



# 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: September 10, 2008

RE: Nature's Fuel / 085-26494-00115

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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## Federally Enforceable State Operating Permit OFFICE OF AIR QUALITY

**Nature's Fuel  
510 E. Main St.  
Atwood, Indiana 46502**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.**

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F 085-26494-00115	
Issued by:  <i>Original document signed by</i>  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 10, 2008   Expiration Date: September 10, 2013

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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 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

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The Permittee owns and operates a stationary source to convert wood and wood waste into renewable energy.

Source Address:	510 E. Main St., Atwood, Indiana 46502
Mailing Address:	421 East Cook Road, Suite 400, Fort Wayne, IN 46825
General Source Phone Number:	(260) 490-1777
SIC Code:	2869
County Location:	Kosciusko
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) pyrolysis unit, identified as EU-1, approved for construction in 2008, with a maximum capacity of 10 tons per hour, using no control, and exhausting to stack S1.
- (b) One (1) enclosed char load out system, approved for construction in 2008, using a baghouse, identified as CE-01, for a particulate control, exhausting to stack SE-01, the system consisting of the following:
  - (1) a char load out auger system
  - (2) a char chiller system
  - (3) a magnetic separator system
  - (4) a char screen system
  - (5) a container for the char, identified as a Gayload box

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

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This stationary source has following insignificant activities, as defined in 326 IAC 2-7-1(21).

- (c) Three (3) 7,000 gallon above ground fuel tanks.
- (d) One (1) natural gas-fired combustion unit with a maximum heat input rate of 5 MMBtu.
- (e) Unpaved roads and parking lots.

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

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

## SECTION B GENERAL CONDITIONS

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

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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 2-7) shall prevail.

### B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

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- (a) This permit, F 085-26494-00115, 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.3 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.4 Enforceability [326 IAC 2-8-6]

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

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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.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

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

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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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

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

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

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

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

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

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

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

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

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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) within ninety (90) days after issuance of this permit, 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 Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

Telephone Number: 317-233-0178 (ask for Compliance Section)

Facsimile Number: 317-233-6865

Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

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

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

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

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or

contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

- (a) All terms and conditions of permits established prior to F 085-26494-00115 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

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

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

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

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

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

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

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

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

**B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination**

[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

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

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

Request for renewal shall be submitted to:

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

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

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

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- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:
- Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
  - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

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

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

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit modification under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.25 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

#### C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

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

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

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

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred and fifty (250) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.3 Opacity [326 IAC 5-1]

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

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

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

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

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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]**

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

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

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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  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue

MC 61-52 IGCN 1003  
Indianapolis, Indiana 46204-2251

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

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

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

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

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

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

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

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

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

### **Compliance Requirements [326 IAC 2-1.1-11]**

#### **C.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 2-8-4][326 IAC 2-8-5(a)(1)]**

#### **C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]**

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

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

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

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

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

#### **C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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

#### **C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]**

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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 [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

#### **C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

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

within ninety (90) days after the date of issuance of this permit.

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

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; and/or
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

**C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]**

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

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

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

**C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

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

**C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]**

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit 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.

**Stratospheric Ozone Protection**

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

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

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

## SECTION D.1

## EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description [326 IAC 2-8]:

- (a) One (1) pyrolysis unit, identified as EU-1, approved for construction in 2008, with a maximum capacity of 10 tons per hour, using no control, and exhausting to stack S1.
- (b) One (1) enclosed char load out system, approved for construction in 2008, using a baghouse, identified as CE-01, for a particulate control, exhausting to stack SE-01, the system consisting of the following:
  - (1) a char load out auger system
  - (2) a char chiller system
  - (3) a magnetic separator system
  - (4) a char screen system
  - (5) a container for the char, identified as a Gayload box
- (c) Three (3) 7,000 gallon above ground fuel tanks.
- (d) One (1) natural gas-fired combustion unit with a maximum heat input rate of 5 MMBtu.

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

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

#### D.1.1 FESOP Limits [326 IAC 2-8]

Pursuant to 326 IAC 2-8-4 the PM10, SO2, and NOx emissions from the pyrolysis unit shall be as follows:

- (1) The PM10 emissions shall not exceed 3.1 pounds PM10 per ton of the feedstock to the pyrolysis, and the amount of the feedstock shall not exceed 55,500 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (2) The SO2 emissions shall not exceed 3.2 pounds SO2 per ton of the feedstock to the pyrolysis, and the amount of the feedstock shall not exceed 55,500 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (3) The NOx emissions shall not exceed 3.16 pounds NOx per ton of the feedstock to the pyrolysis, and the amount of the feedstock shall not exceed 55,500 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with these limits, combined with the potential to emit of PM10, SO2, and NOx from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, SO2, and NOx to less than 100 tons per year and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

#### D.1.2 VOC Limits [326 IAC 8-1-6]

---

In order to render the requirements of 326 IAC 8-1-6 not applicable, VOC emissions from the pyrolysis unit shall not exceed 0.89 pounds VOC per ton of the feedstock, and the amount of the feedstock shall not exceed 55,500 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit shall render the requirements of 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities New Facilities) not applicable.

#### D.1.3 Particulate [326 IAC 6-3-2]

---

Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the pyrolysis unit shall not exceed 19.2 pounds per hour when operating at a maximum process weight rate of 10 tons per hour.

Interpolation of the data for each above process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by the use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

#### D.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this pyrolysis unit.

### Compliance Determination Requirements

#### D.1.5 Particulate

---

In order to demonstrate compliance with D.1.3, the PM shall not exceed 1.92 pound per ton of the feedstock.

#### D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

---

- (a) Within one hundred and eighty (180) days after the initial startup, the Permittee shall perform PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and VOC testing in order to demonstrate compliance with Conditions D.1.1, D.1.2, and D.1.3 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Pursuant to 326 IAC 2-8, the Permitted shall perform dioxin and furans testing, within one hundred and eighty (180) days after the initial startup. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

#### D.1.7 PM10 Control

---

- (a) In order to comply with conditions D.1.1, the baghouse shall be in operation to control PM-10 at all times while the char load out system is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the

expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

#### D.1.8 Visible Emissions Notations

---

- (a) Visible emission notations of the char load out system stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) When an abnormal emission is observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps accordance to Section C- Response to Excursions or Exceedances shall be considered a deviation from this permit.

#### D.1.9 Parametric Monitoring

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- (a) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the char load out process, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.1.10 Broken or Failed Bag Detection

---

In the event that bag failure has been observed:

- (a) For multi-compartment units, if operations will continue for 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the bag-house's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been

repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

#### **D.1.11 Record Keeping Requirements**

---

- (a) To document compliance with Conditions D.1.1, and D.1.2 the Permittee shall maintain records of the amount delivered to the feeders per month.
- (b) To document compliance with Condition D.1.8, the Permittee shall maintain a daily record of the visible emissions from the stack exhaust controlling the char load out unit. The Permittee shall include in its daily record when a visible emissions is not observed (e.g. the process did not operate that day).
- (c) To document compliance with Condition D.1.9, the Permittee shall maintain a daily record of the pressure drop across the baghouse controlling the char load out unit. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (d) These records shall be maintained in accordance with Section C - General Record Keeping Requirements.

#### **D.1.12 Reporting Requirements**

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

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

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

Source Name: Nature's Fuel  
Source Address: 510 E. Main St., Atwood, Indiana 46502  
Mailing Address: 421 East Cook Road, Suite 400, Fort Wayne, IN 46825  
FESOP Permit No.: F 085-26494-00115

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)\_\_\_\_\_
- Report (specify)\_\_\_\_\_
- Notification (specify)\_\_\_\_\_
- Affidavit (specify)\_\_\_\_\_
- Other (specify)\_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

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

**FESOP Quarterly Report**

Source Name: Nature's Fuel  
Source Address: 510 E. Main St., Atwood, Indiana 46502  
Mailing Address: 421 East Cook Road, Suite 400, Fort Wayne  
FESOP Permit No.: F 085-26494-00115  
Facility: Pyrolysis  
Parameter: Amount of the feedstock  
Limit: The feedstock shall not exceed 55,500 tons per twelve (12) consecutive month period

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

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

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

Source Name: Nature's Fuel  
Source Address: 510 E. Main St., Atwood, Indiana 46502  
Mailing Address: 421 East Cook Road, Suite 400, Fort Wayne, IN 46825  
FESOP Permit No.: F 085-26494-00115

**This form consists of 2 pages**

**Page 1 of 2**

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

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

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

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

Page 2 of 2

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

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

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

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

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

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION  
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Nature's Fuel  
 Source Address: 510 E. Main St., Atwood, Indiana 46502  
 Mailing Address: 421 East Cook Road, Suite 400, Fort Wayne, IN 46825  
 FESOP Permit No.: F 085-26494-00115

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

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

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

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

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

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

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

Attach a signed certification to complete this report.

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

Addendum to the Technical Support Document (ATSD) for a  
FESOP

<b>Source Background and Description</b>
--

<b>Source Name:</b>	<b>Nature's Fuel</b>
<b>Source Location:</b>	<b>510 E. Main Street, Atwood, IN 46502</b>
<b>County:</b>	<b>Kosciusko</b>
<b>SIC Code:</b>	<b>2869</b>
<b>Exemption No.:</b>	<b>F 085-26494-00115</b>
<b>Permit Reviewer:</b>	<b>Renee Traivaranon</b>

On July 9, 2008, the Office of Air Quality (OAQ) had a notice published in the Times Union, in Warsaw, Indiana in Kosciusko County, stating that Nature's Fuel had applied for a FESOP to construct and operate a new research and development facility to convert wood and wood waste into renewable energy. The notice also stated that the OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

<b>Comments and Responses</b>
-------------------------------

During the public notice period, the following comments on the draft FESOP were received from neighbors living near the source; on July 15, 2008, a comment was received via e-mail from Gary and Grace Williams, on July 20, 2008 a comment was received via e-mail from Howard Barnhart, Phil and Sharon Byrer, on August 8, 2008, comments and petitioners' signatures were received from Betty L. Swanson and a hard copy was received from Nina Suephering.

**Comment 1:**

The commenters indicated that that they did not receive the information about the permit issuance for this source.

**Response to Comment 1:**

The interested parties were included in the list for future activities of the source. There are no changes to permit due to this comment.

**Comment 2:**

A copy of the application and related documents could not be found in the public library nor the internet.

**Response to Comment 2:**

The source indicated that copy of the application was placed in the Warsaw Public Library by the owner and the source's representative. The draft permit and the technical support document have been available at the library since July 8, 2008. Documents related to the permit can be found at the internet at <http://www.in.gov/ai/appfiles/idem-caats/>. There are no changes to permit due to this comment.

**Comment 3:**

The commenters indicated they opposed the emissions of any air pollutants created during the operation.

**Response to Comment 3:**

The initial application indicated that there would be minimum amount of any pollutants created by this operation. However, this application was reviewed in detail according to the requirements for a FESOP, which is one of the National Ambient Air Quality Standard (NAAQs). The NAAQs is the standard that protects basic health and the environment from industrial operations. Also, the most recent emission factors from the EPA were used to determine the potential to emit criteria pollutants from this operation, when source operates 24 hours per day and 365 days per week. In addition, the source was required to test these criteria pollutants; PM, PM10, SO<sub>2</sub>, NO<sub>x</sub>, VOC and dioxins/furans to ensure that the emissions were within the required limits by the NAAQs. (See TSD for emissions of each criteria and hazardous pollutants).

There are no changes to permit due to this comment.

**Comment 4:**

The commenters indicated that their properties border the company, and there has been a significant increase in the dust in their homes and they are very concerned about what they are breathing.

**Response to Comment 4:**

IDEM has inquired about the dust generated from this source per comments. IDEM was informed that the dust could have come from the area that needs to be graded and formed to make a retention pond and the re-work of the road. The source has not yet constructed nor operated the pyrolysis unit.

On August 19, 2008, the Owner has scheduled a Community Meeting to answer any concerns that the town may have regarding the source, and this issue was included on the agenda. (See Appendix B to ATSD: summary of the meeting, dated August 19, 2008.)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), sources are not allowed to cause or release 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.

There are no changes to permit due to this comment.

**Comment 5:**

The commenters raised concerns about past operation at this site, future operation at this company relating to noise, fire, safety, dirt, flood, open burning, smoke, odors.

**Response to Comment 5:**

The Permittee or the Operator is not allowed to 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 (see C.4 condition.) IDEM has no authority to regulate odor or noise. However, unusual odors or changes in odors or noise may be an indication that a process is not running correctly.

The source is required to operate and monitor the operation in a safe and sound manner according to the requirements of 326 IAC 2-8. The source is also required to report any deviation and emergency

occurrence within two (2) working days.

IDEM encourages citizens who have a concern about a source of pollution to file a complaint. IDEM has a Complaint Clearinghouse that is the central point for receiving and coordinating complaints within IDEM and with other local, state, and federal agencies. The Complaint Clearinghouse staff also establishes agency standards for responding to and tracking complaints to measure agency responsiveness and identify trends or issues as they relate to complaints. You can file a complaint with IDEM three different ways:

1. [Submit a complaint on-line](http://www.in.gov/idem/5275.htm) at <http://www.in.gov/idem/5275.htm> on the internet,
2. Call the Complaint Coordinator at (800) 451-6027 ext.24464, or
3. Print, complete, and mail a paper-based [Complaint Submission Form \[PDF\]](http://www.in.gov/icpr/webfile/formsdiv/50014.pdf). This form is found at <http://www.in.gov/icpr/webfile/formsdiv/50014.pdf> on the internet.

Spills and other environmental emergencies should be immediately reported to IDEM at (888) 233-7745.

IDEM was informed that the owners had hand delivered more than 120 letters to individuals and held a community meeting on August 19, 2008 to answer any concerns that the town had. According to the source, almost all of the petitioners were satisfied with this meeting. A summary of the meeting was submitted to IDEM and it is appended to this ATSD (Appendix B to ATSD).

There are no changes to permit due to this comment.

<b>Additional Changes</b>
---------------------------

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

- (1) The enclosed char load out system has the PTE of PM/PM10 which exceeds the threshold for an significant unit. Therefore, this unit was added to the emission units and pollution control equipment in A.2 and D.1 as follows:

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

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

- (a) One (1) pyrolysis unit, identified as EU-1, approved for construction in 2008, with a maximum capacity of 10 tons per hour, using no control, and exhausting to stack S1.
- (b) **One (1) enclosed char load out system, approved for construction in 2008, using a baghouse, identified as CE-01, for a particulate control, exhausting to stack SE-01, the system consisting of the following:**
  - (1) **a char load out auger system**
  - (2) **a char chiller system**
  - (3) **a magnetic separator system**
  - (4) **a char screen system**
  - (5) **a container for the char, identified as a Gayload box**

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

This stationary source has following insignificant activities, as defined in 326 IAC 2-7-1(21).

- ~~(b)~~ (c) Three (3) 7,000 gallon above ground fuel tanks.
- ~~(e)~~ (d) One (1) natural gas-fired combustion unit with a maximum heat input rate of 5 MMBtu.
- ~~(d)~~ (e) Unpaved roads and parking lots.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8]:

- (a) One (1) pyrolysis unit, identified as EU-1, approved for construction in 2008, with a maximum capacity of 10 tons per hour, using no control, and exhausting to stack S1.
- (b) One (1) enclosed char load out system, approved for construction in 2008, using a baghouse, identified as CE-01, for a particulate control, exhausting to stack SE-01, the system consisting of the following:**
  - (1) a char load out auger system**
  - (2) a char chiller system**
  - (3) a magnetic separator system**
  - (4) a char screen system**
  - (5) a container for the char, identified as a Gayload box**
- ~~(b)~~ (c) Three (3) 7,000 gallon above ground fuel tanks.
- ~~(e)~~ (d) One (1) natural gas-fired combustion unit with a maximum heat input rate of 5 MMBtu.

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

- (2) The FESOP limit for PM10 for this source was revised as follows after the char load out was added to the permit (see the following re-calculation note for PM/PM10 emissions.)

D.1.1 FESOP Limits [326 IAC 2-8]

Pursuant to 326 IAC 2-8-4 the PM10, SO2, and NOx emissions from the pyrolysis unit shall be as follows:

- (1) The PM10 emissions shall not exceed ~~3.4~~ **3.1** pounds PM10 per ton of the feedstock to the pyrolysis, and the amount of the feedstock shall not exceed 55,500 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

**NOTE:** The PTE of PM/PM10 emissions for source before control and after issuance in the TSD were re-calculated as follows (see also the additional calculation of the char load out unit in appendix A1 to ATSD):

- (a) The following table reflects the unlimited potential to emit (PTE) of PM/PM10 for the entire source before controls.

Pollutant	Potential To Emit (tons/year)
PM	154 192
PM10	154 192

- (b) The table below summarizes the potential to emit of PM/PM10 for the entire source after issuance of this FESOP:

Process/Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)							
	PM	PM10	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Pyrolysis	53	<del>95.2</del> 86.6	89.6	87.7	24.8	8.3	0.05	0.039 (Hexane)
<b>Char enclosed load out system</b>	<b>8.6</b>	<b>8.6</b>	--	--	--	--	--	--
Insignificant Activities	4	4	4	4	4	4	--	--
Total PTE of Entire Source	57	99	94	92	29	13	0.05	0.39
Title V Major Source Thresholds	NA	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	NA	NA

- (3) The compliance determination for the char load out system was added as follows:

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) Within one hundred and eighty (180) days after the initial startup, the Permittee shall perform PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and VOC testing in order to demonstrate compliance with Conditions D.1.1, D.1.2, and D.1.3 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Pursuant to 326 IAC 2-8, within one hundred and eighty (180) days after the initial startup, the Permittee shall perform dioxin and furans testing. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

### **D.1.7 PM10 Control**

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- (a) In order to comply with conditions D.1.1, the baghouse shall be in operation to control PM-10 at all times while the char load out system is in operation.**
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.**

### **D.1.8 Visible Emissions Notations**

---

- (a) Visible emission notations of the char load out system stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.**
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.**
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.**
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.**
- (e) When an abnormal emission is observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps accordance to Section C- Response to Excursions or Exceedances shall be considered a deviation from this permit.**

### **D.1.9 Parametric Monitoring**

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- (a) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the char load out process, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.**

- (b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.**

#### **D.1.10 Broken or Failed Bag Detection**

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In the event that bag failure has been observed:

- (a) For multi-compartment units, if operations will continue for 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.**
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

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

#### **D.4.7 1.11 Record Keeping Requirements**

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- (a) To document compliance with Conditions D.1.1, and D.1.2 the Permittee shall maintain records of the amount delivered to the feeders per month.**
- (b) To document compliance with Condition D.1.8, the Permittee shall maintain a daily record of the visible emissions from the stack exhaust controlling the char load out unit. The Permittee shall include in its daily record when a visible emissions is not observed (e.g. the process did not operate that day).**
- (c) To document compliance with Condition D.1.9, the Permittee shall maintain a daily record of the pressure drop across the baghouse controlling the char load out unit. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).**
- (d) These records shall be maintained in accordance with Section C - General Record Keeping Requirements.**

#### **D.4.8 1.12 Reporting Requirements**

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<b>IDEM Contact</b>
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- (a) Questions regarding this proposed FESOP can be directed to Renee Traivaranon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5615 or toll free at 1-800-451-6027 extension 4-5615.**

- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

**Appendix A1: Emission Calculations**

**Company Name:** Nature's Fuel  
**Address City IN Zip:** 510 E. Main St., Atwood, IN 46502  
**Permit No.:** F 085-26494-00115  
**Reviewer:** Renee Traivaranon  
**Date:** May 6, 2008

**Potential to Emit before Baghouse**

<b>Emission Unit EU-1 (Baghouse CE-01)</b>	<b>PM/PM10 emissions</b>	
	0.005 gr/dscf x 6,000 dscf/min x 60 min/hr x pound/7000 gr (1-control eff.) =	8.57 lbs/hr
	0.005 gr/dscf x 12,000 dscf/min x 60 min/hr x 8760 hr/year x pound/7000 gr x ton/2000 pounds =	<b>37.54 tons/year</b>

**Methodology**

Outlet grain loading after control of 0.005 grains/dscf of PM/PM10

Emissions in pounds per hour = grains/dscf x exhaust air flow rate in dscf/minute x 60 minutes/hour x 7000 grains/pound

Emissions in tons per year = emissions in pounds per hour x 8760 hours/year x ton/2000 pounds

PM10 emissions equivalent to PM emissions

### Summary of Nature's Fuel Community Meetings Atwood, IN – 19 Aug 2008

As a response to a petition and three contacts from the community during the 30 day period for public comment to the FESOP process for Nature's Fuel's Atwood plant, Nature's Fuel (NF) rented the Atwood Community Building for the day of August 19, 2008. On the prior Friday, the CEO and COO hand delivered over 140 invitations to meetings scheduled for Tuesday, August 19, 2008 in the Atwood Community Building to every home, business, and church in the Atwood area.

NF's CEO, COO, and Dir of Mfg (serving currently as the Atwood plant manager) conducted the meetings. The letter sent to IDEM by a neighbor of the plant and initiator of the petition, Betty Swanson, was used by NF as an outline for the meetings to assure all concerns were addressed by NF. NF's COO started the meeting by apologizing for the need for secrecy at the NF Atwood facility until 18 patent claims on new processes could be successfully filed by the Barnes & Thornburg law firm.

Concerns of the community discussed in depth included the following:

- Problems and goals that led to the design of new processes and equipment for NF Atwood.
- A dusty environment
  - Discussed dust collection for new process, dust handling, bag house, and road improvements
- Storage building built too close to the road
  - Acknowledged mistake of local turn-key contractor, subsequent variance requests, berm creation, and commissioning of engineering firm for drainage plan which the local authorities approved, scheduled excavation, and variance approval.
- Water leaves NF property to flood adjacent houses
  - Discussed the two engineering firms NF hired to create the required flood and drainage plans, discussed the aerated (fountain) retention pond NF just received approval to build to handle even the 100 year flood level, and discussed the fire hydrant NF will install at the retention pond for use by the Atwood Fire Department (AFD) for any fire emergency in the Atwood area. The AFD currently has a 2 inch well that takes 15 min to fill their fire truck. NF will install the largest diameter hydrant (4 to 8 inch) that their equipment can handle and greatly reduce filling time. This should improve fire insurance rates for the local community. The three members of the Atwood Volunteer Fire Department that attended our 1PM session were excited about the prospect.
- Smoke filled my house this summer
  - Discussed the conversation we had with a member of the fire department about burning stumps outside, acknowledged that NF put out such a fire after a local complaint, and discussed NF's reaction to a second complaint and new policy to never burn brush, stumps, or damaged wood material outside its facilities in Atwood.
- Noise
  - We discussed our new processes that are electrically powered and more quiet than initial processes, our bag house that operates within compliance

noise levels but which we will further baffle to effect noise reduction, the berms that will be built up to deflect noise and water run off on three sides of the property as we take out dirt to create the retention pond. On the property sided by the railroad track, we discussed how to apply for a variance and the possibility of planting fast growing, tall, conifers to further contain noise. Ideas on how to avoid making noise with front loaders or lift trucks at night were discussed.

- Other questions asked which will receive further consideration at subsequent meeting of the NF staff included rodent control and pond safety. One question asked on a form but not verbalized concerned the degree of wear on roads.

The Mfg Dir then discussed future 24X7 operations, the need to hire local employees soon and the pay scales and skill sets required the solvency and lack of debt at NF, NF's prompt payment history, and materials used at the plant.

NF was able to dispel some incorrect rumors to the relief of those present. Rumors or misinformation included:

- Fears that NF was going to have garbage delivered to its Atwood facility on a daily basis to process into fuel
- NF owners were all attorneys
- NF would operate an incinerator at Atwood

NF's CEO then covered future plans for the company to build plants at landfills to process MSW and C&D waste into clean cellulosic biofuels.

A copy of a simple feedback questionnaire NF handed to each attendee is attached. Almost sixty people attended the three meetings. Four handed in applications for employment with NF but did not hand in a feedback questionnaire. We assume that a willingness to work for NF Atwood is an affirmative response to our first question.

53 people agreed that NF addressed the concerns they had. This included Betty Swanson who initiated the petition and her husband Troy. Only one person checked the box that they did not feel their concerns were addressed and one person checked both yes and no boxes.

30 people checked yes in the second box indicating a willingness to be a member of a feedback group to meet with NF management quarterly to review progress, discuss concerns, etc. NF was delighted to find that 4 people whose houses abutted the NF plant property were among those willing to participate including Betty Swanson and the owners of several duplexes on the east side of the plant. A majority of the attendees thanked NF for the meeting and shared our enthusiasm for green fuel and easing dependence on foreign oil.

NF considers the meetings a very good start at a long-term positive relationship with some very fine people who we are fortunate to have as neighbors in Atwood. We will form our feedback group shortly and keep them informed of improvements we make to the plant and for the community.

Glenn Johnson, COO  
Bill Sinish, CEO

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a New Source Construction and Federally Enforceable State Operating Permit (FESOP)

#### Source Description and Location

<b>Source Name:</b>	<b>Nature's Fuel</b>
<b>Source Location:</b>	<b>510 E. Main Street, Atwood, IN 46502</b>
<b>County:</b>	<b>Kosciusko</b>
<b>SIC Code:</b>	<b>2869</b>
<b>Exemption No.:</b>	<b>F 085-26494-00115</b>
<b>Permit Reviewer:</b>	<b>Renee Traivaranon</b>

On May 7, 2008 and June 25, 2008, the Office of Air Quality (OAQ) has received an application and additional information from Nature's Fuel related to a construction and operation of a new source to convert wood and wood waste into renewable energy.

#### Existing Approvals

There have been no previous approvals issued to this source.

#### Description of New Source Construction

The following is a list of the new emission units and pollution control devices:

- (a) One (1) pyrolysis unit, identified as EU-1, approved for construction in 2008, with a maximum capacity of 10 tons per hour, using no control, and exhausting to stack S1.

The following is a list of the insignificant activities:

- (b) Three (3) 7,000 gallon above ground fuel tanks.
- (c) One (1) natural gas-fired combustion unit with a maximum heat input rate of 5 MMBtu.
- (d) Unpaved roads and parking lots.

#### County Attainment Status

The source is located in Kosciusko 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>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.
PM <sub>10</sub>	Unclassifiable effective November 15, 1990 <sup>1</sup> .
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
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. Kosciusko 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) **PM2.5**  
 Kosciusko County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions.
- (c) **Other Criteria Pollutants**  
 Kosciusko County has been classified as attainment or unclassifiable in Indiana for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

**Fugitive Emissions**

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

**Enforcement Issues**

There are no pending enforcement actions related to this source.

**Emission Calculations**

See Appendix A of this TSD for detailed emission calculations (Pages 1 through 5 Appendix A).

**Permit Level Determination – FESOP**

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	154
PM10 <sup>(1)</sup>	154
SO <sub>2</sub>	114
NO <sub>x</sub>	92
VOC	39
CO	37
Single HAP	<0.1
Total HAPs	<1

(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". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM10, SO<sub>2</sub>, CO, and VOC each is greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) 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, the source is not subject to the provisions of 326 IAC 2-7 (Part 70 Permits) for HAPs.

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

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

Process/Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)							
	PM	PM10 *	SO <sub>2</sub>	NOx	VOC	CO	Total HAPs	Worst Single HAP
Pyrolysis	53**	95.2	89.6	87.7	24.8***	8.3	0.05	0.039 (Hexane)
Insignificant Activities	4	4	4	4	4	4	--	--
Total PTE of Entire Source	57	99	94	92	29	13	0.05	0.39
Title V Major Source Thresholds	NA	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	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". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.  
 \*\* The PM emissions limitation was derived from 326 IAC 6-3  
 \*\*\* The PTE of VOC was greater than 25 tons per year, but this facility is required to limit VOC emissions to less than 25 tons per year to render the requirements of 326 IAC 8-1-6 not applicable.

(a) FESOP Status

This new source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this new source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the pyrolysis will be limited as follows:

- (1) The PM10 emissions shall not exceed 3.4 pounds PM10 per ton of the feedstock to the pyrolysis, and the amount of the feedstock shall not exceed 55,500 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (2) The SO2 emissions shall not exceed 3.2 pounds SO2 per ton of the feedstock to the pyrolysis, and the amount of the feedstock shall not exceed 55,500 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (3) The NOx emissions shall not exceed 3.2 pounds NOx per ton of the feedstock to the pyrolysis, and the amount of the feedstock shall not exceed 55,500 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

Compliance with these limits, combined with the potential to emit of PM10, SO<sub>2</sub>, and NOx from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, SO<sub>2</sub>, and NOx to less than 100 tons per year and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

(b) Prevention of Significant Deterioration (PSD) Minor Source

This new source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit of each pollutant; PM, PM10, SO<sub>2</sub>, NOx, CO and VOC is less than 250 tons per year and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the Prevention of Significant Deterioration (PSD) requirements do not apply.

<b>Federal Rule Applicability Determination</b>
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New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

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

Compliance Assurance Monitoring (CAM)

- (c) 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 2-8-4 (FESOP)  
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.

- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))  
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the PSD section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The unlimited potential to emit of HAPs from the pyrolysis unit is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, the source is not subject to the requirements 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 Permits), 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)  
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 7-1.1-1 (Sulfur dioxide emission limitations: applicability)  
The source is not subject to the requirements of 326 IAC 7-1.1, because the source does not use coal, residual oil or distillate oil for combustion.
- (h) 326 IAC 10-1 (Nitrogen Oxides Control)  
The source is not subject to 326 IAC 10 (Nitrogen Oxides Control) because the source is not located in Clark or Floyd Counties.

#### Pyrolysis Operation

- (i) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the pyrolysis unit shall not exceed 19.2 pounds per hour when operating at a process weight rate of 10 tons per hour. The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (j) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
The unlimited VOC potential emissions from the pyrolysis is greater than twenty-five (25) tons per year. However, the source shall limit VOC emissions to 0.89 pounds per ton of feedstock to the pyrolysis and limit the feedstock to 55,500 tons per twelve (12) consecutive month period with compliance at the end of each month.

The VOC emissions limitation was calculated as follows:

$$\begin{aligned}\text{VOC emissions (lb/ton)} &= 24.8 \text{ (tons/year)} / 55,500 \text{ (tons/year)} * 2,000 \text{ (pounds/ton)} \\ &= 0.894 \text{ pounds/ton of feedstock}\end{aligned}$$

Compliance with this limit, which is equivalent to VOC emissions less than twenty-five (25) tons per year, will render the requirements of 326 IAC 8-1-6 not applicable.

- (k) There are no other 326 IAC 8 Rules that are applicable to the pyrolysis unit.

### 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 May 7, 2008.

The construction and operation of this source shall be subject to the conditions of the attached proposed New Source Construction and FESOP No. 085-26494-00115. The staff recommends to the Commissioner that this New Source Construction and FESOP be approved.

### IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Renee Traivaranon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5615 or toll free at 1-800-451-6027 extension 4-5615.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

**Appendix A: Emissions Calculations**

**Company Name:** Nature's Fuel  
**Source Address:** 510 E. Main Street, Atwood, IN 46502  
**Permit Number:** F 085-26494-00115  
**Reviewer:** Renee Traivaranon  
**Date:** July 1, 2008

The following calculations determine the potential emissions from the Pyrolysis Unit

Maximum Feedstock Rate = 10 tons/hr  
Maximum throughput = 87,600 tons/yr

Criteria Pollutants	Uncontrolled <sup>(1)</sup> Emission Factors (lb/ton)	Unlimited/Uncontrolled Potential to Emit (tons/yr)
PM	3.430	150.2
PM10	3.430	150.2
SO <sub>2</sub>	3.230	141.5
NO <sub>x</sub>	3.160	138.4
CO	0.299	13.1
VOC	0.000	0.00

**Methodology**

Potential to Emit (tons/yr) = (Maximum Hourly feedstock (tons/hr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)\*(8760hr/yr)

<sup>(1)</sup> All Emission Factors are from FIRE 6.25, dated October 18, 2004, Uncontrol SCC 50300114 (Solid Waste Burned)

Throughput Limit = 55,500 tons/yr

Criteria Pollutants	Uncontrolled Emission Factors (lb/ton)	Emissions after Issurance (tons/yr)
PM	1.920	53.3
PM10	3.430	95.2
SO <sub>2</sub>	3.230	89.6
NO <sub>x</sub>	3.160	87.7
CO	0.299	8.3
VOC	0.894	24.8

**Methodology**

Potential to Emit (tons/yr) = (Maximum Throughput (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)

All Emission Factors are from FIRE 6.25, dated October 18, 2004, Uncontrol SCC 50300114 (Solid Waste Burned) except PM and VOC

PM emissions per feedstock was limited to 1.92 lb/ton because of 326 IAC 6-3 limit requirements (see 326 IAC 6-3 in TSD)

Since VOC factor is not reliable, the emission factor was determine by the following

VOC = (24.8 tons/yr) / (55,500 tons/yr) \* (2000 lb/ton) (See also 326 IAC 8-1-6 requirements in TSD)

**Appendix A: Emissions Calculations**  
**Pyrolysis**  
**Hazardous Air Pollutants**

**Company Name:** Nature's Fuel  
**Source Address:** 510 E. Main Street, Atwood, IN 46502  
**Permit Number:** F 085-26494-00115  
**Reviewer:** Renee Traivaranon  
**Date:** July 1, 2008

The following calculations determine the unlimited/uncontrolled HAP emissions from the pyrolysis

Maximum feedstock = 10 tons/hr

Hazardous Air Pollutant	Unlimited/Uncontrolled Emission Factors (lb/ton)	Unlimited/Uncontrolled Potential to Emit (tons/yr)
Arsenic	6.69E-04	3.35E-06
Cadmium	2.41E-03	1.21E-05
Chromium	3.31E-03	1.66E-05
Dioxin*	2.90E-06	1.45E-08
Hydrogen Chloride	2.15E+00	1.08E-02
Lead	2.82E-03	1.41E-05
Nickel	5.52E-03	2.76E-05
Mercury	5.60E-03	2.80E-05
<b>Total HAPs</b>		0.01
<b>Worst Single HAP</b>		<b>0.01</b>
		<b>HCl</b>

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual feedstock (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)  
Emission Factors are from Fire Version 6.25, dated October 18, 2004, SCC 50300114 (Solid Waste Burned)

\*dioxin = Chlorodibenzo-p-dioxin, chlorodibenzofurans total

HCL = Hydrogen Chloride

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only**

**Company Name:** Nature's Fuel  
**Address City IN Zip:** 510 E. Main Street, Atwood, IN 46502  
**Permit Number:** F 085-26494-00115  
**Reviewer:** Renee Traivaranon  
**Date:** June 25, 2008

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

5.0

43.8

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.04	0.2	0.01	2.2	0.1	1.8

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

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

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

See page 2 for HAPs emissions calculations.

**Appendix A: Emissions Calculations  
Natural Gas Combustion Only  
HAPs Emissions**

**Company Name:** Nature's Fuel  
**Address City IN Zip:** 510 E. Main Street, Atwood, IN 46502  
**Permit Number:** F 085-26494-00115  
**Reviewer:** Renee Traivaranon  
**Date:** June 25, 2008

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	4.599E-05	2.628E-05	1.643E-03	3.942E-02	7.446E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.095E-05	2.409E-05	3.066E-05	8.322E-06	4.599E-05

Methodology is the same as page 1.

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

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

**Company Name:** Nature's Fuel  
**Address City IN Zip:** 510 E. Main Street, Atwood, IN 46502  
**Permit Number:** F 085-26494-00115  
**Reviewer:** Renee Traivaranon  
**Date:** June 25, 2008

**Unpaved Roads at Industrial Site**

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	1.0	6.0	6.0	1.0	6.0	1320	0.250	1.5	547.5
Vehicle (leaving plant) (one-way trip)	1.0	6.0	6.0	1.0	6.0	1320	0.250	1.5	547.5
<b>Total</b>			<b>12.0</b>		<b>12.0</b>			<b>3.0</b>	<b>1095.0</b>

Average Vehicle Weight Per Trip =  $\frac{1.0}{0.25}$  tons/trip  
Average Miles Per Trip =  $\frac{1.0}{0.25}$  miles/trip

Unmitigated Emission Factor,  $E_f = k \left[ \left( \frac{s}{12} \right)^a \right] \left[ \left( \frac{W}{3} \right)^b \right]$  (Equation 1a from AP-42 13.2.2)

	PM	PM10	
where k =	4.9	1.5	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	= constant (AP-42 Table 13.2.2-2)
W =	1.0	1.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E_f \left[ \frac{365 - P}{365} \right]$

Mitigated Emission Factor,  $E_{ext} = E_f \left[ \frac{365 - P}{365} \right]$   
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	
Unmitigated Emission Factor, $E_f$ =	1.57	0.40	lb/mile
Mitigated Emission Factor, $E_{ext}$ =	1.03	0.26	lb/mile
Dust Control Efficiency =	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.43	0.11	0.28	0.07	0.14	0.04
Vehicle (leaving plant) (one-way trip)	0.43	0.11	0.28	0.07	0.14	0.04
<b>Total</b>	<b>0.86</b>	<b>0.22</b>	<b>0.57</b>	<b>0.14</b>	<b>0.28</b>	<b>0.07</b>

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Unmitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Mitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) \* (1 - Dust Control Efficiency)

**Abbreviations**

PM = Particulate Matter  
PM10 = Particulate Matter (<10 um)  
PTE = Potential to Emit