciprocating internal combustion engine (RICE) compressors, identified as EUENG01, EUENG02 and EUENG03, are not subject to 326 IAC 6-2 (Particulate Emission Limitations from Sources of Indirect Heating) because the three (3) compressors are not a source of indirect heating.
- (b) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The two (2) reciprocating internal combustion engine (RICE) compressors, identified as EUENG01 and EUENG02, and one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03 are not subject to 326 IAC 6-3-1 because they burn natural gas.
- (c) 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)
This source is not subject to 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations), because the potential to emit sulfur dioxide from the two (2) reciprocating internal combustion engine (RICE) compressors (EUENG01 and EUENG02) and one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03 are less than twenty-five (25) tons per year and less than 10 pounds per hour each.

- (d) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The two (2) natural gas-fired reciprocating internal combustion engine (RICE) compressors (EUENG01 and EUENG02) and one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03 are not subject to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) because the potential to emit (PTE) of VOC from the two (2) compressors (EUENG01 and EUENG02) and one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03 are less than twenty-five (25) tons per year each.
- (e) 326 IAC 9-1-1 (Carbon Monoxide Emission Limits)
The two (2) natural gas-fired reciprocating internal combustion engine (RICE) compressors (EUENG01 and EUENG02) and one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03 are not subject to 326 IAC 9-1-1 (Carbon Monoxide Emission Limits) because there are no applicable emission limits for this source under 326 IAC 9-1-2.
- (f) 326 IAC 10-1-1 (Nitrogen Oxides Control)
The two (2) natural gas-fired reciprocating internal combustion engine (RICE) compressors (EUENG01 and EUENG02) and one (1) Caterpillar G3516LE natural gas-fired 4-cycle lean burn reciprocating internal combustion engine (RICE), identified as EUENG03 are not subject to 326 IAC 10-1-1 (Nitrogen Oxides Control) because the source is not located in Clark or Floyd counties.

Amine Reboiler and Glycol Reboiler

- (g) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The amine reboilers, identified as EUAMINE and EUAMN60, and the glycol reboilers, identified as EUDEHY and EUDEHY02 are subject to 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating). The total source heat input capacity for indirect heating units EUAMINE and EUDEHY is 2.25MMBtu/hr + 0.6MMBtu/hr = 2.85 MMBtu/hr and EUAMINE60 is 8.35 MMBtu/hr.

$$Pt = \frac{1.09}{Q^{0.26}} (\text{EUAMINE and EUDEHY}) = \frac{1.09}{2.85^{0.26}} = 0.83 \text{ lb/MMBtu}$$

$$Pt = \frac{1.09}{Q^{0.26}} (\text{EUAMINE60}) = \frac{1.09}{8.35^{0.26}} = 0.6 \text{ lb/MMBtu}$$

Pursuant to 326 IAC 6-2-4(a), for a total source heat input capacity of less than 10MMBtu/hr, the allowable particulate emissions from the one (1) amine reboiler and the one (1) glycol reboiler shall not exceed 0.6 pounds per million British thermal units per hour each.

The potential to emit PM emissions from the amine reboiler and glycol reboiler EUAMINE and EUDEHY is 0.6 lb/ MMBtu per year. The potential to emit PM emissions from the amine reboiler EUAMINE60 is 0.6 lb/ MMBtu per year.

- (h) 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)
The amine reboilers, identified as EUAMINE and EUAMN60 and the glycol reboilers, identified as EUDEHY and EUDEHY02, are not subject to 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations), because they each have a potential to emit sulfur dioxide that is less than twenty-five (25) tons per year and less than 10 pounds per hour.
- (i) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The amine reboilers, identified as EUAMINE and EUAMN60, and the glycol reboilers, identified as EUDEHY and EUDEHY02, are not subject to 326 IAC 8-1-6 (New Facilities; General Reduction

Requirements), because they each have the potential to emit VOC of less than twenty-five (25) tons per year and no article 8 applies.

Recommendation

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

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

An application for the purposes of this review was received on October 8, 2013.

Conclusion

The operation of this existing stationary natural gas compression and treating station shall be subject to the conditions of the attached MSOP Renewal No. M083-33760-00054.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Diya Bhattacharjee at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317)234-5372 or toll free at 1-800-451-6027 extension 5372.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

**Appendix A: Emission Calculations
Potential to Emit Summary**

Company Name: Atlas Energy Indiana- E. Knox
Compressor Station Address: NW1/4, SW1/4 Sec 26, T5N, R8W, Edwardsport, IN 47528
Gas Treating Facility Address: Freelandville Rd, NE1/4, NE1/4, Sec 22, T5N, R8W, Edwardsport, IN 47528
Permit No.: 083-33760-00054
Reviewer: Diya Bhattacharjee

Uncontrolled Potential to Emit (ton/yr)											
Emission Unit (ID)	PM	PM10	PM2.5	SO2	Nox	VOC	CO	CO2e (GHGs)	Total HAPs	Worst Single HAPs	
Rice ENG EUENG01, EUENG02, EUENG03	0.0101816	1.32	1.32	0.0776495	69.87	12.03	73.37	18081.06	12.20	9.70	Formaldehyde
Reboilers (EUDHY02, EUAMINE, EUAMIN60, EUDHY01, & EUDHY03)	0.07	0.28	0.28	0.02	3.74	0.21	3.14	4,510	0.07	0.07	Hexane
Flare	9.00E-02	3.60E-01	3.60E-01	2.84E-02	4.74	2.61E-01	3.98	5,718	0.09	0.09	Hexane
Brine Storage Tanks (EUTANK, EUTNK02 & EUTNK03)	-	-	-	-	-	<5.0	-	-	-	-	-
Unpaved Roads	0.49	0.12	0.01	-	-	-	-	-	-	-	-
Total	0.66	2.09	1.98	0.13	78.34	12.50	80.48	28309.69	12.35	9.70	Formaldehyde

**Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas
4-Stroke Lean-Burn (4SLB) Engines**

Company Name: Atlas Energy Indiana- E. Knox
Compressor Station Address: NW 1/4, SW 1/4 Sec 26, T5N, R8W, Edwardsport, IN 47528
Gas Treating Facility Address: Freelandville Rd., NE 1/4, NE 1/4, Sec 22, T5N, R8W, Edwardsport, IN 47528
Permit No.: 083-33760-00054
Reviewer: Diya Bhattacharjee

Emission Unit (ID)	HP
EUENG01	1340
EUENG02	1340
EUENG03	1340
Total	4020

Maximum Output Horsepower Rating (hp)	4020
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7500
Maximum Hours Operated per Year (hr/yr)	8760
Potential Fuel Usage (MMBtu/yr)	264114
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	258.94

Criteria Pollutants	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	7.71E-05	9.99E-03	9.99E-03	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Manufacturer's Emission Factor (g/bhp-hr)	-	-	-	-	1.80E+00	3.10E-01	1.89E+00
Potential Emissions (tons/yr)	0.0102	1.32	1.32	0.078	538.79	15.58	41.86
Potential Emissions (tons/yr)	-	-	-	-	69.87	12.03	73.37

*PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.

PM2.5 emission factor is filterable PM2.5 + condensable PM.

Manufacturer's Emission Factor for Nox has been doubled to remain conservative.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)	Manufacturer's Emission Factor (g/bhp-hr)	Potential to Emit (tons/yr)
Acetaldehyde	8.36E-03	1.104	-	-
Acrolein	5.14E-03	0.679	-	-
Benzene	4.40E-04	0.058	-	-
Biphenyl	2.12E-04	0.028	-	-
1,3-Butadiene	2.67E-04	0.035	-	-
Formaldehyde	5.28E-02	6.973	0.25	9.70
Methanol	2.50E-03	0.330	-	-
Hexane	1.10E-03	0.145	-	-
Toluene	4.08E-04	0.054	-	-
2,2,4-Trimethylpentane	2.50E-04	0.033	-	-
Xylene	1.84E-04	0.024	-	-
Total				12.20

HAP pollutants consist of the eleven highest HAPs included in AP-42 Table 3.2-2.

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

Potential Fuel Usage (MMBtu/yr) = [Maximum Output Horsepower Rating (hp)] * [Brake Specific Fuel Consumption (Btu/hp-hr)] * [Maximum Hours Operated per Year (hr/yr)] / [1000000 Btu/MMBtu]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Greenhouse Gases (GHGs)	Greenhouse Gas (GHG)		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu*	110	1.25	2.2
Emission Factor in lb/MMcf**			
Potential Emission in tons/yr	14526.27	165.07	0.28
Summed Potential Emissions in tons/yr	14691.63		
CO2e Total in tons/yr	18081.06		

Methodology

*The CO2 and CH4 emission factors are from Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2

**The N2O emission factor is from AP 42, Table 1.4-2. The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

For CO2 and CH4: Emission (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

For N2O: Emission (tons/yr) = [Potential Fuel Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

SO2 = Sulfur Dioxide

NOx = Nitrous Oxides

VOC = Volatile Organic Compounds

CO = Carbon Monoxide

CO2 = Carbon Dioxide

CH4 = Methane

N2O = Nitrous Oxide

CO2e = CO2 equivalent emissions

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

Company Name: Atlas Energy Indiana- E. Knox
Compressor Station Address: NW1/4, SW1/4 Sec 26, T5N, R8W, Edwardsport, IN 47528
Gas Treating Facility Address: Freelandville Rd, NE1/4, NE1/4, Sec 22, T5N, R8W, Edwardsport, IN 47528
Permit No.: 083-33760-00054
Reviewer: Diya Bhattacharjee

Emission Unit (ID)	MMBtu/hr
EUDHY02	0.2
EUAMINE	2.25
EUAMIN60	5.5
EUDHY01	0.5
EUDHY03	0.25
Total	8.7

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
8.7	1020	74.7

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.1	0.3	0.3	2.24E-02	3.7	0.2	3.1

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 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
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

Emission Factor in lb/MMcf	HAPs - Organics					Total - Organics
	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	7.845E-05	4.483E-05	2.802E-03	6.725E-02	1.270E-04	7.030E-02

Emission Factor in lb/MMcf	HAPs - Metals					Total - Metals
	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	1.868E-05	4.109E-05	5.230E-05	1.420E-05	7.845E-05	2.047E-04
	Total HAPs					7.050E-02
	Worst HAP					6.725E-02

Methodology is the same as above.

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

Greenhouse Gas Calculations

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2 120,000	CH4 2.3	N2O 2.2
Potential Emission in tons/yr	4,483	0.1	0.1
Summed Potential Emissions in tons/yr	4,483		
CO2e Total in tons/yr	4,510		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

updated 2/13

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

Company Name: Atlas Energy Indiana- E. Knox
Compressor Station Address: NW1/4, SW1/4 Sec 26, T5N, R8W, Edwardsport, IN 47528
Gas Treating Facility Address: Freelandville Rd, NE1/4, NE1/4, Sec 22, T5N, R8W, Edwardsport, IN 47528
Permit No.: 083-33760-00054
Reviewer: Diya Bhattacharjee

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
11.0	1020	94.7

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emission in tons/yr	9.00E-02	3.60E-01	3.60E-01	2.84E-02	4.74E+00	2.61E-01	3.98E+00

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 PM2.5 emission factor is filterable and condensable PM2.5 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
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8.760 hrs/yr x 1 MMCF/1,020 MMBtu
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

Emission Factor in lb/MMcf	HAPs - Organics					Total - Organics
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	9.946E-05	5.684E-05	3.552E-03	8.526E-02	1.610E-04	8.913E-02

Emission Factor in lb/MMcf	HAPs - Metals					Total - Metals
	Lead	Cadmium	Chromium	Manganese	Nickel	
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.368E-05	5.210E-05	6.631E-05	1.800E-05	9.946E-05	2.596E-04
					Total HAPs	8.938E-02
					Worst HAP	8.526E-02

Methodology is the same as above.

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

Greenhouse Gas Calculations

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	5,684	0.1	0.1
Summed Potential Emissions in tons/yr	5,684		
CO2e Total in tons/yr	5,718		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
 Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Atlas Energy Indiana- E. Knox
Compressor Station Address: NW 1/4, SW 1/4 Sec 26, T5N, R8W, Edwardsport, IN 47528
Gas Treating Facility Address: Freelandville Rd, NE 1/4, Sec 22, T5N, R8W, Edwardsport, IN 47528
Permit No.: 083-33760-00054
Reviewer: Diya Bhattacharjee

Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip) (CS)	2.0	2.0	4.0	4.0	16.0	300	0.057	0.2	83.0
Vehicle (leaving plant) (one-way trip) (CS)	2.0	2.0	4.0	4.0	16.0	300	0.057	0.2	83.0
Vehicle (entering plant) (one-way trip) GTF	2.0	2.0	4.0	4.0	16.0	300	0.057	0.2	83.0
Vehicle (leaving plant) (one-way trip) GTF	2.0	2.0	4.0	4.0	16.0	300	0.057	0.2	83.0
Totals			16.0		64.0			0.9	331.8

Average Vehicle Weight Per Trip = 4.0 tons/trip
 Average Miles Per Trip = 0.06 miles/trip

Unmitigated Emission Factor, Ef = $k'[(s/12)^a]^{1/(W/3)^b}$ (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	4.0	4.0	4.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = $E * [(365 - P)/365]$ (Equation 2 from AP-42 13.2.2)

Mitigated Emission Factor, Eext = $E * [(365 - P)/365]$

where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	2.94	0.75	0.07	lb/mile
Mitigated Emission Factor, Eext =	1.93	0.49	0.05	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip) (CS)	0.12	0.03	0.00	0.08	0.02	0.00
Vehicle (leaving plant) (one-way trip) (CS)	0.12	0.03	0.00	0.08	0.02	0.00
Vehicle (entering plant) (one-way trip) GTF	0.12	0.03	0.00	0.08	0.02	0.00
Vehicle (leaving plant) (one-way trip) GTF	0.12	0.03	0.00	0.08	0.02	0.00
Totals	0.49	0.12	0.01	0.32	0.08	0.01

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / 5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PTE = Potential to Emit



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Warren Hanks
Atlas Energy Indiana – E. Knox
32 South Court Street, Ste F
Sullivan, IN 47882

DATE: March 28, 2014

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

SUBJECT: Final Decision
Renewal of a Minor Source Operating Permit (MSOP)
083-33760-00054

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Carla Suszkowski, Director of Environmental & Regulatory Affairs
Donald Schuster, Consultant
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

March 28, 2014

TO: Bicknell – Vigo Township Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Atlas Energy Indiana – E. Knox
Permit Number: 083-33760-00054

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	VHAUN 3/28/2014 Atlas Energy Indiana - E Knox 083-33760-00054 FINAL			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Warren Hanks Atlas Energy Indiana - E Knox 32 S Court St, Ste F Sullivan IN 47882 (Source CAATS)		Confirmed Delivery								
2		Carla Suszkowski Director of Environmental & Regulatory Affairs Atlas Energy Indiana - E Knox 1000 Commerce Dr Pittsburgh PA 15275 (RO CAATS)										
3		Bicknell Vigo Twp Public Library 201 W 2nd St Bicknell IN 47512-2299 (Library)										
4		Knox County Health Department 520 S. 7th Street Vincennes IN 47591-1038 (Health Department)										
5		Knox County Commissioners 111 Washington Ave Vincennes IN 47591 (Local Official)										
6		Edwardsport Town Council P.O. Box 142 Edwardsport IN 47528 (Local Official)										
7		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 (Affected Party)										
8		Donald Schuster 6 White Tail Lane Monticello IL 61856 (Consultant)										
9		John Blair 800 Adams Ave Evansville IN 47713 (Affected Party)										
10												
11												
12												
13												
14												
15												

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
8			