



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 31, 2011

RE: Global Energy Resources / 003-30426-00382

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

## Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures  
FNPER.dot12/03/07



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## New Source Construction and Minor Source Operating Permit OFFICE OF AIR QUALITY

**Global Energy Resources  
7415 Nelson Rd  
Fort Wayne, Indiana 46803**

(herein known as the Permittee) is hereby authorized to construct and 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 2-5.1, 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.: M003-30426-00382	
Issued by:  Alfred G. Dumauval, Ph. D., Section Chief. Permits Branch Office of Air Quality	Issuance Date: May 31, 2011  Expiration Date: May 31, 2016

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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)]

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The Permittee owns and operates a stationary renewable diesel additive production plant.

Source Address:	7415 Nelson Rd, Fort Wayne, Indiana 46803
General Source Phone Number:	260-749-9101
SIC Code:	2869
County Location:	Allen
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) One (1) renewable diesel additive production process, with a maximum production capacity of 3000 gallons of diesel additive per hour, consisting of the following:
  - (1) One (1) raw vegetable oil truck unloading and storage tank filling operation, identified as Bulk Storage Warehouse, constructed in 2009 and permitted in 2011;
  - (2) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-1, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 17;
  - (3) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-2, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 18;
  - (4) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-3, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 19;
  - (5) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-4, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 20;
  - (6) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as C-1, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 14;
  - (7) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as C-2, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 15;

- (8) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as C-3, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 16;
- (9) One (1) vertical fixed roof surfactant tank, identified as SF-1, constructed in 2009 and permitted in 2011, with a maximum volume of 250 gallons, with no exhaust vent;
- (10) One (1) vertical fixed roof ethanol tank, identified as E-1, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 13;
- (11) One (1) vertical fixed roof bonding tank, identified as B-1, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with no exhaust vent;
- (12) One (1) vertical fixed roof bonding tank, identified as B-2, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with no exhaust vent;
- (13) One (1) vertical fixed roof bonding tank, identified as B-3, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with no exhaust vent;
- (14) One (1) vertical fixed roof transfer tank, identified as T-1, constructed in 2010 and permitted in 2011, with a maximum volume of 6,000 gallons, with no exhaust vent;
- (15) One (1) aeration process, identified as A-1, consisting of the following:
  - (A) One (1) horizontal fixed roof process tank, identified as HT-1, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, with VOC emissions controlled by the condenser system CD-1; and
  - (B) One (1) vertical fixed roof aeration tank, identified as VT-1, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with VOC emissions controlled by the condenser system CD-1;
- (16) One (1) aeration process, identified as A-2, consisting of the following:
  - (A) One (1) horizontal fixed roof process tank, identified as HT-2, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, with VOC emissions controlled by the condenser system CD-1; and
  - (B) One (1) vertical fixed roof aeration tank, identified as VT-2, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with VOC emissions controlled by the condenser system CD-1;

- (17) One (1) aeration process, identified as A-3, consisting of the following:
  - (A) One (1) horizontal fixed roof process tank, identified as HT-3, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, with VOC emissions controlled by the condenser system CD-1; and
  - (B) One (1) vertical fixed roof aeration tank, identified as VT-3, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with VOC emissions controlled by the condenser system CD-1;
- (18) One (1) horizontal fixed roof finished diesel additive storage tank, identified as F-1, constructed in 2009 and permitted in 2011, with a maximum volume of 28,000 gallons, exhausting through Vent 11;
- (19) One (1) horizontal fixed roof finished diesel additive storage tank, identified as F-2, constructed in 2009 and permitted in 2011, with a maximum volume of 28,000 gallons, exhausting through Vent 12;
- (20) One (1) finished diesel additive truck loading operation, identified as Truck Load, constructed in 2009 and permitted in 2011, exhausting to the atmosphere;
- (21) One (1) horizontal fixed roof diesel storage tank, identified as DS-1, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, exhausting through Vent 5;
- (25) One (1) closed condenser system, identified as CD-1, constructed in 2011 and permitted in 2011, for controlling VOC emissions from process tanks HT-1 through HT-3 and aeration tanks VT-1 through VT-3, with condensed organic liquids collected in a closed receiving tank, and with uncontaminated liquid recycled back to bonding tank B-1, B-2, and/or B-3, and contaminated liquid collected in drums and shipped offsite for solvent recovery and reuse.
- (b) One (1) natural gas-fired forced air office heater, identified as OH-1, constructed in 1990 and permitted in 2011, with a maximum heat input capacity of 0.08 MMBtu/hr, and exhausting to the outdoors via roof vent.
- (c) Three (3) natural gas-fired warehouse heaters, identified as WH-1, WH-2, and WH-3, each constructed in 2008 and permitted in 2011, each with a maximum heat input capacity of 0.225 MMBtu/hr, and each exhausting to the outdoors via roof vents.
- (d) Receiving and shipping by paved roads.

## SECTION B

## GENERAL CONDITIONS

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

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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 Revocation of Permits [326 IAC 2-1.1-9(5)]

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Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

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This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

### B.4 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

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- (a) This permit, M003-30426-00382, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

### B.5 Term of Conditions [326 IAC 2-1.1-9.5]

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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.6 Enforceability

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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.7 Severability**

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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.8 Property Rights or Exclusive Privilege**

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

**B.9 Duty to Provide Information**

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- (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.10 Annual Notification [326 IAC 2-6.1-5(a)(5)]**

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- (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.11 Preventive Maintenance Plan [326 IAC 1-6-3]**

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- (a) If required by specific condition(s) in Section D of this permit, 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.

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

**B.12 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of permits established prior to M003-30426-00382 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.13 Termination of Right to Operate [326 IAC 2-6.1-7(a)]**

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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.14 Permit Renewal [326 IAC 2-6.1-7]**

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- (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.15 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.16 Source Modification Requirement

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

B.17 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.18 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]**

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- (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.19 Annual Fee Payment [326 IAC 2-1.1-7]**

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- (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.20 Credible Evidence [326 IAC 1-1-6]**

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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 construct and 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]

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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]

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- (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]**

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- (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]**

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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]**

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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]**

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

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

### **Corrective Actions and Response Steps**

#### **C.12 Response to Excursions or Exceedances**

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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**

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- (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]**

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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]**

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- (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]**

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

**SECTION D.1**

**EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

- (a) One (1) renewable diesel additive production process, with a maximum production capacity of 3000 gallons of diesel additive per hour, consisting of the following:
- (1) One (1) raw vegetable oil truck unloading and storage tank filling operation, identified as Bulk Storage Warehouse, constructed in 2009 and permitted in 2011;
  - (2) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-1, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 17;
  - (3) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-2, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 18;
  - (4) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-3, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 19;
  - (5) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-4, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 20;
  - (6) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as C-1, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 14;
  - (7) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as C-2, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 15;
  - (8) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as C-3, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 16;
  - (9) One (1) vertical fixed roof surfactant tank, identified as SF-1, constructed in 2009 and permitted in 2011, with a maximum volume of 250 gallons, with no exhaust vent;
  - (10) One (1) vertical fixed roof ethanol tank, identified as E-1, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 13;
  - (11) One (1) vertical fixed roof bonding tank, identified as B-1, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with no exhaust vent;
  - (12) One (1) vertical fixed roof bonding tank, identified as B-2, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with no exhaust vent;

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

**Emissions Unit Description:**

- (13) One (1) vertical fixed roof bonding tank, identified as B-3, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with no exhaust vent;
- (14) One (1) vertical fixed roof transfer tank, identified as T-1, constructed in 2010 and permitted in 2011, with a maximum volume of 6,000 gallons, with no exhaust vent;
- (15) One (1) aeration process, identified as A-1, consisting of the following:
  - (A) One (1) horizontal fixed roof process tank, identified as HT-1, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, with VOC emissions controlled by the condenser system CD-1; and
  - (B) One (1) vertical fixed roof aeration tank, identified as VT-1, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with VOC emissions controlled by the condenser system CD-1;
- (16) One (1) aeration process, identified as A-2, consisting of the following:
  - (A) One (1) horizontal fixed roof process tank, identified as HT-2, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, with VOC emissions controlled by the condenser system CD-1; and
  - (B) One (1) vertical fixed roof aeration tank, identified as VT-2, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with VOC emissions controlled by the condenser system CD-1;
- (17) One (1) aeration process, identified as A-3, consisting of the following:
  - (A) One (1) horizontal fixed roof process tank, identified as HT-3, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, with VOC emissions controlled by the condenser system CD-1; and
  - (B) One (1) vertical fixed roof aeration tank, identified as VT-3, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with VOC emissions controlled by the condenser system CD-1;
- (18) One (1) horizontal fixed roof finished diesel additive storage tank, identified as F-1, constructed in 2009 and permitted in 2011, with a maximum volume of 28,000 gallons, exhausting through Vent 11;
- (19) One (1) horizontal fixed roof finished diesel additive storage tank, identified as F-2, constructed in 2009 and permitted in 2011, with a maximum volume of 28,000 gallons, exhausting through Vent 12;
- (20) One (1) finished diesel additive truck loading operation, identified as Truck Load, constructed in 2009 and permitted in 2011, exhausting to the atmosphere;

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

**Emissions Unit Description:**

- (21) One (1) horizontal fixed roof diesel storage tank, identified as DS-1, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, exhausting through Vent 5;
- (25) One (1) closed condenser system, identified as CD-1, constructed in 2011 and permitted in 2011, for controlling VOC emissions from process tanks HT-1 through HT-3 and aeration tanks VT-1 through VT-3, with condensed organic liquids collected in a closed receiving tank, and with uncontaminated liquid recycled back to bonding tank B-1, B-2, and/or B-3, and contaminated liquid collected in drums and shipped offsite for solvent recovery and reuse.

(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 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]**

In order to render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable, the Permittee shall comply with the following:

- (a) The total input of diesel additive to each of the aeration processes (A-1, A-2, and A-3) shall not exceed 8,389,488 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) VOC emissions before control from each of the aeration processes (A-1, A-2, and A-3) shall not exceed 0.005936 pounds per gallon of diesel additive input.

Compliance with these limits shall limit the VOC emissions before control from each aeration process to less than 25 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable.

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

A Preventive Maintenance Plan is required for all equipment associated with diesel additive production process. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

**D.1.3 Testing Requirements [326 IAC 2-1.1-11]**

Not later than 180 days after issuance of this permit M003-30426-00382, in order to demonstrate compliance with Condition D.1.1(b), the Permittee shall perform VOC testing for one (1) of the aeration processes (A-1, A-2, or A-3) utilizing methods as approved by the Commissioner. This test shall be repeated on a different aeration process at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing of any individual aeration process shall not be repeated until each aeration process has been tested. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

### **D.1.4 Record Keeping Requirements**

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- (a) To document the compliance status with Condition D.1.1(a), the Permittee shall maintain monthly records of the gallons of diesel additive input to each of the aeration processes.
  
- (b) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

### **D.1.5 Reporting Requirements**

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A quarterly summary of the information to document the compliance status with Condition D.1.1(a) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

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

**Quarterly Report**

Source Name: Global Energy Resources  
 Source Address: 7415 Nelson Rd, Fort Wayne, Indiana 46803  
 MSOP Permit No.: M003-30426-00382  
 Facility: Aeration Process A-1  
 Parameter: Total input of diesel additive to aeration processes A-1  
 Limit: The total input of diesel additive to aeration processes A-1 shall not exceed 8,389,488 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Aeration Process A-1 Total Input of Diesel Additive (gallons)	Aeration Process A-1 Total Input of Diesel Additive (gallons)	Aeration Process A-1 Total Input of Diesel Additive (gallons)
	This Month	Previous 11 Months	12 Month Total

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

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

**Quarterly Report**

Source Name: Global Energy Resources  
Source Address: 7415 Nelson Rd, Fort Wayne, Indiana 46803  
MSOP Permit No.: M003-30426-00382  
Facility: Aeration Process A-2  
Parameter: Total input of diesel additive to aeration processes A-2  
Limit: The total input of diesel additive to aeration processes A-2 shall not exceed 8,389,488 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Aeration Process A-2 Total Input of Diesel Additive (gallons)	Aeration Process A-2 Total Input of Diesel Additive (gallons)	Aeration Process A-2 Total Input of Diesel Additive (gallons)
	This Month	Previous 11 Months	12 Month Total

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

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

**Quarterly Report**

Source Name: Global Energy Resources  
 Source Address: 7415 Nelson Rd, Fort Wayne, Indiana 46803  
 MSOP Permit No.: M003-30426-00382  
 Facility: Aeration Process A-3  
 Parameter: Total input of diesel additive to aeration processes A-3  
 Limit: The total input of diesel additive to aeration processes A-3 shall not exceed 8,389,488 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Aeration Process A-3 Total Input of Diesel Additive (gallons)	Aeration Process A-3 Total Input of Diesel Additive (gallons)	Aeration Process A-3 Total Input of Diesel Additive (gallons)
	This Month	Previous 11 Months	12 Month Total

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**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).

<b>Company Name:</b>	Global Energy Resources
<b>Address:</b>	7415 Nelson Rd
<b>City:</b>	Fort Wayne, Indiana 46803
<b>Phone #:</b>	260-749-9101
<b>MSOP #:</b>	M003-30426-00382

I hereby certify that Global Energy Resources is :

still in operation.

I hereby certify that Global Energy Resources is :

no longer in operation.

in compliance with the requirements of MSOP M003-30426-00382.

not in compliance with the requirements of MSOP M003-30426-00382.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

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.

<b>Noncompliance:</b>

**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:

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

Global Energy Resources  
7415 Nelson Rd  
Fort Wayne, Indiana 46803

Affidavit of Construction

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_.  
(Title) (Company Name)
3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of \_\_\_\_\_.  
(Company Name)
4. I hereby certify that Global Energy Resources 7415 Nelson Rd, Fort Wayne, Indiana 46803, completed construction of the renewable diesel additive production plant on \_\_\_\_\_ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on April 8, 2011, and as permitted pursuant to New Source Construction Permit and Minor Source Operating Permit No. M003-30426-00382, Plant ID No. 003-00382 issued on \_\_\_\_\_.
5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature \_\_\_\_\_  
Date \_\_\_\_\_

STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of Indiana  
on this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_. My Commission expires: \_\_\_\_\_.

Signature \_\_\_\_\_  
Name \_\_\_\_\_ (typed or printed)

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

Technical Support Document (TSD) for a New Source Construction and  
Minor Source Operating Permit (MSOP)

**Source Description and Location**

**Source Name:** Global Energy Resources  
**Source Location:** 7415 Nelson Rd, Fort Wayne, IN 46803  
**County:** Allen County  
**SIC Code:** 2869  
**Operation Permit No.:** M003-30426-00382  
**Permit Reviewer:** Nathan C. Bell

On April 8, 2011, the Office of Air Quality (OAQ) received an application from Global Energy Resources related to the construction and operation of a new stationary renewable diesel additive production plant.

**Existing Approvals**

There have been no previous approvals issued to this source.

**County Attainment Status**

The source is located in Allen County.

<b>Pollutant</b>	<b>Designation</b>
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Attainment effective February 12, 2007, for the Fort Wayne area, including Allen County, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM <sub>2.5</sub> .	

- (a) **Ozone Standards**  
 Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM<sub>2.5</sub>**  
 Allen County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM<sub>2.5</sub> emissions until 326 IAC 2-2 is revised.

- (c) Other Criteria Pollutants  
Allen County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

#### **Fugitive Emissions**

- (a) 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.
- (b) Since this source is classified as a chemical process plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

#### **Background and Description of New Source Construction**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Global Energy Resources on April 8, 2011, relating to the construction and operation a stationary renewable diesel additive production plant.

The source consists of the following unpermitted emission units:

- (a) One (1) renewable diesel additive production process, with a maximum production capacity of 3000 gallons of diesel additive per hour, consisting of the following:
- (1) One (1) raw vegetable oil truck unloading and storage tank filling operation, identified as Bulk Storage Warehouse, constructed in 2009 and permitted in 2011;
  - (2) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-1, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 17;
  - (3) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-2, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 18;
  - (4) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-3, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 19;
  - (5) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as S-4, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 20;
  - (6) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as C-1, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 14;
  - (7) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as C-2, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 15;

- (8) One (1) horizontal fixed roof raw vegetable oil storage tank, identified as C-3, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 16;
- (9) One (1) vertical fixed roof surfactant tank, identified as SF-1, constructed in 2009 and permitted in 2011, with a maximum volume of 250 gallons, with no exhaust vent;
- (10) One (1) vertical fixed roof ethanol tank, identified as E-1, constructed in 2009 and permitted in 2011, with a maximum volume of 20,000 gallons, exhausting through Vent 13;
- (11) One (1) vertical fixed roof bonding tank, identified as B-1, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with no exhaust vent;
- (12) One (1) vertical fixed roof bonding tank, identified as B-2, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with no exhaust vent;
- (13) One (1) vertical fixed roof bonding tank, identified as B-3, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with no exhaust vent;
- (14) One (1) vertical fixed roof transfer tank, identified as T-1, constructed in 2010 and permitted in 2011, with a maximum volume of 6,000 gallons, with no exhaust vent;
- (15) One (1) aeration process, identified as A-1, consisting of the following:
  - (A) One (1) horizontal fixed roof process tank, identified as HT-1, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, with VOC emissions controlled by the condenser system CD-1; and
  - (B) One (1) vertical fixed roof aeration tank, identified as VT-1, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with VOC emissions controlled by the condenser system CD-1;
- (16) One (1) aeration process, identified as A-2, consisting of the following:
  - (A) One (1) horizontal fixed roof process tank, identified as HT-2, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, with VOC emissions controlled by the condenser system CD-1; and
  - (B) One (1) vertical fixed roof aeration tank, identified as VT-2, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with VOC emissions controlled by the condenser system CD-1;
- (17) One (1) aeration process, identified as A-3, consisting of the following:
  - (A) One (1) horizontal fixed roof process tank, identified as HT-3, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, with VOC emissions controlled by the condenser system CD-1; and
  - (B) One (1) vertical fixed roof aeration tank, identified as VT-3, constructed in 2009 and permitted in 2011, with a maximum volume of 4,000 gallons, with VOC emissions controlled by the condenser system CD-1;
- (18) One (1) horizontal fixed roof finished diesel additive storage tank, identified as F-1, constructed in 2009 and permitted in 2011, with a maximum volume of 28,000 gallons, exhausting through Vent 11;

- (19) One (1) horizontal fixed roof finished diesel additive storage tank, identified as F-2, constructed in 2009 and permitted in 2011, with a maximum volume of 28,000 gallons, exhausting through Vent 12;
  - (20) One (1) finished diesel additive truck loading operation, identified as Truck Load, constructed in 2009 and permitted in 2011, exhausting to the atmosphere;
  - (21) One (1) horizontal fixed roof diesel storage tank, identified as DS-1, constructed in 2009 and permitted in 2011, with a maximum volume of 1,000 gallons, exhausting through Vent 5;
  - (25) One (1) closed condenser system, identified as CD-1, constructed in 2011 and permitted in 2011, for controlling VOC emissions from process tanks HT-1 through HT-3 and aeration tanks VT-1 through VT-3, with condensed organic liquids collected in a closed receiving tank, and with uncontaminated liquid recycled back to bonding tank B-1, B-2, and/or B-3, and contaminated liquid collected in drums and shipped offsite for solvent recovery and reuse.
- (b) One (1) natural gas-fired forced air office heater, identified as OH-1, constructed in 1990 and permitted in 2011, with a maximum heat input capacity of 0.08 MMBtu/hr, and exhausting to the outdoors via roof vent.
  - (c) Three (3) natural gas-fired warehouse heaters, identified as WH-1, WH-2, and WH-3, each constructed in 2008 and permitted in 2011, each with a maximum heat input capacity of 0.225 MMBtu/hr, and each exhausting to the outdoors via roof vents.
  - (d) Receiving and shipping by paved roads.

<b>Enforcement Issues</b>
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IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

<b>Process Bottleneck</b>
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Based on information provided by the source, the aeration processes (A-1, A-2, and A-3) is the bottleneck in the diesel additive production process. The maximum diesel additive throughput capacity for each aeration process (a batch process) is 1,000 gallons per hour (total of 3,000 gallons per hour for all 3 aeration processes combined) and is based upon the maximum tank filling rate for each aeration process, a one-hour aeration batch processing time, and the maximum tank emptying rate for each aeration process.

<b>Emission Calculations</b>
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See Appendix A of this TSD for detailed emission calculations.

<b>Permit Level Determination – MSOP</b>
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The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	1.06
PM10 <sup>(1)</sup>	0.24
PM2.5	0.08
SO <sub>2</sub>	0.002
NO <sub>x</sub>	0.33
VOC	81.88
CO	0.28
Total HAPs	0.0062
Worst Single HAP	0.0060 (Hexane)

(1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of VOC is less than one hundred (100) tons per year, but greater than or equal to twenty-five (25) tons per year. The PTE of all other regulated criteria pollutants are less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. A Minor Source Operating Permit (MSOP) will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

**PTE of the Entire Source After Issuance of the MSOP**

The table below summarizes the potential to emit of the entire source after issuance of this MSOP, reflecting all limits, of the emission units.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of MSOP (tons/year)								
	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Aeration Process	0.0	0.0	0.0	0.0	0.0	74.7	0.0	0.0	0.0
Storage Tanks	0.0	0.0	0.0	0.0	0.0	0.54	0.0	0.0	0.0
Truck Load	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0
Natural Gas Combustion Units	0.006	0.025	0.025	0.002	0.33	0.018	0.28	0.0062	0.0060 (Hexane)
Equipment Leaks (fugitive)	0.0	0.0	0.0	0.0	0.0	3.02	0.0	0.0	0.0
Paved Roads (fugitive)	1.05	0.21	0.05	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total PTE of Entire Source</b>	<b>1.06</b>	<b>0.24</b>	<b>0.08</b>	<b>0.002</b>	<b>0.33</b>	<b>78.58</b>	<b>0.28</b>	<b>0.0062</b>	<b>0.0060 (Hexane)</b>

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of MSOP (tons/year)								
	PM	PM10	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs	Worst Single HAP
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	100	100	100	100	100	100	100	NA	NA
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".									

In order to render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable, the Permittee shall comply with the following:

- (a) The total input of diesel additive to each of the aeration processes (A-1, A-2, and A-3) shall not exceed 8,389,488 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) VOC emissions before control from each of the aeration processes (A-1, A-2, and A-3) shall not exceed 0.005936 pounds per gallon of diesel additive input.

Compliance with these limits shall limit the VOC emissions before control from each aeration process to less than 25 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable.

**Federal Rule Applicability Determination**

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (60.40c through 60.48c) (326 IAC 12), are not included in the permit, because each of the natural gas-fired heaters at this source has a heat input rate less than or equal to 10 million Btu per hour (MMBtu/hr) and each are not considered a steam generating unit as defined by 40 CFR 60.41c.
- (b) The requirements of the New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60, Subpart Kb (60.110b through 60.117b) (326 IAC 12), are not included in the permit, because:
  - (1) storage vessel SF-1 and DS-1 each has a capacity less than seventy-five (75) cubic meters (m3) (19,813 gallons);
  - (2) storage vessel S-1, S-2, S-3, S-4, C-1, C-2, C-3, F-1, and F-2, which each has a storage capacity greater than or equal to seventy-five (75) m3 (19,813 gallons), but less than one hundred fifty-one (151) m3 (39,890 gallons), is intended to store liquids that have a maximum true vapor pressure less than 15.0 kilopascals (kPa) (2.18 pounds per square inch absolute (psia)) at the highest calendar-month average storage temperature; and
  - (3) tanks B-1, B-2, B-3, T-1, HT-1, HT-2, HT-3, VT-1, VT-2, and VT-3, each are not considered a "storage vessel" as defined by 40 CFR 60.111b. These tanks are considered "process tanks" as defined by 40 CFR 60.111b and are not subject to this rule.

- (c) The requirements of the following New Source Performance Standards (NSPS) are not included in the permit, because this source does not “produce” chemicals (see note 1 below) and does not consist of air oxidation unit processes, distillation operations, or reactor processes. This source only stores and blends vegetable oil, surfactant, and ethanol to produce renewable diesel additive, which is then loaded into trucks for offsite shipment.
- (1) 40 CFR 60, Subpart VV (60.480 through 60.489), Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (326 IAC 12);
  - (2) 40 CFR 60, Subpart III (60.610 through 60.617), Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes (326 IAC 12);
  - (3) 40 CFR 60, Subpart NNN (60.660 through 60.668), Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations (326 IAC 12); and
  - (4) 40 CFR 60, Subpart RRR (60.700 through 60.708), Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes (326 IAC 12).

Note 1: The major processing steps employed in Synthetic Organic Chemicals Manufacturing Industry (SOCMI) can be classified in two broad categories: conversion and separation. Conversion processes are chemical reactions that alter the molecular structure of the compounds involved. Separation operations divide mixtures into distinct fractions. [References: (1) EPA Office of Compliance Sector Notebook Project: Profile of the Organic Chemical Industry, 2nd Edition (EPA/310-R-02-001), November 2002, Section III.A.1, page 11; (2) Distillation Operations In Synthetic Organic Chemical Manufacturing - Background Information For Proposed Standards (EPA-450/3-83-005a), December 1983, Chapter 3, page 3-1; and (3) Guideline Series: Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations Processes in the Synthetic Organic Chemical Manufacturing Industry (EPA-450/4-91-031), August 1993, Chapter 2, page 2-1.]

- (d) The requirements of the New Source Performance Standard for Bulk Gasoline Terminals, 40 CFR 60, Subpart XX (326 IAC 12), are not included in the permit, because this source is not a bulk gasoline terminal which receives gasoline by pipeline, ship, or barge. This source only stores and blends vegetable oil, surfactant, and ethanol to produce renewable diesel additive, which is then loaded into trucks for offsite shipment.
- (e) There are no New Source Performance Standards (NSPS) (326 IAC 12, 40 CFR Part 60) included in the permit.

#### National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (f) The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations), 40 CFR 63, Subpart R (63.420 through 63.429) (326 IAC 20-10), are not included in the permit, because this source is not a bulk gasoline terminal or pipeline breakout station which stores, mixes, or conveys gasoline. This source only stores and blends vegetable oil, surfactant, and ethanol to produce renewable diesel additive, which is then loaded into trucks for offsite shipment.
- (g) The requirements of the following National Emission Standard for Hazardous Air Pollutants (NESHAPs) are not included in the permit, because this source is not a major source of HAPs and this source does not “manufacture” chemicals as specified in this rule (see note 1 below). This

source only stores and blends vegetable oil, surfactant, and ethanol to produce renewable diesel additive, which is then loaded into trucks for offsite shipment (see note 2 below).

- (1) 40 CFR 63, Subpart F (63.100 through 63.107), NESHAPs From the Synthetic Organic Chemical Manufacturing Industry (326 IAC 20-11)
- (2) 40 CFR 63, Subpart G (63.110 through 63.153), NESHAPs From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater (326 IAC 20-11)
- (3) 40 CFR 63, Subpart H (63.160 through 63.183), NESHAPs: Organic Hazardous Air Pollutants for Equipment Leaks (326 IAC 20-11)
- (4) 40 CFR 63, Subpart I (63.190 through 63.193), NESHAPs: Certain Processes Subject to the Negotiated Regulation for Equipment Leaks (326 IAC 20-12)

Note 1: The major processing steps employed in Synthetic Organic Chemicals Manufacturing Industry (SOCMI) can be classified in two broad categories: conversion and separation. Conversion processes are chemical reactions that alter the molecular structure of the compounds involved. Separation operations divide mixtures into distinct fractions. [References: (1) EPA Office of Compliance Sector Notebook Project: Profile of the Organic Chemical Industry, 2nd Edition (EPA/310-R-02-001), November 2002, Section III.A.1, page 11; (2) Distillation Operations In Synthetic Organic Chemical Manufacturing - Background Information For Proposed Standards (EPA-450/3-83-005a), December 1983, Chapter 3, page 3-1; and (3) Guideline Series: Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations Processes in the Synthetic Organic Chemical Manufacturing Industry (EPA-450/4-91-031), August 1993, Chapter 2, page 2-1.]

Note 2: In the Hazardous Organic National Emission Standard for Hazardous Air Pollutants (NESHAP) Background Information Document (BID) Volume 2D: Comments on Applicability, National Impacts, and Overlap with Other Rules (EPA-453/R-94-003d), January 1994, page 3-51, the following discussion is included regarding the Hazardous Organic NESHAPs (HON) (40 CFR 63, Subpart F, G, H, I): "Processing of a chemical, as intended in the HON, involves one or more unit operations to change the physical or chemical characteristics of a raw material or an intermediate stream. Mere blending or repackaging of a finished product is not a process subject to the HON".

- (h) The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Miscellaneous Organic Chemical Manufacturing, 40 CFR 63, Subpart FFFF (63.2430 through 63.2550) (326 IAC 20-84), are not included in the permit, because this source is not a major source of HAPs. However, this source does contain miscellaneous organic chemical manufacturing process units (MCPUs) that produce an organic chemical classified using the 1987 version of SIC code 282, 283, 284, 285, 286, 287, 289, or 386, or the 1997 version of NAICS code 325, and is not specifically exempted under 40 CFR 63.2435(c). This source stores and blends vegetable oil, surfactant, and ethanol to produce renewable diesel additive, which is then loaded into trucks for offsite shipment under SIC code 2869 or NAICS code 325199 (see note 1 below).

Note 1: Pursuant to Federal Register 72 FR 41113 July 26, 2007 (See also Applicability Determination Index (ADI) Control Number M060034, Memorandum from Michael S. Alushin, EPA Office of Compliance, to John F. Metzger, P.E. of 3M EHS Operations, dated June 6, 2005), the following discussion is included regarding the applicability of 40 CFR part 63, Subpart FFFF, NESHAP for Miscellaneous Organic Chemical Manufacturing (MON rule): "Whether there is chemical reaction during the manufacturing process is not a factor for determining the applicability of the MON rule. Although chemical reaction is typically associated with the manufacture of organic chemicals, it is not exclusively so."

- (i) The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Organic Liquids Distribution (Non-Gasoline), 40 CFR 63, Subpart EEEE (63.2330 through 63.2406) (326 IAC 20-83) are not included in the permit, because this source does not store or transfer "organic liquids" as defined by 40 CFR 63.2406 and this source is not a major source of HAPs.
- (j) The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Solvent Extraction for Vegetable Oil Production, 40 CFR 63, Subpart GGGG (63.2830 through 63.2872) (326 IAC 20-60), are not included in the permit, because this source does not produce crude vegetable oil and/or meal products. This source only stores and blends vegetable oil, surfactant, and ethanol to produce renewable diesel additive, which is then loaded into trucks for offsite shipment.
- (k) The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities, 40 CFR 63, Subpart BBBB (63.11080 through 63.11100), are not included in the permit, because the source is not considered a bulk gasoline terminal, a pipeline breakout station, a pipeline pumping station, or a bulk gasoline plant as defined in 40 CFR 63.11081.
- (l) The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Gasoline Dispensing Facilities, 40 CFR 63, Subpart CCCCC (63.11110 through 63.11132), are not included in the permit, because the source is not a gasoline dispensing facility as defined by 40 CFR 63.11132.
- (m) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing for Area Sources, 40 CFR 63, Subpart VVVVV (63.11494 through 63.11503), are not included in the permit, because each chemical manufacturing process unit (CMPU) at this source does not use, generate, or produce any of the HAPs listed in Table 1 to this subpart in concentrations greater than 0.1 percent for the listed carcinogens or greater than 1.0 percent for the listed noncarcinogens (see note 1 below for EPA's meaning of "chemical manufacturing" with respect to this rule).

Note 1: Pursuant to the Response to Public Comments for National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources; Proposed Rule (40 CFR 63 Subpart VVVVV) (October 16, 2009) (Docket ID No. EPA-HQ-OAR-2008-0334-0087), page 3-9, EPA states that "This rule covers material produced by blending, mixing, dilution, or other formulation operations that are described by NAICS 325 and are not a coating operations. General applicability is the same as for subpart FFFF." In addition, on page 3-10, EPA states that "If any blending, heating, or other physical or chemical changes occur, then the operation is chemical manufacturing and subject to the final rule."

- (n) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Sources: Chemical Preparations Industry, 40 CFR 63, Subpart BBBB, are not included in the permit, because this source does not contain a "chemical preparations facility" or a "chemical preparations operation in target HAP service" as defined in 40 CFR 63.11588 (see note 1 below).

Note 1: Pursuant to in 40 CFR 63.11588, a chemical preparations facility consists the facility-wide collection of chemical preparation operations, including mixing, blending, milling, and extruding equipment used to manufacture chemical preparations. Chemical preparation means a target HAP-containing product, or intermediate used in the manufacture of other products, manufactured in a process operation described by the NAICS code 325998. Target HAP-containing means raw materials, intermediates, or products that contain one or more target HAP. Any material that contains compounds of chromium (VI), lead, or nickel in amounts greater than or equal to 0.1 percent by weight (as the metal), or manganese or chromium (III) compounds in amounts greater than or equal to 1.0 percent by weight (as the metal) is considered to be target HAP-containing.

In target HAP service means that equipment in the chemical preparation operation either contains, contacts, or is processing target HAP-containing materials.

- (o) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

#### Compliance Assurance Monitoring (CAM)

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

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the source:

- (a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))  
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.
- (b) 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 100 tons per year, and this source is 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 PSD requirements do not apply.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (d) 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 LaPorte 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.
- (e) 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 nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
The source is subject to the requirements of 326 IAC 6-4, because the paved roads at this source have the potential to emit fugitive particulate emissions. 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.

- (g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)  
The source is not subject to the requirements of 326 IAC 6-5, because the paved roads at this source do not have potential fugitive particulate emissions greater than 25 tons per year.
- (h) 326 IAC 12 (New Source Performance Standards)  
See Federal Rule Applicability Section of this TSD.
- (i) 326 IAC 20 (Hazardous Air Pollutants)  
See Federal Rule Applicability Section of this TSD.

### **Storage Tanks, Process Tanks, and Truck Loading Operation**

- (j) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
  - (1) The unlimited VOC potential emissions from each of the aeration processes (A-1, A-2, and A-3) is greater than twenty-five (25) tons per year. However, the source shall limit the VOC potential emissions from each of the aeration processes (A-1, A-2, and A-3) to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.  
  
In order to render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable, the Permittee shall comply with the following:
    - (A) The total input of diesel additive to each of the aeration processes (A-1, A-2, and A-3) shall not exceed 8,389,488 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
    - (B) VOC emissions before control from each of the aeration processes (A-1, A-2, and A-3) shall not exceed 0.005936 pounds per gallon of diesel additive input.  
  
Compliance with these limits shall limit the VOC emissions before control from each aeration process to less than 25 tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable.
  - (2) Each of the other process tanks, the storage tanks, and the truck loading operation is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each unit is less than twenty-five (25) tons per year.
- (k) 326 IAC 8-4-3 (Petroleum Sources; Petroleum Liquid Storage Facilities)  
Pursuant to 326 IAC 8-4-1(c) and 326 IAC 8-4-3(a), each of the storage vessels at this source is not subject to the requirements of 326 IAC 8-4-3, since:
  - (1) diesel storage tank DS-1, which was constructed after January 1, 1980, has storage capacity less than thirty-nine thousand (39,000) gallons; and
  - (2) all other storage vessels at this source do not store petroleum liquids.
- (l) 326 IAC 8-4-4 (Petroleum Sources: Bulk Gasoline Terminals)  
This source is not subject to the requirements 326 IAC 8-4-4, because this source is not a bulk gasoline terminal.
- (m) 326 IAC 8-4-6 (Petroleum Sources: Gasoline Dispensing Facilities)  
This source is not subject to the requirements 326 IAC 8-4-6, because this source does not include a gasoline dispensing facility.

- (n) 326 IAC 8-5-6 (Miscellaneous Operations: Fuel grade ethanol production at dry mills)  
This source is not subject to the requirements 326 IAC 8-5-6, because this source is not a fuel grade ethanol production plant at a dry mill.
- (o) 326 IAC 8-6 (VOC Rules: Organic Solvent Emission Limitations)  
Pursuant to 326 IAC 8-6-1, this rule applies to sources commencing operation after October 7, 1974 and prior to January 1, 1980, located anywhere in the state, with potential VOC emissions of 100 tons per year or more, and not regulated by any other provision of Article 8. Pursuant to 326 IAC 8-6-1, this source is not subject to the requirements 326 IAC 8-6, because this source, which is located in Allen County, did not commence operation after October 7, 1974 and prior to January 1, 1980, and does not have potential VOC emissions of 100 tons per year or more.
- (p) 326 IAC 8-7 (VOC Rules; Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)  
Pursuant to 326 IAC 8-7-2(a), this source is not subject to the requirements of 326 IAC 8-7, since it is not located in Lake, Porter, Clark, or Floyd County.
- (q) 326 IAC 8-9 (VOC Rules; Volatile Organic Liquid Storage Vessels)  
Pursuant to 326 IAC 8-9-1(a), this source is not subject to the requirements of 326 IAC 8-9, since it is not located in Lake, Porter, Clark, or Floyd County.
- (r) 326 IAC 8-15 (VOC Rules; Standards for Consumer and Commercial Products)  
Pursuant to 326 IAC 8-15, this source is not subject to the requirements of 326 IAC 8-15, because the renewable diesel additive manufactured at this source does not fall under any of the product categories listed in 326 IAC 8-15-3(a).

Although the renewable diesel additive manufactured at this source could be described as an "automotive specialty product" listed under item (xi) of the definition of "consumer product" at 326 IAC 8-15-2(37), there is no corresponding product category listed under 326 IAC 8-15-3(a) that includes renewable diesel additives. The renewable diesel additive manufactured at this source does not fall under the 326 IAC 8-15-3(a) product category of "engine degreaser" or "multipurpose lubricant" as defined by 326 IAC 8-15-2. The purpose of the renewable diesel additive is to give diesel fuel a lower gel point, higher combustion horsepower, and cleaner combustion emissions.

- (s) 326 IAC 8-18 (VOC Rules; Synthetic Organic Chemical Manufacturing Industry Air Oxidation, Distillation, and Reactor Processes)  
Pursuant to 326 IAC 8-18-1, this source is not subject to the requirements of 326 IAC 8-18, since it is not located in Lake or Porter County, and does not contain any air oxidation unit processes, distillation operations, and reactor processes as defined by 326 IAC 8-18-1(b).
- (t) 326 IAC 8-19 (VOC Rules; Control of Volatile Organic Compound Emissions from Process Vents in Batch Operations)  
Pursuant to 326 IAC 8-19-1, this source is not subject to the requirements of 326 IAC 8-18, since it is not located in Lake or Porter County and does not have the potential to emit VOC greater than or equal to one hundred (100) tons per year. However, this source does have a batch process train associated with SIC Code 2869.
- (u) 326 IAC 8-20 (VOC Rules; Industrial Wastewater)  
Pursuant to 326 IAC 8-20-1, this source is not subject to the requirements of 326 IAC 8-20, since it is not located in Lake or Porter County and does not have the potential to emit VOC greater than or equal to one hundred (100) tons per year from emission sources listed under 326 IAC 8-20-1(a)(2). However, this source does have facility operations specifically listed under SIC Code 2869.
- (v) There are no other 326 IAC 8 Rules that are applicable to the storage tanks, process tanks, and truck loading operation at this source.

**Natural Gas-Fired Heaters**

- (w) 326 IAC 6-2 (Particulate Emissions Limitations for Sources of Indirect Heating)  
 Each of the natural gas-fired heaters is not subject to the requirements of 326 IAC 6-2, because they each are not an indirect heating unit.
- (x) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)  
 Each of the natural gas-fired heaters is exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight. In addition, pursuant to 326 IAC 6-3-1(b)(14), each of the natural gas-fired heaters is also exempt from the requirements of 326 IAC 6-3, because they each have potential particulate emissions of less than five hundred fifty one thousandths (0.551) pound per hour.
- (y) 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)  
 Pursuant to 326 IAC 7-1.1-1, each of the natural gas-fired heaters at this source is not subject to the requirements of 326 IAC 7-1.1, since each has unlimited sulfur dioxide (SO<sub>2</sub>) emissions less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

**Compliance Determination, Monitoring and Testing Requirements**

- (a) There are no compliance determination and monitoring requirements applicable to this source.
- (b) The testing requirements applicable to this source are as follows:

<b>Testing Requirements</b>				
<b>Emission Unit</b>	<b>Control Device</b>	<b>Pollutant</b>	<b>Timeframe for Testing</b>	<b>Frequency of Testing</b>
Aeration process (A-1, A-2, and A-3)	None Required	VOC	Not later than 180 days after issuance of this permit	At least once every five (5) years from the date of the most recent valid compliance demonstration

These requirements are necessary to demonstrate compliance with the VOC emission limitation of 0.005936 pounds per gallon of diesel additive input (before control) for each of the aeration processes (A-1, A-2, and A-3) and to render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable.

**Conclusion and Recommendation**

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 April 8, 2011. Additional information was submitted on April 12, 2011 and April 14, 2011.

The construction and operation of this source shall be subject to the conditions of the attached proposed New Source Construction and MSOP No. M003-30426-00382. The staff recommends to the Commissioner that this New Source Construction and MSOP be approved.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Nathan Bell at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-5670 or toll free at 1-800-451-6027 extension (35670).
- (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.in.gov/idem](http://www.in.gov/idem)

**Appendix A: Emissions Calculations  
Emission Summary**

**Company Name:** Global Energy Resources  
**Source Address:** 7415 Nelson Rd, Fort Wayne, IN 46803  
**Operation Permit No.:** M003-30426-00382  
**Permit Reviewer:** Nathan C. Bell

Process Description	Uncontrolled/Unlimited Potential to Emit (PTE) (tons/year)									
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP	
Aeration Process	0.0	0.0	0.0	0.0	0.0	78.0	0.0	0.0	0.0	---
Storage Tanks	0.0	0.0	0.0	0.0	0.0	0.54	0.0	0.0	0.0	---
Truck Load	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	---
Natural Gas Combustion Units	0.006	0.025	0.025	0.002	0.33	0.018	0.28	0.0062	0.0060	Hexane
Equipment Leaks (fugitive)	0.0	0.0	0.0	0.0	0.0	3.02	0.0	0.0	0.0	---
Paved Roads (fugitive)	1.05	0.21	0.05	0.0	0.0	0.0	0.0	0.0	0.0	---
<b>Total PTE</b>	<b>1.06</b>	<b>0.24</b>	<b>0.08</b>	<b>0.002</b>	<b>0.33</b>	<b>81.88</b>	<b>0.28</b>	<b>0.0062</b>	<b>0.0060</b>	<b>Hexane</b>

Process Description	Limited Potential to Emit (PTE) (tons/year)									
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP	
Aeration Process	0.0	0.0	0.0	0.0	0.0	74.7	0.0	0.0	0.0	---
Storage Tanks	0.0	0.0	0.0	0.0	0.0	0.54	0.0	0.0	0.0	---
Truck Load	0.0	0.0	0.0	0.0	0.0	0.31	0.0	0.0	0.0	---
Natural Gas Combustion Units	0.006	0.025	0.025	0.002	0.33	0.018	0.28	0.0062	0.0060	Hexane
Equipment Leaks (fugitive)	0.0	0.0	0.0	0.0	0.0	3.02	0.0	0.0	0.0	---
Paved Roads (fugitive)	1.05	0.21	0.05	0.0	0.0	0.0	0.0	0.0	0.0	---
<b>Total PTE</b>	<b>1.06</b>	<b>0.24</b>	<b>0.08</b>	<b>0.002</b>	<b>0.33</b>	<b>78.58</b>	<b>0.28</b>	<b>0.0062</b>	<b>0.0060</b>	<b>Hexane</b>

**Appendix A: Emission Calculations  
Aeration Process (A-1, A-2, and A-3)  
Volatile Organic Compound (VOC)**

**Company Name:** Global Energy Resources  
**Source Address:** 7415 Nelson Rd, Fort Wayne, IN 46803  
**Operation Permit No.:** M003-30426-00382  
**Permit Reviewer:** Nathan C. Bell

**VOC Emissions from the Aeration Process (A-1, A-2, and A-3)**

The following calculations determine the amount of VOC emitted from the aeration process (A-1, A-2, and A-3)

Density of Diesel Additive (lbs/gallon)	7.42
VOC Loss During Aeration Process (lb VOC/lb additive)*	0.0008
Uncontrolled VOC Emission Factor (lbs VOC/gal additive)	0.005936

**Uncontrolled/Unlimited Potential to Emit (PTE)**

Process	Unlimited Diesel Additive Input Rate (gallons/hour)**	Uncontrolled/Unlimited PTE of VOC (tons/yr)
A-1	1000	26.0
A-2	1000	26.0
A-3	1000	26.0
<b>Total</b>		<b>78.0</b>

**Limited Potential to Emit (PTE) VOC in order to render 326 IAC 8-1-6 (BACT) not applicable to each aeration process**

Limited Diesel Additive Input (gallons/year)	8,389,488
VOC Emission Limit (lbs VOC/gallon additive)	0.005936

Process	Limited Diesel Additive Input (gallons/year)	Limited PTE of VOC (tons/yr)
A-1	8,389,488	24.9
A-2	8,389,488	24.9
A-3	8,389,488	24.9
<b>Total</b>		<b>74.7</b>

**Methodology**

\*The VOC loss during the aeration process (lb VOC/lb additive) was provided by the source based on on-site sampling results for VOC content of the diesel additive before and after processing in the aeration process.

\*\*The aeration processes (A-1, A-2, and A-3) is the bottleneck in the diesel additive production process. The diesel additive input rate is the average input rate for the aeration processes (A-1, A-2, and A-3) based on the maximum tank filling rate for each aeration process, a one-hour aeration batch processing time, and the maximum tank emptying rate for each aeration process.

Uncontrolled VOC Emission Factor (lbs VOC/gal additive) = [Density of Diesel Additive (lbs/gallon)] \* [VOC Loss During Aeration Process (lb VOC/lb additive)]

Uncontrolled/Unlimited PTE of VOC (tons/yr) = [Unlimited Diesel Additive Input Rate (gal/hr)] \* [Uncontrolled VOC Emission Factor (lbs VOC/gal additive)] \* [8,760 hr/yr] \* [ton/2000 lb]

VOC Emission Limit (lbs VOC/gallon additive) = [Density of Diesel Additive (lbs/gallon)] \* [VOC Loss During Aeration Process (lb VOC/lb additive)]

Limited PTE of VOC (tons/yr) = [Limited Diesel Additive Input (gallons/year)] \* [VOC Emission Limit (lbs VOC/gallon additive)] \* [ton/2000 lbs]

**Acronyms**

VOC = Volatile Organic Compounds  
PTE = Potential to Emit

**Appendix A: Emission Calculations  
Storage Tank and Loading Losses  
Volatile Organic Compound (VOC)**

Company Name: Global Energy Resources  
Source Address: 7415 Nelson Rd, Fort Wayne, IN 46803  
Operation Permit No.: M003-30426-00382  
Permit Reviewer: Nathan C. Bell

**Volatile Organic Compound (VOC) Emissions From Storage Tanks (Working and Breathing Losses) Using US EPA TANKS Version 4.09 program'**

Storage Tank ID	Product Stored	Tank Type	Roof Type	Tank Dimensions	Maximum Liquid Volume (gallons)	Turnovers per year	Product Throughput (gallons/yr)**	VOC Working Losses (lbs/yr)	VOC Breathing Losses (lbs/yr)	VOC Working Losses (tons/yr)	VOC Breathing Losses (tons/yr)
S-1	Soybean Oil	Horizontal	Fixed Dome	9.0 ft dia 44 ft length	20,939.2	148.56	3,110,709	6.83	2.07	0.003	0.0010
S-2	Soybean Oil	Horizontal	Fixed Dome	9.0 ft dia 44 ft length	20,939.2	148.56	3,110,709	6.83	2.07	0.003	0.0010
S-3	Soybean Oil	Horizontal	Fixed Dome	9.0 ft dia 42 ft length	19,987.0	148.56	2,969,313	6.52	1.97	0.003	0.0010
S-4	Soybean Oil	Horizontal	Fixed Dome	9.0 ft dia 48 ft length	22,842.7	148.56	3,393,501	7.45	2.26	0.004	0.0011
C-1	Corn Oil	Horizontal	Fixed Dome	9.0 ft dia 44 ft length	20,939.2	203.41	4,259,279	7.96	2.07	0.004	0.0010
C-2	Corn Oil	Horizontal	Fixed Dome	9.0 ft dia 44 ft length	20,939.2	203.41	4,259,279	7.96	2.07	0.004	0.0010
C-3	Corn Oil	Horizontal	Fixed Dome	9.0 ft dia 42 ft length	19,987.0	203.42	4,065,675	7.60	1.97	0.004	0.0010
E-1	Ethanol	Vertical	Fixed Cone	11.0 ft dia 28 ft height	19,905.0	56.90	1,132,581	296.30	77.99	0.148	0.0390
F-1	Finished Diesel Additive	Horizontal	Fixed Dome	9.0 ft dia 48 ft length	22,842.7	550.91	12,584,232	253.58	62.64	0.127	0.0313
F-1	Finished Diesel Additive	Horizontal	Fixed Dome	9.0 ft dia 48 ft length	22,842.7	550.91	12,584,232	253.58	62.64	0.127	0.0313
DS-1	Diesel	Horizontal	Fixed Dome	4.17 ft dia 10 ft length	1,000.0	135.20	135,200	1.05	0.37	0.001	0.0002
<b>Totals</b>								<b>855.66</b>	<b>218.12</b>	<b>0.43</b>	<b>0.11</b>

**ACRONYMS**  
VOC = Volatile Organic Compound

<b>Total Potential to Emit VOC (lbs/yr) =</b>	<b>1073.78</b>
<b>Total Potential to Emit VOC (tons/yr) =</b>	<b>0.54</b>

**Volatile Organic Compound (VOC) Emissions From Tanker Truck Loading (Working and Breathing Losses) Estimated Using US EPA TANKS Version 4.09 program'**

Storage Tank ID	Product Stored	Tank Type	Roof Type	Tank Dimensions	Maximum Liquid Volume (gallons)	Turnovers per year	Product Throughput (gallons/yr)**	VOC Working Losses (lbs/yr)	VOC Breathing Losses (lbs/yr)	VOC Working Losses (tons/yr)	VOC Breathing Losses (tons/yr)
Truck Load	Finished Diesel Additive	Horizontal	Fixed Dome	7.0 ft dia 21 ft length	6,046.0	4163.13	25,170,284	599.22	15.94	0.300	0.0080

**ACRONYMS**  
VOC = Volatile Organic Compound

<b>Total Potential to Emit VOC (lbs/yr) =</b>	<b>615.16</b>
<b>Total Potential to Emit VOC (tons/yr) =</b>	<b>0.31</b>

**Methodology**

\*VOC emissions from storage tanks and tanker truck loading were determined by the source using US EPA TANKS Version 4.09 program.  
The TANKS output was verified by IDEMto be accurate and complete.  
\*\*The aeration processes (A-1, A-2, and A-3) is the bottleneck in the diesel additive production process. The product throughputs for each of the products stored in tanks was based on the bottleneck for the aeration processes (A-1, A-2, and A-3).

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

**Company Name: Global Energy Resources**  
**Source Address: 7415 Nelson Rd, Fort Wayne, IN 46803**  
**Operation Permit No.: M003-30426-00382**  
**Permit Reviewer: Nathan C. Bell**

Emission Unit	Number of Units	Unit Heat Input Capacity MMBtu/hr	Combined Total Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Potential Emission tons/yr					
					PM*	PM10*	SO2	NOx**	VOC	CO
OH-1	1	0.080	0.080	0.70	0.001	0.003	0.000	0.035	0.002	0.029
WH-1	1	0.225	0.225	1.97	0.002	0.007	0.001	0.099	0.005	0.083
WH-2	1	0.225	0.225	1.97	0.002	0.007	0.001	0.099	0.005	0.083
WH-3	1	0.225	0.225	1.97	1.9E-03	0.007	0.001	0.099	0.005	0.083
<b>Totals</b>	<b>4</b>		<b>0.8</b>		<b>0.006</b>	<b>0.025</b>	<b>0.002</b>	<b>0.331</b>	<b>0.018</b>	<b>0.278</b>

Emission Unit	Potential Emission tons/yr									
	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
OH-1	7.4E-07	4.2E-07	2.6E-05	0.001	1.2E-06	1.8E-07	3.9E-07	4.9E-07	1.3E-07	7.4E-07
WH-1	2.1E-06	1.2E-06	7.4E-05	0.002	3.4E-06	4.9E-07	1.1E-06	1.4E-06	3.7E-07	2.1E-06
WH-2	2.1E-06	1.2E-06	7.4E-05	0.002	3.4E-06	4.9E-07	1.1E-06	1.4E-06	3.7E-07	2.1E-06
WH-3	2.1E-06	1.2E-06	7.4E-05	0.002	3.4E-06	4.9E-07	1.1E-06	1.4E-06	3.7E-07	2.1E-06
<b>Totals</b>	<b>6.9E-06</b>	<b>4.0E-06</b>	<b>2.5E-04</b>	<b>0.006</b>	<b>1.1E-05</b>	<b>1.7E-06</b>	<b>3.6E-06</b>	<b>4.6E-06</b>	<b>1.3E-06</b>	<b>6.9E-06</b>

**Total Potential to Emit HAPs (tons/yr) 0.006**

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 emission assumed equal to PM10 emissions

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

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

**Methodology**

Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) \* 8,760 hrs/yr \* 1 MMCF/1,000 MMBtu

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

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

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

**Abbreviations**

PM = Particulate Matter

NOx = Nitrous Oxides

DCB = Dichlorobenzene

Cr = Chromium

PM10 = Particulate Matter (<10 um)

VOC = Volatile Organic Compounds

Pb = Lead

Mn = Manganese

SO2 = Sulfur Dioxide

CO = Carbon Monoxide

Cd = Cadmium

Ni = Nickel

**Appendix A: Emission Calculations  
Fugitive Equipment Leaks**

**Company Name: Global Energy Resources  
Source Address: 7415 Nelson Rd, Fort Wayne, IN 46803  
Operation Permit No.: M003-30426-00382  
Permit Reviewer: Nathan C. Bell**

**Fugitive Equipment Leaks**

<b>Equipment</b>	<b>Service</b>	<b>Number of Units</b>	<b>Emission Factor (kg/hr/unit)*</b>	<b>Emission Factor (lb/hr/unit)</b>	<b>VOC Content (% by weight)**</b>	<b>Uncontrolled PTE (lb/hour)</b>	<b>Uncontrolled PTE (tons/year)</b>
Valves	Gas	6	5.97E-03	1.32E-02	10.0%	0.01	0.03
Valves	Light liquid	14	4.03E-03	8.88E-03	100.0%	0.12	0.54
Valves	Heavy liquid	105	2.30E-04	5.07E-04	10.0%	0.01	0.02
Pump seals	Light liquid	1	1.99E-02	4.39E-02	100.0%	0.04	0.19
Pump seals	Heavy liquid	13	8.62E-03	1.90E-02	10.0%	0.02	0.11
Compressor seals	Gas	0	2.28E-01	5.03E-01	100.0%	0.00	0.00
Pressure relief valves	Gas	1	1.04E-01	2.29E-01	100.0%	0.23	1.00
Connectors	All	209	1.83E-03	4.03E-03	16.0%	0.14	0.59
Open-ended lines	All	0	1.70E-03	3.75E-03	100.0%	0.00	0.00
Sampling connections	All	18	1.50E-02	3.31E-02	20.0%	0.12	0.52
<b>Totals</b>						<b>0.69</b>	<b>3.02</b>

**Methodology**

\*Emission factors taken from Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017, Table 2-1.

\*\*As a worst case scenario, fugitive equipment leaks from the final diesel additive and vegetable oils were assumed to have a VOC content of 10%, and fugitive equipment leaks from natural gas equipment was assumed to have a VOC content of 10% (only gas service components are natural gas to heaters).

Emission Factor (lb/hr/unit) = [Emission Factor (kg/hr/unit)] \* [2.20462 lb/kg]

Uncontrolled PTE (lb/hour) = [Number of Units] \* [Emission Factor (lb/hr/unit)] \* [VOC Content (% by weight)]

Uncontrolled PTE (tons/year) = [Uncontrolled PTE (lb/hour)] \* [8760 hr/yr] \* [ton/2000 lb]

**Appendix A: Emission Calculations  
Fugitive Dust Emissions - Paved Roads**

**Company Name:** Global Energy Resources  
**Source Address:** 7415 Nelson Rd, Fort Wayne, IN 46803  
**Operation Permit No.:** M003-30426-00382  
**Permit Reviewer:** Nathan C. Bell

**Paved Roads at Industrial Site**

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Parameter	Vegetable Oil	Ethanol	Diesel Additive
Maximum Annual Throughput (gallons/year)*	25,168,465	1,132,581	25,170,284
Density of Material (lbs/gallon)	7.67	6.59	7.42

\*The aeration processes (A-1, A-2, and A-3) is the bottleneck in the diesel additive production process. The maximum annual throughputs for each of the products was based on the bottleneck for the aeration processes (A-1, A-2, and A-3).

Tanker Truck Capacity = **6,000** gallon/trip

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Vegetable Oil Tanker Truck Entering Full	Tanker Truck (6000 gal)	16.0	23.0	39.0	4.2E+03	1.6E+05	450	0.085	357.5
Vegetable Oil Tanker Truck Leaving Empty	Tanker Truck (6000 gal)	16.0	0	16.0	4.2E+03	6.7E+04	100	0.019	79.4
Ethanol Tanker Truck Entering Full	Tanker Truck (6000 gal)	16.0	19.8	35.8	1.9E+02	6.8E+03	450	0.085	16.1
Ethanol Tanker Truck Leaving Empty	Tanker Truck (6000 gal)	16.0	0	16.0	1.9E+02	3.0E+03	450	0.085	16.1
Diesel Additive Tanker Truck Entering Empty	Tanker Truck (6000 gal)	16.0	0.0	16.0	4.2E+03	6.7E+04	450	0.085	357.5
Diesel Additive Tanker Truck Leaving Full	Tanker Truck (6000 gal)	16.0	22.3	38.3	4.2E+03	1.6E+05	100	0.019	79.5
<b>Total</b>					<b>1.7E+04</b>	<b>4.7E+05</b>			<b>906.1</b>

Average Vehicle Weight Per Trip = **27.3** tons/trip  
Average Miles Per Trip = **0.053** miles/trip

Unmitigated Emission Factor,  $E_f = [k * (sL)^{0.91} * (W)^{1.02}]$  (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5
where k =	0.011	0.0022	0.00054
W =	27.3	27.3	27.3
sL =	9.7	9.7	9.7

lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)

tons = average vehicle weight (provided by source)

g/m<sup>2</sup> = silt loading value for paved roads at iron and steel production facilities (AP-42 Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E * [1 - (p/4N)]$  (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor,  $E_{ext} = E_f * [1 - (p/4N)]$

where p = **125** days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)

N = **365** days per year

	PM	PM10	PM2.5	lb/mile
Unmitigated Emission Factor, $E_f =$	2.535	0.507	0.1245	lb/mile
Mitigated Emission Factor, $E_{ext} =$	2.318	0.464	0.1138	lb/mile

Process	Vehicle Type	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)
Vegetable Oil Tanker Truck Entering Full	Tanker Truck (6000 gal)	0.4532	0.0906	0.0222	0.4144	0.0829	0.0203
Vegetable Oil Tanker Truck Leaving Empty	Tanker Truck (6000 gal)	0.1007	0.0201	0.0049	0.0921	0.0184	0.0045
Ethanol Tanker Truck Entering Full	Tanker Truck (6000 gal)	0.0204	0.0041	0.0010	0.0186	0.0037	0.0009
Ethanol Tanker Truck Leaving Empty	Tanker Truck (6000 gal)	0.0204	0.0041	0.0010	0.0186	0.0037	0.0009
Diesel Additive Tanker Truck Entering Empty	Tanker Truck (6000 gal)	0.4532	0.0906	0.0222	0.4144	0.0829	0.0203
Diesel Additive Tanker Truck Leaving Full	Tanker Truck (6000 gal)	0.1007	0.0201	0.0049	0.0921	0.0184	0.0045
		<b>1.149</b>	<b>0.230</b>	<b>0.056</b>	<b>1.050</b>	<b>0.210</b>	<b>0.052</b>

**Methodology**

Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]  
 Maximum trips per year (trip/yr) = [Maximum Annual Throughput (gallons/year)] / [Tanker Truck Capacity (gallons/trip)]  
 Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] \* [Maximum trips per year (trip/yr)]  
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
 Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] \* [Maximum one-way distance (mi/trip)]  
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]  
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]  
 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)  
 PM2.5 = PM10  
 PTE = Potential to Emit



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

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

TO: Luke Ice  
Global Energy Resources  
7415 Nelson Rd  
Fort Wayne, IN 46803

DATE: May 31, 2011

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

SUBJECT: Final Decision  
MSOP  
003-30426-00382

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:  
Mr. Ken Taylor (Mostardi Platt Environmental)  
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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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[www.idem.IN.gov](http://www.idem.IN.gov)

May 31, 2011

TO: Allen County Public Library

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

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

**Applicant Name: Global Energy Resources**  
**Permit Number: 003-30426-00382**

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

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

Enclosures  
Final Library.dot 11/30/07

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3		Duane & Deborah Clark Clark Farms 6973 E. 500 S. Columbia City IN 46725 (Affected Party)										
4		Mr. Victor Locke WPTA-TV P.O.Box 2121 Fort Wayne IN 46801 (Affected Party)										
5		Allen County Public Library 900 Library Plaza, P.O. Box 2270 Fort Wayne IN 46802 (Library)										
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10		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party)										
11		Kenard Taylor Mostardi Platt Environmental 1080 Breuckman Drive Crown Point IN 46307 (Consultant)										
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