INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: November 18, 2009

RE: POET Biorefining - Alexandria / 095-28069-00127

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

IDEM

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Chad Beetz
POET Biorefining - Alexandria
PO Box 717
Alexandria, IN 46001

November 18, 2009

Re: 095-28069-00127
First Significant Revision to
F095-23482-00127

Dear Mr. Beetz:

POET Biorefining - Alexandria was issued a Federally Enforceable State Operating Permit (FESOP) No. F095-23482-00127 on January 29, 2007, for a stationary fuel ethanol production source located at 13179 N 100 E, Alexandria, IN 46001. On June 2, 2009, the Office of Air Quality (OAQ) received an application from the source requesting the ability to continue to operate the fermentation and distillation operations during periods of RTO downtime. The scrubber will still be in operation. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Jillian Bertram, of my staff, at 317-234-5377or 1-800-451-6027, and ask for extension 4-5377.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

IC/JLB

cc: File - Madison County
Madison County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Billing, Licensing and Training Section

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NEW CONSTRUCTION AND FEDERALLY ENFORCEABLE STATE OPERATING PERMIT OFFICE OF AIR QUALITY

POET Biorefining – Alexandria
13179 North 100 East, Alexandria, IN 46001

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

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. This permit also addresses certain new source review requirements and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-8-11.1, applicable to those conditions.

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.: F095-23482-00127	
Issued by: Nisha Sizemore, Chief Permit Administration and Support Section Office of Air Quality	Issuance Date: January 29, 2007 Expiration Date: January 29, 2012

First Administrative Amendment 095-25179-00127, issued on October 23, 2007
Second Administrative Amendment 095-25333-00127, issued November 13, 2007
First Minor Permit Revision 095-27796-00127, issued May 19, 2009

First Significant Permit Revision No.: 095-28069-00127	
Issued by: Iryn Calilung, Section Chief Permit Administration and Support Section Office of Air Quality	Issuance Date: November 18, 2009 Expiration Date: January 29, 2012

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary ethanol production plant.

Source Address:	13179 North 100 East, Alexandria, IN 46001
Mailing Address:	13179 North 100 East, PO Box 717, Alexandria, IN 46001
General Source Phone Number:	(765) 724-4384
SIC Code:	2869
County Location:	Madison
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

(a) One (1) grain receiving and handling operation, approved for construction in 2006, controlled by baghouse CE001, exhausting through stack SV001, and consisting of the following:

(1) Two (2) truck dump pits, identified as EU001, approved for construction in 2006, with a maximum throughput rate of 840 tons of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, approved for construction in 2006, with a maximum throughput rate of 840 tons per hour.

(3) Four (4) grain bins, identified as EU003, approved for construction in 2006, with a maximum throughput rate of 840 tons per hour.

(b) One (1) corn scalper, identified as EU004, approved for construction in 2006, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(c) One (1) surge bin, identified as EU005, approved for construction in 2006, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(d) Five (5) hammermills, identified as EU006, EU007, EU008, EU009, and EU010, approved for construction in 2006, each with a maximum throughput rate of 20 tons of corn per hour, controlled by baghouses CE003, CE004, CE005, CE006, and CE007, respectively, and exhausting through stacks SV003, SV004, SV005, SV006, and SV007, respectively.

(e) One (1) fermentation process, approved for construction in 2006, with a maximum throughput rate of 55,400 gallons per hour, controlled by scrubber CE008 and

regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through SV009. This process consists of the following:

(1) One (1) slurry tank, identified as EU011, approved for construction in 2006.

(2) Five (5) fermenters, identified as EU012 through EU016, approved for construction in 2006.

(3) One (1) yeast propagation tank, identified as EU017, approved for construction in 2006.

(4) One (1) beer well, identified as EU018, approved for construction in 2006.

(f) One (1) regenerative thermal oxidizer (RTO), identified as CE009, approved for construction in 2006, with a maximum heat input capacity of 30 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack SV009.

(g) One (1) distillation process, approved for construction in 2006, with a maximum throughput rate of 54,000 gallons of ethanol per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through stack SV009. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved for construction in 2006.

(2) One (1) rectifier column, identified as EU020, approved for construction in 2006.

(3) One (1) side stripper, identified as EU021, approved for construction in 2006.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved for construction in 2006.

(5) One (1) set of four (4) evaporators, identified as EU023, approved for construction in 2006.

(h) One (1) set of four (4) centrifuges, identified as EU024, approved for construction in 2006, controlled by regenerative thermal oxidizer (RTO) CE009 during normal operation, with emissions exhausted through stack SV009. During wetcake production, emissions from EU024 are exhausted through bypass stack SV008.

(i) Two (2) natural gas-fired DDGS dryers, identified as EU025 and EU026, approved for construction in 2006, each with a maximum heat input rate of 60 MMBtu/hr, with a total maximum throughput rate of 26 tons of DDGS per hour, controlled by multiclones CE013 and CE014, respectively, with emissions venting to regenerative thermal oxidizer (RTO) CE009, and exhausting to stack SV009.

(j) Two (2) natural gas-fired boilers, identified as EU027 and EU028, approved for construction in 2006, each with a maximum heat input rate of 143 MMBtu/hr each, with emissions exhausting to stacks SV013 and SV014, respectively.

(k) One (1) fluidized DDGS cooler, identified as EU029, approved for construction in 2006, with a maximum throughput rate of 26 tons/hr of DDGS, controlled by baghouse CE010, and exhausting to stack SV010.

(l) One (1) DDGS handling and storage operation, approved for construction in 2006, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS storage silo, identified as EU030, approved for construction in 2006, controlled by baghouse CE011, with emissions exhausted to stack SV011.

(2) One (1) DDGS silo bypass, identified as EU031, approved for construction in 2006, controlled by baghouse CE012, with emissions exhausted to stack SV012.

(3) One (1) DDGS storage building, identified as EU032, approved for construction in 2006, controlled by baghouse CE001, with emissions exhausted to stack SV001.

(m) One (1) DDGS loadout operation, approved for construction in 2006, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS conveyor, identified as EU033, approved for construction in 2006, controlled by baghouse CE001, with emissions exhausted to stack SV001.

(2) One (1) DDGS truck loadout spout, identified as EU034, approved for construction in 2006.

(3) One (1) DDGS rail loadout spout, identified as EU035, approved for construction in 2006, controlled by baghouse CE001, with emissions exhausted to stack SV001.

(n) One (1) ethanol loading system, identified as EU036, consisting of two (2) racks for trucks and two (2) racks for railcars, constructed in 2006 and modified in 2007, with a maximum throughput rate of 39,000 gallons per hour when loading trucks, and 144,000 gallons per hour when loading railcars. This unit is controlled by enclosed flare CE015, which is fueled by natural gas and has a pilot gas flare heat input capacity of 54,000 Btu/hr, and exhausts through stack SV016.

(o) One (1) diesel generator, identified as EU037, approved for construction in 2006, with a maximum power output rate of 2,640 HP, and exhausting to stack SV015.

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

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Solvent recycling systems with batch capacity less than or equal to 100 gallons.

(b) Forced and induced draft cooling tower system not regulated under a NESHAP.

(c) Replacement or repair of bags in baghouses and filters in other air filtration equipment.

(d) Paved roads and parking lots with public access. [326 IAC 6-4]

(e) Underground conveyors, including underground grain and product transfer conveyors.

(f) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(g) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths

(12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved for construction in 2006, with a maximum capacity of 250,000 gallons. [40 CFR 60, Subpart Kb]

(2) One (1) denaturant tank, identified as T002, constructed in 2007, approved for modification in 2009, with a maximum capacity of 250,000 gallons of denaturant. [40 CFR 60, Subpart Kb]

(3) One (1) 200-proof ethanol tank, identified as T003, constructed in 2007, approved for modification in 2009, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol. [40 CFR 60, Subpart Kb]

(4) One (1) 200-proof ethanol tank, identified as T004, constructed in 2007, approved for modification in 2009, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol. [40 CFR 60, Subpart Kb]

(5) One (1) denaturant tank, identified as T005, approved for construction in 2006, with a maximum capacity of 126,900 gallons of natural gasoline. [326 IAC 8-9] [40 CFR 60, Subpart Kb]

(6) One (1) diesel storage tank, identified as T006, approved for construction in 2006, with a maximum storage capacity less than 2,000 gallons of diesel fuel.

(7) One (1) thin stillage tank, identified as T007, approved for construction in 2006, with a maximum storage capacity of 500,000 gallons of thin stillage.

(8) One (1) syrup tank, identified as T008, approved for construction in 2006, with a maximum storage capacity of 61,000 gallons of syrup.

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

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

SECTION B GENERAL CONDITIONS

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

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

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

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

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 and [326 IAC 2-8] when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.

(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

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

(a) This permit, 095-23482-00127, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.6 Enforceability [326 IAC 2-8-6]

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

B.7 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

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

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

B.9 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

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

B.11 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.12 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 and Enforcement 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.13 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) prior to startup of operations, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The 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.14 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

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

Indiana Department of Environmental Management
Compliance and Enforcement 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.15 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to 095-23482-00127 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.16 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.17 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 and Enforcement Branch, 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.18 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty

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

B.19 Permit Renewal [326 IAC 2-8-3(h)]

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

Request for renewal shall be submitted to:

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

(b) A timely renewal application is one that is:

(1) Submitted at least 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.20 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

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

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, 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 in 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 Federally Enforceable State Operating Permit
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.22 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.23 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC13-30-3-1]

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.24 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require 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.25 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.26 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.1 and A.2.

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

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

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

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

C.3 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

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

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

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

C.7 Stack Height [326 IAC 1-7]

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

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

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

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

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

C.9 Performance Testing [326 IAC 3-6]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval. 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, Indiana 46204-2251

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

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

C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented prior to startup of operations. 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 prior to startup of operations, 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

C.12 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

(a) The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment.

(b) In the event that a breakdown of a continuous emission monitoring system occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

(c) Whenever a continuous emission monitor other than an opacity monitor is malfunctioning or will be down for calibration, maintenance, or repairs for a period of four (4) hours or more, a calibrated backup CEMS shall be brought online within four (4) hours of shutdown of the primary CEMS, and shall be operated until such time as the primary CEMS is back in operation.

(d) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a continuous emission monitoring system pursuant to 40 CFR 60, Subpart Db.

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

C.14 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

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

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative [326 IAC 2-8-4][326 IAC 2-8-5] or other 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.15 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.16 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;

(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.17 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.18 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 prior to startup of operations.

C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, 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.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS – Grain and DDGS Handling Processes

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

(a) One (1) grain receiving and handling operation, approved for construction in 2006, controlled by baghouse CE001, exhausting through stack SV001, and consisting of the following:

(1) Two (2) truck dump pits, identified as EU001, approved for construction in 2006, with a maximum throughput rate of 840 tons of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, approved for construction in 2006, with a maximum throughput rate of 840 tons per hour.

(3) Four (4) grain bins, identified as EU003, approved for construction in 2006, with a maximum throughput rate of 840 tons per hour.

(b) One (1) corn scalper, identified as EU004, approved for construction in 2006, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(c) One (1) surge bin, identified as EU005, approved for construction in 2006, with a maximum throughput rate of 140 tons of corn per hour, controlled by baghouse CE002, and exhausting through stack SV002.

(d) Five (5) hammermills, identified as EU006, EU007, EU008, EU009, and EU010, approved for construction in 2006, each with a maximum throughput rate of 20 tons of corn per hour, controlled by baghouses CE003, CE004, CE005, CE006, and CE007, respectively, and exhausting through stacks SV003, SV004, SV005, SV006, and SV007, respectively.

(l) One (1) DDGS handling and storage operation, approved for construction in 2006, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS storage silo, identified as EU030, approved for construction in 2006, controlled by baghouse CE011, with emissions exhausted to stack SV011.

(2) One (1) DDGS silo bypass, identified as EU031, approved for construction in 2006, controlled by baghouse CE012, with emissions exhausted to stack SV012.

(3) One (1) DDGS storage building, identified as EU032, approved for construction in 2006, controlled by baghouse CE001, with emissions exhausted to stack SV001.

(m) One (1) DDGS loadout operation, approved for construction in 2006, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) One (1) DDGS conveyor, identified as EU033, approved for construction in 2006, controlled by baghouse CE001, with emissions exhausted to stack SV001.

(2) One (1) DDGS truck loadout spout, identified as EU034, approved for construction in 2006.

(3) One (1) DDGS rail loadout spout, identified as EU035, approved for construction in 2006, controlled by baghouse CE001, with emissions exhausted to stack SV001.

Insignificant Activity:

(d) Paved roads and parking lots with public access. [326 IAC 6-4]

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

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

Construction Conditions

General Construction Conditions

D.1.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated there under, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.1.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.1.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operation Conditions

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

D.1.4 PM and PM10 Emissions [326 IAC 2-2] [326 IAC 2-8-4]

(a) The PM and PM10 emissions from the following units shall not exceed the emission limits listed in the table below.

Unit ID	Unit Description	Baghouse ID	PM/PM10 Emission Limit (lbs/hr)
EU001, EU002, EU003, EU032, EU033, EU035	Grain Receiving, Conveyors, and Storage Bins, and DDGS conveying, storage, and loadout	CE001	0.80
EU004, EU005	Corn Scalper, Surge Bin	CE002	0.09
EU006	Hammermill #1	CE003	0.41
EU007	Hammermill #2	CE004	0.41
EU008	Hammermill #3	CE005	0.41
EU009	Hammermill #4	CE006	0.41
EU010	Hammermill #5	CE007	0.41
EU030	DDGS Silo Loading	CE011	0.14
EU031	DDGS Silo Bypass	CE012	0.14

(b) The total grain received shall not exceed 683,280 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The total DDGS produced shall not exceed 201,480 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Combined with the PM/PM10 emissions from other emission units, the PM/PM10 emissions from the entire source are limited to less than 100 tons/yr. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (PSD) are not applicable.

D.1.5 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of following operations shall not exceed the pound per hour limits listed in the table below:

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
EU001, EU002, EU003	Grain Receiving, Conveyors, and Storage Bins	840	75.4
EU004, EU005	Corn Scalper, Surge Bin	140	54.7
EU006	Hammermill #1	20	30.5
EU007	Hammermill #2	20	30.5
EU008	Hammermill #3	20	30.5
EU009	Hammermill #4	20	30.5
EU010	Hammermill #5	20	30.5
EU030	DDGS Silo Loading	26	36.4
EU031	DDGS Silo Bypass	26	36.4
EU032	DDGS Storage Building	220	59.5
EU033	DDGS Conveyor	220	59.5
EU035	DDGS Rail Loadout Spout	220	59.5

The pounds per hour limitations were calculated using 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:

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

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

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emission may exceed the emission limits shown in the table above, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.1.7 Particulate Control

(a) In order to comply with Conditions D.1.4(a) and D.1.5, each of the following emission units shall be controlled by the associated baghouse, as listed in the table below, when these units are in operation:

Unit ID	Unit Description	Baghouse ID
EU001, EU002, EU003, EU032, EU033, EU035	Grain Receiving, Conveyors, and Storage Bins, and DDGS conveying, storage, and loadout	CE001
EU004, EU005	Corn Scalper, Surge Bin	CE002
EU006	Hammermill #1	CE003
EU007	Hammermill #2	CE004
EU008	Hammermill #3	CE005
EU009	Hammermill #4	CE006
EU010	Hammermill #5	CE007
EU030	DDGS Silo Loading	CE011
EU031	DDGS Silo Bypass	CE012

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

In order to demonstrate compliance with Conditions D.1.4(a) and D.1.5, the Permittee shall perform PM and PM10 testing for baghouses CE001, CE002, and one of CE003 through CE007, and one of baghouses CE011 or CE012, within 60 days after achieving the maximum capacity, but not later than 180 days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated on a different baghouse at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable and condensible PM10.

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

D.1.9 Visible Emissions Notations

(a) Visible emission notations of the baghouse stack exhausts (stacks SV001 through SV007, SV011, and SV012) shall be performed once per day during normal daylight operations. A trained employee or a trained contractor 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 or contractor is a person who has worked or trained 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) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.10 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the grain receiving and handling operations (EU001 through EU005), the hammermills (EU006 through EU010), and the DDGS handling and loadout operations (EU030 through EU033, and EU035), at least once per day when these units are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 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.1.11 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has 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).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. 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).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.1.12 Record Keeping Requirements

(a) To document compliance with Condition D.1.4(b), the Permittee shall maintain monthly records of the amount of grain received at this plant.

(b) To document compliance with Condition D.1.4(c), the Permittee shall maintain monthly records of the amount of DDGS produced.

(c) To document compliance with Condition D.1.9, the Permittee shall maintain records of daily visible emission notations of the baghouse stack exhausts.

(d) To document compliance with Condition D.1.10, the Permittee shall maintain daily records of pressure drop for baghouses during normal operation.

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

D.1.13 Reporting Requirements

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

SECTION D.2 FACILITY OPERATION CONDITIONS – Fermentation/Distillation and DDGS Drying

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

(e) One (1) fermentation process, approved for construction in 2006, with a maximum throughput rate of 55,400 gallons per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through stack SV009. This process consists of the following:

(1) One (1) slurry tank, identified as EU011, approved for construction in 2006.

(2) Five (5) fermenters, identified as EU012 through EU016, approved for construction in 2006.

(3) One (1) yeast propagation tank, identified as EU017, approved for construction in 2006.

(4) One (1) beer well, identified as EU018, approved for construction in 2006.

(f) One (1) regenerative thermal oxidizer (RTO), identified as CE009, approved for construction in 2006, with a maximum heat input capacity of 30 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack SV009.

(g) One (1) distillation process, approved for construction in 2006, with a maximum throughput rate of 54,000 gallons of ethanol per hour, controlled by scrubber CE008 and regenerative thermal oxidizer (RTO) CE009, with emissions exhausted through SV009. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved for construction in 2006.

(2) One (1) rectifier column, identified as EU020, approved for construction in 2006.

(3) One (1) side stripper, identified as EU021, approved for construction in 2006.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved for construction in 2006.

(5) One (1) set of four (4) evaporators, identified as EU023, approved for construction in 2006.

(h) One (1) set of four (4) centrifuges, identified as EU024, approved for construction in 2006, controlled by regenerative thermal oxidizer (RTO) CE009 during normal operation, with emissions exhausted through stack SV009. During wetcake production, emissions from EU024 are exhausted through bypass stack SV008.

(i) Two (2) natural gas-fired DDGS dryers, identified as EU025 and EU026, approved for construction in 2006, each with a maximum heat input rate of 60 MMBtu/hr, with a total maximum throughput rate of 26 tons of DDGS per hour, controlled by multiclones CE013 and CE014, respectively, with emissions venting to regenerative thermal oxidizer (RTO) CE009, and exhausting to stack SV009.

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

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

Construction Conditions

General Construction Conditions

D.2.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated there under, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.2.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.2.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operation Conditions

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

D.2.4 FESOP Limits [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8-4] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4 (FESOP), the Permittee shall comply with the following emission limits for the RTO system (CE009) and Scrubber (CE008), which are used to control the emissions from the fermentation and distillation processes, and the DDGS dryers (EU025 and EU026):

(a) During periods of normal operation (SV009):
  (1) PM/PM10 emissions shall not exceed 6.86 lbs/hr.

  (2) VOC emissions shall not exceed 10.5 lbs/hr.

  (3) CO emissions shall not exceed 10.5 lbs/hr.

  (4) NOx emissions shall not exceed 11.0 lbs/hr.

  (5) Acetaldehyde emissions shall not exceed 1.43 lbs/hr.

  (6) Total HAP emissions shall not exceed 1.88 lbs/hr.

(b) When the RTO is down (SV008):
  (1) The Scrubber shall continue to control the VOC emissions for the fermentation and distillation processes, during the periods when the RTO is down. The RTO downtime shall not exceed 500 hours per year.

  (2) VOC emissions from the scrubber (CE008) shall not exceed 30.8 pounds per hour.

  (3) Acetaldehyde emissions from the scrubber (CE008) shall not exceed 4.2 pounds per hour.

Combined with the PM/PM10, VOC, SO_2, CO, and NOx emissions from other units, the PM/PM10, SO_2, VOC, CO, and NOx emissions from the entire source are each limited to less

than 100 tons/yr. Combined with the HAP emissions from other units, the HAP emissions from the entire source are limited to less than 10 tons/yr for a single HAP and less than 25 tons/yr for total HAPs. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (MACT) are not applicable.

D.2.5 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall control the VOC emissions from the fermentation and distillation processes and the DDGS dryers (EU025 and EU026) using the following controls:

(a) Fermentation and Distillation Process

(1) The VOC emissions from the fermentation and distillation process shall be controlled by the combination of scrubber CE008 and regenerative thermal oxidizer CE009, unless otherwise specified in D.2.4.

(2) The overall efficiency for the scrubber CE008 and regenerative thermal oxidizer CE009 (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv.

(3) The overall efficiency for the scrubber CE008 (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 20 ppmv.

(b) DDGS dryers

(1) The VOC emissions from the DDGS dryers (EU025 and EU026) shall be controlled by regenerative thermal oxidizer CE009.

(2) The overall efficiency for the regenerative thermal oxidizer CE009 controlling the DDGS dryers (EU025 and EU026) (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv.

D.2.6 Standard of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 [40 CFR Part 60, Subpart VVa] [326 IAC 12]

Pursuant to 40 CFR 60, Subpart VVa, the Permittee shall comply with the requirement of Section E.1 for pumps; compressors; pressure relief devices in gas/vapor service; sampling connection systems; open-ended valves or lines; and valves.

D.2.7 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from each of following operations shall not exceed the pound per hour limit listed in the table below:

Unit ID	Unit Description	Max. Throughput Rate (tons/hr)	Particulate Emission Limit (lbs/hr)
EU025	DDGS Dryer	29.4	39.5
EU026	DDGS Dryer	29.4	39.5

The pounds per hour limitations were calculated using 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:

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

D.2.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

Compliance Determination Requirements

D.2.9 VOC and HAP Control [326 IAC 8-5-6]

(a) During periods of normal operation (SV009):
In order to comply with Condition D.2.4(a) the regenerative thermal oxidizer (RTO) CE009 and the scrubber CE008 shall be in operation and control emissions from:

(i) the DDGS dryers (EU025 and EU026) at all times that the dryers are in operation and

(ii) the fermentation and distillation processes at all times that these units are in operation, except as specified in Condition D.2.9(b).

(b) When the RTO is down (SV008)
In order to comply with D.2.4(b), when the regenerative thermal oxidizer (RTO) CE009 is down, emissions from the fermentation and distillation processes shall be controlled by the scrubber CE008 only. When the RTO is down, the DDGS dryers shall not be in operation.

D.2.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 8-5-6]

(a) In order to demonstrate compliance with Conditions D.2.4(a), D.2.5, and D.2.7, the Permittee shall perform PM, PM10, VOC (including emission rate, destruction efficiency, and capture efficiency), NOx, CO, and Acetaldehyde testing for the RTO system stack (SV009) within 60 days after achieving maximum capacity, but not later than 180 days after initial startup, utilizing methods as approved by the Commissioner. PM10 includes filterable and condensable PM10. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

(b) In order to demonstrate compliance with Condition D.2.4(b), the Permittee shall perform VOC (including emission rate, destruction efficiency, and capture efficiency) and Acetaldehyde testing for the scrubber (CE008) when the RTO is down five (5) years from the date of the most recent valid compliance demonstration for the RTO system stack (SV009), utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this 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.2.11 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust from the RTO system stack (SV009) 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) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.2.12 Regenerative Thermal Oxidizer Temperature [326 IAC 8-5-6]

To demonstrate compliance with 326 IAC 8-5-6, the Permittee shall meet the following requirements:

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the RTO system (CE009) for measuring operating temperature. For the purpose of this condition, continuous means no less than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average. From the date of startup until the stack test results are available, the Permittee shall operate the regenerative thermaloxidizer at or above the 3-hour average temperature of 1,400°F.

(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.2.4(a) and D.2.5(a).

(c) On and after the date the stack test results are available, the Permittee shall operate the regenerative thermaloxidizers at or above the 3-hour average temperature as observed during the compliant stack test.

D.2.13 Parametric Monitoring [326 IAC 8-5-6]

(a) The Permittee shall determine the appropriate duct pressure or fan amperage from the most recent valid stack test that demonstrates compliance with limits in Conditions D.2.4 and D.2.5, as approved by IDEM.

(b) The duct pressure or fan amperage shall be observed at least once per day when the regenerative thermaloxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in most recent compliant stack test.

D.2.14 Scrubber Pressure Drop and Flow Rate [326 IAC 8-5-6]

The Permittee shall monitor and record the pressure drop and the flow rate of the scrubber CE008 at least once per day when the fermentation and/or the distillation process is in operation. When for any one reading, the pressure drop across the scrubber 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) During normal operations as referenced in Condition D.2.4(a), when for any one reading, the flow rate of the scrubber is less than the normal minimum of 35 gallons per minute, or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.

(b) During RTO downtime as referenced in Condition D.2.4(b), when for any one reading, the flow rate of the scrubber is less than the normal minimum of 70 gallons per minute, or a minimum 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 or a flow rate that is below the above mentioned minimum 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.
The instruments used for determining the pressure drop and flow rate 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.2.15 Scrubber Detection

In the event that a scrubber malfunction has been observed:

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). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

D.2.16 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document compliance with Condition D.2.4(b), the Permittee shall maintain monthly records of the amount of hours the RTO (CE009) is down. A computerized system shall keep and maintain instantaneous records.

(b) To document compliance with Condition D.2.11, the Permittee shall maintain daily records of visible emission notations of the stack SV009. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(c) To document compliance with Condition D.2.12, the Permittee shall maintain continuous temperature records for the regenerative thermaloxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(d) To document compliance with Condition D.2.13, the Permittee shall maintain daily records of the duct pressure or fan amperage for the RTO system (CE009). The Permittee shall include in its daily record when the duct pressure or fan amperage is not taken and the reason for the lack of the reading (e.g., the process did not operate that day).

(e) To document compliance with Condition D.2.14, the Permittee shall maintain daily records of pressure drop and flow rate for scrubber CE008. The Permittee shall include in its daily record when the pressure drop and flow rate are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

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

D.2.17 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.4(b)(1) and shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 FACILITY OPERATION CONDITIONS – Boilers

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

(j) Two (2) natural gas-fired boilers, identified as EU027 and EU028, approved for construction in 2006, each with a maximum heat input rate of 143 MMBtu/hr, with emissions exhausting to stacks SV013 and SV014, respectively.

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

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

Construction Conditions

General Construction Conditions

D.3.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated there under, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.3.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.3.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operation Conditions

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

D.3.4 Nitrogen Oxides (NOx) [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-3]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable, the following conditions shall apply:

(a) The boilers shall only burn natural gas.

(b) The input of the natural gas to the boilers shall be limited to less than 2,505.4 MMCF per 12 consecutive month period, with compliance determined at the end of each month.

(c) NOx emissions from each boiler shall not exceed 35 pounds per MMCF.

(d) Total NOx emissions from the boilers shall be limited to 43.8 tons per year.

Combined with the NOx emissions from other units, the NOx emissions from the entire source are limited to less than one hundred (100) tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) are not applicable.

D.3.5 CO Emissions [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4, and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the following conditions shall apply:

(a) The boilers shall only burn natural gas.

(b) The input of natural gas to the boilers shall be limited to less than 2,505.4 MMCF per 12 consecutive month period, with compliance determined at the end of each month.

(c) CO emissions from each boiler shall not exceed 40 pounds per MMCF.

(d) Total CO emissions from fuel combustion shall be limited to 50.1 tons per year.

Combined with the CO emissions from other units, the CO emissions from the entire source are limited to less than one hundred (100) tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (PSD) are not applicable.

D.3.6 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission Limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from the boilers shall not exceed 0.250 pounds per million Btu heat input (lb/MMBtu). This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where Q = total source heat input capacity (MMBtu/hr)
For these units, Q = 286 MMBtu/hr.

D.3.7 Standard of Performance for Boilers [40 CFR Part 60, Subpart Db] [326 IAC 12]

Pursuant to 40 CFR 60, Subpart Db, the Permittee shall comply with the requirements of Section E.2 for the boilers.

D.3.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.3.9 Testing Requirements [326 IAC 2-8-5(a) (1), (4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.3.4 and D.3.5, the Permittee shall perform NOx and CO testing for the boilers, within sixty (60) days after achieving the maximum capacity, but not later than one hundred eighty (180) days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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

D.3.10 Record Keeping Requirements

(a) To document compliance with Conditions D.3.4 and D.3.5, the Permittee shall maintain daily records of the amount of fuel combusted in the boilers.

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

D.3.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.3.4 and D.3.5 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(7).

SECTION D.4 FACILITY OPERATION CONDITIONS – DDGS Cooler

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

(k) One (1) fluidized DDGS cooler, identified as EU029, approved for construction in 2006, with a maximum throughput rate of 26 tons/hr of DDGS, controlled by baghouse CE010, and exhausting to stack SV010.

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

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

Construction Conditions

General Construction Conditions

D.4.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.4.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.4.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operation Conditions

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

D.4.4 PM and PM10 Emissions [326 IAC 2-2] [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

The PM/PM10 emissions from the DDGS cooler, which is controlled by baghouse CE010, shall not exceed the 0.82 lbs/hr.

Combined with the PM/PM10 emissions from other emission units, the PM/PM10 emissions from the entire source are limited to less than 100 tons/yr. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), and 326 IAC 2-2 (PSD), are not applicable.

D.4.5 VOC Emissions [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8-4] [326 IAC 8-1-6]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall comply with the following:

VOC emissions shall not exceed 5.7 lbs/hr.

Combined with the VOC emissions from other emission units, the VOC emissions from the entire source are limited to less than 100 tons/yr. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 8-1-6 (BACT) are not applicable.

D.4.6 Acetaldehyde Emissions [326 IAC 2-2] [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall comply with the following:

(a) Acetaldehyde emissions from the DDGS cooler shall be controlled by the RTO and exhaust through SV008 unless as specified in Condition D.4.6(b).

(b) When acetaldehyde emissions are not being controlled by the RTO, the acetaldehyde emissions from the DDGS cooler shall exhaust through SV010. The hours of operation of the DDGS cooler when exhausting directly to SV010 shall not exceed 3660 hours per year.

Compliance with the requirements in combination with the Acetaldehyde emissions from other emission units, including emissions from the RTO downtime, the Acetaldehyde emissions from the entire source are limited to less than 10 tons/yr. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) are not applicable.

D.4.7 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from the DDGS cooler (EU029) shall not exceed 33.5 pounds per hour when operating at the maximum process throughput rate of 23 tons per hour.

The pounds per hour limitation, was calculated using 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:

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

D.4.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control device.

Compliance Determination Requirements

D.4.9 Particulate Control

(a) In order to comply with Conditions D.4.4 and D.4.6, Baghouse CE010 shall be in operation and control emissions from the DDGS cooler (EU029) at all times that this unit 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.4.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.4.4, D.4.5 and D.4.7, the Permittee shall perform PM, PM10, and VOC testing for the DDGS cooler (EU029) within 60 days after achieving the maximum capacity, but not later than 180 days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 includes filterable and condensible PM10.

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

D.4.11 Visible Emissions Notations

(a) Visible emission notations of the baghouse stack exhaust (stack SV010) shall be performed once per day during normal daylight operations. A trained employee or a trained contractor 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 or contractor is a person who has worked or trained 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) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.4.12 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the DDGS cooler (EU029) at least once per day when this unit is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 to 6.0 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.4.13 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has 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).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. 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).

Bag failure can be indicated by a significant drop in the baghouse=s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.4.14 Record Keeping Requirements

(a) To document compliance with Condition D.4.6(b), the Permittee shall maintain monthly records of the amount of hours the emissions from the DDGS cooler exhaust through SV010.

(b) To document compliance with Condition D.4.11, the Permittee shall maintain records of daily visible emission notations of the baghouse stack exhaust.

(c) To document compliance with Condition D.4.12, the Permittee shall maintain daily records of pressure drop for the baghouse during normal operation.

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

SECTION D.5 FACILITY OPERATION CONDITIONS – Ethanol Loading Racks

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

(n) One (1) ethanol loading system, identified as EU036, consisting of two (2) racks for trucks and two (2) racks for railcars, constructed in 2006 and modified in 2007, with a maximum throughput rate of 39,000 gallons per hour when loading trucks, and 144,000 gallons per hour when loading railcars. This unit is controlled by enclosed flare CE015, which is fueled by natural gas and has a pilot gas flare heat input capacity of 54,000 Btu/hr, and exhausting through stack SV016.

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

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

Construction Conditions

General Construction Conditions

D.5.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated there under, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

D.5.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.5.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

Operation Conditions

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

D.5.4 FESOP Limits [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP), the Permittee shall comply with the following emission limits for the ethanol loading racks:

(a) The total denatured ethanol load-out from loading rack EU036 shall not exceed 69,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The Permittee shall use flare CE015 to control the emissions from the ethanol loading rack (EU036).

(c) CO emissions from flare CE015 shall not exceed 0.084 lbs/kgal.

(d) NOx emissions from flare CE015 shall not exceed 0.0334 lbs/kgal.

(e) The VOC emissions from enclosed flare CE015 shall not exceed 2.81 lbs/hr.

(f) The ethanol loading rack shall utilize submerged loading method when loading trucks and railcars.

(g) The railcars and trucks shall not use vapor balance services.

(h) The flare CE015 shall be designed as a smokeless flare.

Combined with the VOC, CO, NOx and HAP emissions from other units, the VOC, CO, and NOx emissions from the entire source are each limited to less than 100 tons/yr and the HAP emissions from the entire source are limited to less than 10 tons/yr for a single HAP and less than 25 tons/yr for total HAPs. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) are not applicable.

D.5.5 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), and the Permittee shall collect and control the VOC emissions from the ethanol loading rack (EU036) using the following:

(a) The VOC emissions from the ethanol loading rack (EU036) shall be collected and controlled by enclosed flare CE015.

(b) The overall control efficiency for the vapor collection system and enclosed flare CE015 (including the capture efficiency and destruction efficiency) shall be at least 98%.

D.5.6 Standard of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 [40 CFR Part 60, Subpart VVa] [326 IAC 12]

Pursuant to 40 CFR 60, Subpart VVa, the Permittee shall comply with the requirement of - Section E.1 for pumps; compressors; pressure relief devices in gas/vapor service; sampling connection systems; open-ended valves or lines; and valves.

D.5.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and the control device.

Compliance Determination Requirements

D.5.8 VOC Control [326 IAC 8-5-6]

In order to comply with Conditions D.5.4 and D.5.5, enclosed flare CE015 shall be in operation and control emissions from the ethanol loading rack (EU036) at all times when this unit is in operation.

D.5.9 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 8-5-6]

In order to demonstrate compliance with Conditions D.5.4 and D.5.5, the Permittee shall perform VOC (including emission rate, destruction efficiency, and capture efficiency), CO, and NOx testing for enclosed flare CE015, within 60 days after achieving the maximum capacity, but not later than 180 days after initial startup, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this 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.5.10 Flare Pilot Flame [326 IAC 8-5-6]

In order to comply with Conditions D.5.4 and D.5.5, the Permittee shall monitor the presence of a flare pilot flame for flare CE015 using a thermocouple or any other equivalent device to detect the presence of a flame when ethanol loading rack EU036 is in operation.

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

D.5.11 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document compliance with Condition D.5.4(a), the Permittee shall maintain monthly records of the total amount of denatured ethanol loaded out from loading rack EU036.

(b) To document compliance with Condition D.5.10, the Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when loading rack EU036 is in operation.

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

D.5.12 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.5.4(a) 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(7).

SECTION D.6 FACILITY OPERATION CONDITIONS – Diesel Generator

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

(o) One (1) diesel Generator, identified as EU037, approved for construction in 2006, with a maximum power output rate of 2,640 horsepower, and exhausting to stack SV015.

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

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

D.6.1 FESOP Limits [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8-4] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4 (FESOP), the Permittee shall comply with the following limits for diesel generator EU037:

(a) The operating hours for the diesel generator (EU037) shall not exceed 100 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) CO Emissions from EU037 shall not exceed 4.58E-04 lbs/HP-hr.

Combined with the emission limits from other emission units, the emissions of each regulated pollutant from the entire source are each limited to less than 100 tons/yr. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) are not applicable.

D.6.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII] [326 IAC 12]

Pursuant to 40 CFR 60, Subpart IIII, the Permittee shall comply with the requirements of Section E.4 for emergency generator EU037.

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

D.6.3 Record Keeping Requirements

(a) To document compliance with Condition D.6.1(a), the Permittee shall maintain monthly records of the operating hours for the diesel generator (EU036).

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

D.6.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.6.1(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.7 FACILITY OPERATION CONDITIONS – Storage Tanks

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

Insignificant Activities

(g) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved for construction in 2006, with a maximum capacity of 250,000 gallons. [40 CFR 60, Subpart Kb]

(2) One (1) denaturant tank, identified as T002, constructed in 2007, approved for modification in 2009, with a maximum capacity of 250,000 gallons of denaturant. [40 CFR 60, Subpart Kb]

(3) One (1) 200-proof ethanol tank, identified as T003, constructed in 2007, approved for modification in 2009, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol. [40 CFR 60, Subpart Kb]

(4) One (1) 200-proof ethanol tank, identified as T004, constructed in 2007, approved for modification in 2009, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol. [40 CFR 60, Subpart Kb]

(5) One (1) denaturant tank, identified as T005, approved for construction in 2006, with a maximum capacity of 126,900 gallons of natural gasoline. [40 CFR 60, Subpart Kb]

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

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

D.7.1 Volatile Organic Compounds (VOC) [326 IAC 8-4-3]

(a) Pursuant to 326 IAC 8-4-3(b)(1)(B), storage tanks T002 and T005 shall be maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials.

(b) Pursuant to 326 IAC 8-4-3(b)(1)(C), all openings, except stub drains, are equipped with covers, lids, or seals such that:

(1) The cover, lid or seal in the closed potion at all times except when in actual use;

(2) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;

(3) Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

(c) Pursuant to 326 IAC 8-4-3(d) (Petroleum Liquid Storage Facilities), the Permittee shall maintain the following records for a period of two (2) years for tanks T002 and T005:

(1) The types of volatile petroleum liquid stored;

(2) The maximum true vapor pressure of the liquids as stored; and

(3) The results of the inspections performed on the storage vessels.

The above records shall be made available to the IDEM, OAQ upon written request.

D.7.2 Storage Tanks [326 IAC 12][40 CFR 60, Subpart Kb]

Pursuant to 40 CFR 60, Subpart Kb, the Permittee shall comply with the requirement of - Section E.3 for Tanks T001 through T005.

D.7.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.

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

D.7.4 Record Keeping Requirements

(a) To document compliance with Condition D.7.1, the Permittee shall maintain the following records for tanks T002 and T005:

(1) The types of volatile petroleum liquid stored;

(2) The maximum true vapor pressure of the liquids as stored; and

(3) The results of the inspections performed on the storage vessels.

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

SECTION E.1 FACILITY OPERATION CONDITIONS

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

(e) One (1) fermentation process, approved for construction in 2006, with a maximum throughput rate of 55,400 gallons per hour, controlled by scrubber CE008 and regenerative thermaloxidizer CE009, with emissions exhausted through stack SV009. This process consists of the following:

(1) One (1) slurry tank, identified as EU011, approved for construction in 2006.

(2) Five (5) fermenters, identified as EU012 through EU016, approved for construction in 2006.

(3) One (1) yeast propagation tank, identified as EU017, approved for construction in 2006.

(4) One (1) beer well, identified as EU018, approved for construction in 2006.

(g) One (1) distillation process, approved for construction in 2006, with a maximum throughput rate of 54,000 gallons of ethanol per hour, controlled by scrubber CE008 and regenerative thermaloxidizer CE009, with emissions exhausted through stack SV009. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved for construction in 2006.

(2) One (1) rectifier column, identified as EU020, approved for construction in 2006.

(3) One (1) side stripper, identified as EU021, approved for construction in 2006.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved for construction in 2006.

(5) One (1) set of four (4) evaporators, identified as EU023, approved for construction in 2006.

(h) One (1) set of four (4) centrifuges, identified as EU024, approved for construction in 2006, controlled by regenerative thermaloxidizer CE009 during normal operation, with emissions exhausted through tack SV009. During wetcake production, emissions from EU024 are exhausted through bypass stack SV008.

(n) One (1) ethanol loading system, identified as EU036, consisting of two (2) racks for trucks and two (2) racks for railcars, constructed in 2006 and modified in 2007, with a maximum throughput rate of 39,000 gallons per hour when loading trucks, and 144,000 gallons per hour when loading railcars. This unit is controlled by enclosed flare CE015, which is fueled by natural gas and has a pilot gas flare heat input capacity of 54,000 Btu/hr, and exhausting through stack SV016.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

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

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-

1, except as otherwise specified in 40 CFR Part 60, Subpart VVa.

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

E.1.2 Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 [40 CFR Part 60, Subpart VVa] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart VVa (included as Attachment A of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart VVa:

(1) 40 CFR 60.480a
(2) 40 CFR 60.481a
(3) 40 CFR 60.482-1a
(4) 40 CFR 60.482-2a
(5) 40 CFR 60.482-3a
(6) 40 CFR 60.482-4a
(7) 40 CFR 60.482-5a
(8) 40 CFR 60.482-6a
(9) 40 CFR 60.482-7a
(10) 40 CFR 60.482-8a
(11) 40 CFR 60.482-9a
(12) 40 CFR 60.482-10a
(13) 40 CFR 60.482-11a
(14) 40 CFR 60.483-1a
(15) 40 CFR 60.483-2a
(16) 40 CFR 60.485a
(17) 40 CFR 60.486a
(18) 40 CFR 60.487a
(19) 40 CFR 60.488a
(20) 40 CFR 60.489a

SECTION E.2 FACILITY OPERATION CONDITIONS

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

(j) Two (2) natural gas fired boilers, identified as EU027 and EU028, approved for construction in 2006, each with a maximum heat input rate of 143 MMBtu/hr, with emissions exhausting to stacks SV013 and SV014, respectively.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for boilers EU027 and EU028, except as otherwise specified in 40 CFR Part 60, Subpart Db.

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

E.2.2 Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units Requirements [40 CFR Part 60, Subpart Db] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart Db, the Permittee shall comply with the provisions of Standard of Performance for Industrial-Commercial-Institutional Steam Generating Units, which are incorporated by reference as 326 IAC 12, for boilers EU027 and EU028 as follows:

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32742, June 13, 2007, unless otherwise noted.

§ 60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

(1) Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the particulate matter (PM) and nitrogen oxides (NO_X) standards under this subpart.

(2) Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are subject to the PM and NO_X standards under this subpart and to the sulfur dioxide (SO_2) standards under subpart D (§60.43).

(3) Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the NO_X standards under this subpart.

(4) Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are also subject to the NO_X standards under this subpart and the PM and SO_2standards under subpart D (§60.42 and §60.43).

(c) Affected facilities that also meet the applicability requirements under subpart J (Standards of performance for petroleum refineries; §60.104) are subject to the PM and NO_X standards under this subpart and the SO_2standards under subpart J (§60.104).

(d) Affected facilities that also meet the applicability requirements under subpart E (Standards of performance for incinerators; §60.50) are subject to the $NO_X$and PM standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; §60.40Da) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing total reduced sulfur (TRS) as defined under §60.281 is not considered a modification under §60.14 and the steam generating unit is not subject to this subpart.

(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

(h) Any affected facility that meets the applicability requirements and is subject to subpart Ea, subpart Eb, or subpart AAAA of this part is not covered by this subpart.

(i) Heat recovery steam generators that are associated with combined cycle gas turbines and that meet the applicability requirements of subpart GG or KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, §60.40).

(k) Any affected facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart Cb or subpart BBBB of this part is not covered by this subpart.

§ 60.41b Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels listed in §60.42b(a), §60.43b(a), or §60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760

hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants, petroleum refineries, or pulp and paper mills (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide (CO_2) levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purpose of this subpart.

Chemical manufacturing plants mean industrial plants that are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, coke oven gas, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any byproduct of coal mining or coal cleaning operations with an ash content greater than 50 percent, by weight, and a heating value less than 13,900 kJ/kg (6,000 Btu/lb) on a dry basis.

Cogeneration, also known as combined heat and power, means a facility that simultaneously produces both electric (and mechanical) and useful thermal energy from the same primary energy source.

Coke oven gas means the volatile constituents generated in the gaseous exhaust during the carbonization of bituminous coal to form coke.

Combined cycle system means a system in which a separate source, such as a gas turbine, internal combustion engine, kiln, etc., provides exhaust gas to a steam generating unit.

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary gas turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under §60.49b(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.

Gaseous fuel means any fuel that is present as a gas at ISO conditions.

Gross output means the gross useful work performed by the steam generated. For units generating only electricity, the gross useful work performed is the gross electrical output from the turbine/generator set. For cogeneration units, the gross useful work performed is the gross electrical or mechanical output plus 75 percent of the useful thermal output measured relative to ISO conditions that is not used to generate additional electrical or mechanical output (i.e., steam delivered to an industrial process).

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hr) divided by the furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row of convection pass tubes.

Heat transfer medium means any material that is used to transfer heat from one point to another point.

High heat release rate means a heat release rate greater than 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3).

ISO Conditions means a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals.

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m^3 (70,000 Btu/hr-ft^3) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a retort or is fed directly onto a grate where it is combusted.

Maximum heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel on a steady state basis, as determined by the physical design and characteristics of the steam generating unit.

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible materials such as glass and rock.

Natural gas means: (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or (2) liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical SO_2emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Pulp and paper mills means industrial plants that are classified by the Department of Commerce under North American Industry Classification System (NAICS) Code 322 or Standard Industrial Classification (SIC) Code 26.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units. Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste and produces steam or heats water or any other heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Very low sulfur oil means for units constructed, reconstructed, or modified on or before February 28, 2005, an oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 215 ng/J (0.5 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005, very low sulfur oil means an oil that contains no more than 0.3 weight percent sulfur or that, when combusted without SO_2emission control, has a SO_2emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input.

Wet flue gas desulfurization technology means a SO_2control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including, but not limited to, sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

§ 60.44b Standard for nitrogen oxides (NOX).

(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this

section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X(expressed as NO_2) in excess of the following emission limits:

Fuel/steam generating unit type	Nitrogen oxide emission limits (expressed as NO_2) heat input	
	ng/J	lb/MMBTu
(1) Natural gas and distillate oil, except (4):		
(i) Low heat release rate	43	0.10
(ii) High heat release rate	86	0.20
(2) Residual oil:		
(i) Low heat release rate	130	0.30
(ii) High heat release rate	170	0.40
(3) Coal:		
(i) Mass-feed stoker	210	0.50
(ii) Spreader stoker and fluidized bed combustion	260	0.60
(iii) Pulverized coal	300	0.70
(iv) Lignite, except (v)	260	0.60
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace	340	0.80
(vi) Coal-derived synthetic fuels	210	0.50
(4) Duct burner used in a combined cycle system:		
(i) Natural gas and distillate oil	86	0.20
(ii) Residual oil	170	0.40

...

(h) For purposes of paragraph (i) of this section, the NO_X standards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

(1) Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;

(2) Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and

(3) Are subject to a federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j)(1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 MMBtu/hr) or less, are not subject to the NO_X emission limits under this section.

(l) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction or reconstruction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO_X (expressed as NO_2) in excess of the following limits:

(1) If the affected facility combusts coal, oil, or natural gas, or a mixture of these fuels, or with any other fuels: A limit of 86 ng/J (0.20 lb/MMBtu) heat input unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent (0.10) or less and is subject to a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas; or

(2) If the affected facility has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the following formula:

$$E_n = \frac{(0.10 \times H_{go}) + (0.20 \times H_r)}{(H_{go} + H_r)}$$

Where:

E_n= NO_X emission limit, (lb/MMBtu);

H_{go}= 30-day heat input from combustion of natural gas or distillate oil; and

H_r= 30-day heat input from combustion of any other fuel.

(3) After February 27, 2006, units where more than 10 percent of total annual output is electrical or mechanical may comply with an optional limit of 270 ng/J (2.1 lb/MWh) gross energy output, based on a 30-day rolling average. Units complying with this output-based limit must demonstrate compliance according to the procedures of §60.48Da(i) of subpart Da of this part, and must monitor emissions according to §60.49Da(c), (k), through (n) of subpart Da of this part.

§ 60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The PM emission standards and opacity limits under §60.43b apply at all times except during periods of startup, shutdown, or malfunction. The NO_X emission standards under §60.44b apply at all times.

...

(c) Compliance with the NO_X emission standards under §60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.

...

(e) To determine compliance with the emission limits for NO_X required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring NO_X under §60.48(b).

(1) For the initial compliance test, NO_X from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_X emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

...

(4) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the NO_X standards under §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_X emissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_X emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days.

...

(f) To determine compliance with the emissions limits for NO_X required by §60.44b(a)(4) or §60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

(1) The owner or operator of an affected facility shall conduct the performance test required under §60.8 as follows:

(i) The emissions rate (E) of NO_X shall be computed using Equation 1 in this section:

$$E = E_{sg} + \left(\frac{H_g}{H_b}\right)\left(E_{sg} - E_g\right) \qquad \text{(Eq.1)}$$

Where:

E = Emissions rate of NO_X from the duct burner, ng/J (lb/MMBtu) heat input;

E_{sg}= Combined effluent emissions rate, in ng/J (lb/MMBtu) heat input using appropriate F factor as described in Method 19 of appendix A of this part;

H_g= Heat input rate to the combustion turbine, in J/hr (MMBtu/hr);

H_b= Heat input rate to the duct burner, in J/hr (MMBtu/hr); and

E_g= Emissions rate from the combustion turbine, in ng/J (lb/MMBtu) heat input calculated using appropriate F factor as described in Method 19 of appendix A of this part.

(ii) Method 7E of appendix A of this part shall be used to determine the NO_X concentrations. Method 3A or 3B of appendix A of this part shall be used to determine O_2concentration.

(iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.

(iv) Compliance with the emissions limits under §60.44b(a)(4) or §60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the CEMS specified under §60.48b for measuring NO_X and $O_2$and meet the requirements of §60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NO_X emissions rate at the outlet from the steam generating unit shall constitute the NO_X emissions rate from the duct burner of the combined cycle system.

(g) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method described in sections 5 and 7.3 of the ASME Power Test Codes 4.1 (incorporated by reference, see §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test

for affected facilities that meet the criteria of §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of §60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

...

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides.

...

(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NO_X standard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and shall record the output of the system; or

...

(c) The CEMS required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(d) The 1-hour average NO_X emission rates measured by the continuous NO_X monitor required by paragraph (b) of this section and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2).

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

...

(2) For affected facilities combusting coal, oil, or natural gas, the span value for NO_X is determined using one of the following procedures:

(i) Except as provided under paragraph (e)(2)(ii) of this section, NO_X span values shall be determined as follows:

Fuel	Span values for NO_X (ppm)
Natural gas	500.
Oil	500.
Coal	1,000.
Mixtures	500 (x + y) + 1,000z.

Where:

x = Fraction of total heat input derived from natural gas;

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

(ii) As an alternative to meeting the requirements of paragraph (e)(2)(i) of this section, the owner or operator of an affected facility may elect to use the NO_X span values determined according to section 2.1.2 in appendix A to part 75 of this chapter.

…

(f) When NO_X emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or

(2) Monitor steam generating unit operating conditions and predict NO_X emission rates as specified in a plan submitted pursuant to §60.49b(c).

(h) The owner or operator of a duct burner, as described in §60.41b, that is subject to the NO_X standards of §60.44b(a)(4) or §60.44b(l) is not required to install or operate a continuous emissions monitoring system to measure NO_X emissions.

(i) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) is not required to install or operate a CEMS for measuring NO_X emissions.

…

§ 60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by §60.7. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility;

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i);

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired; and

...

(b) The owner or operator of each affected facility subject to the SO_2, PM, and/or NO_X emission limits under §§60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B of this part. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the NO_X standard of §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions under the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored under §60.48b(g)(2) and the records to be maintained under §60.49b(j). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide

emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_X emission rates (i.e. , ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e. , the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e. , flue gas O_2level);

(2) Include the data and information that the owner or operator used to identify the relationship between NO_X emission rates and these operating conditions; and

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(j).

(d) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

...

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the NO_X standards under §60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The average hourly NO_X emission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

(3) The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

(7) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions that occurred during the reporting period.

(1) Any affected facility subject to the opacity standards under §60.43b(e) or to the operating parameter monitoring requirements under §60.13(i)(1).

(2) Any affected facility that is subject to the NO_X standard of §60.44b, and that:

(i) Combusts natural gas, distillate oil, or residual oil with a nitrogen content of 0.3 weight percent or less; or

(ii) Has a heat input capacity of 73 MW (250 MMBtu/hr) or less and is required to monitor NO_X emissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2).

(3) For the purpose of §60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under §60.43b(f).

(4) For purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO_X emission rate, as determined under §60.46b(e), that exceeds the applicable emission limits in §60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for NO_X under §60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

...

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in §60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The number of hours of operation; and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator a report containing:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the reporting period, if residual oil was fired; and

(3) If the affected facility meets the criteria described in §60.44b(j), the results of any NO_X emission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last NO_X emission test.

...

(v) The owner or operator of an affected facility may submit electronic quarterly reports for SO_2 and/or NO_X and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(w) The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

...

SECTION E.3 FACILITY OPERATION CONDITIONS

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

(g) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO_2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) off spec tank for 190-proof ethanol, identified as T001, approved for construction in 2006, with a maximum capacity of 250,000 gallons. [40 CFR 60, Subpart Kb]

(2) One (1) denaturant tank, identified as T002, constructed in 2007, approved for modification in 2009, with a maximum capacity of 250,000 gallons of denaturant. [40 CFR 60, Subpart Kb]

(3) One (1) 200-proof ethanol tank, identified as T003, constructed in 2007, approved for modification in 2009, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol. [40 CFR 60, Subpart Kb]

(4) One (1) 200-proof ethanol tank, identified as T004, constructed in 2007, approved for modification in 2009, with a maximum capacity of 2,000,000 gallons of 200-proof ethanol. [40 CFR 60, Subpart Kb]

(5) One (1) denaturant tank, identified as T005, approved for construction in 2006, with a maximum capacity of 126,900 gallons of natural gasoline. [326 IAC 8-9] [40 CFR 60, Subpart Kb]

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.3.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for tanks T001, T002, T003, T004, and T005, except as otherwise specified in 40 CFR Part 60, Subpart Kb.

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

E.3.2 Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) [40 CFR Part 60, Subpart Kb] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart Kb, the Permittee shall comply with the provisions of Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels), which are incorporated by reference as 326 IAC 12, for tanks T001, T002, T003, T004, and T005 as follows:

Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)

§ 60.110b Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

(1) Vessels at coke oven by-product plants.

(2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

(3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.

(4) Vessels with a design capacity less than or equal to 1,589.874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer.

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

(8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance*—(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of §60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph

(e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

(3) *Internal floating roof report.* If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) *External floating roof report.* If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003]

§ 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see §60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17);

(4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323–82 or 94 (incorporated by reference—see §60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

(1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

§ 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in §60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of §60.112b.

(a) After installing the control equipment required to meet §60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in §60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in §60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

§ 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in §60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of §60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with §60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of §60.112b(a)(1) and §60.113b(a)(1). This report shall be an attachment to the notification required by §60.7(a)(3).

(2) Keep a record of each inspection performed as required by §60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in §60.113b(a)(2) are detected during the annual visual inspection required by §60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by §60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in §60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of §61.112b(a)(1) or §60.113b(a)(3) and list each repair made.

§ 60.116b Monitoring of operations.

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in §60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see §60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17); or

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.117b Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

SECTION E.4 FACILITY OPERATION CONDITIONS

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

(o) One (1) diesel generator, identified as EU037, approved for construction in 2006, with a maximum power output rate of 2,640 HP, and exhausting to stack SV015.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.4.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60 Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1 for emergency generator EU037, except as otherwise specified in 40 CFR Part 60, Subpart IIII.

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

E.4.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII] [326 IAC 12]

Pursuant to 40 CFR Part 60, Subpart IIII, the Permittee shall comply with the provisions of Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, which are incorporated by reference as 326 IAC 12, for emergency generator EU037 as follows:

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

Fuel Requirements for Owners and Operators

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

Other Requirements for Owners and Operators

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model year?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section.

(h) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

Compliance Requirements

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(e) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the

manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

Notification, Reports, and Records for Owners and Operators

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

General Provisions

§ 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

§ 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means either:

(1) The calendar year in which the engine was originally produced, or

(2) The annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

Useful life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for useful life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for useful life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Tables to Subpart IIII of Part 60

Table 1 to Subpart IIII of Part 60._Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder [As stated in §§ 60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NOX	HC	NOX	CO	PM
KW<8 (HP<11)	10.5 (7.8)	.....	.....	8.0 (6.0)	1.0 (0.75)
8[le]KW<19 (11[le]HP<25)	9.5 (7.1)	.....	.....	6.6 (4.9)	0.80 (0.60)
19[le]KW<37 (25[le]HP<50)	9.5 (7.1)	.....	.....	5.5 (4.1)	0.80 (0.60)
37[le]KW<56 (50[le]HP<75)	.....	.....	9.2 (6.9)	.....	.....
56[le]KW<75 (75[le]HP<100)	.....	.....	9.2 (6.9)	.....	.....
75[le]KW<130 (100[le]HP<175)	.....	.....	9.2 (6.9)	.....	.....
130[le]KW<225 (175[le]HP<300)	.....	1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

225[le]KW<450 (300[le]HP<600).....	.....	1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450[le]KW[le]560 (600[le]HP[le]750).....	.....	1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750).....	.....	1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 5 to Subpart IIII of Part 60._Labeling and Recordkeeping Requirements for New Stationary Emergency Engines
[You must comply with the labeling requirements in § 60.4210(f) and the recordkeeping requirements in § 60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19[le]KW<56 (25[le]HP<75).....	2013
56[le]KW<130 (75[le]HP<175).....	2012
KW>=130 (HP>=175).....	2011

Table 8 to Subpart IIII of Part 60._Applicability of General Provisions to Subpart IIII
[As stated in § 60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§ 60.1.....	General applicability of the General Provisions.	Yes.....	
§ 60.2.....	Definitions.....	Yes.....	Additional terms defined in § 60.4219.
§ 60.3.....	Units and abbreviations...	Yes.....	
§ 60.4.....	Address.....	Yes.....	
§ 60.5.....	Determination of construction or modification.	Yes.....	
§ 60.6.....	Review of plans.....	Yes.....	
§ 60.7.....	Notification and Recordkeeping.	Yes.....	Except that § 60.7 only applies as specified in § 60.4214(a).
§ 60.8.....	Performance tests.....	Yes.....	Except that § 60.8 only applies to stationary CI ICE with a displacement of (>=30 liters per cylinder and engines that are not certified.
§ 60.9.....	Availability of information.	Yes.....	
§ 60.10.....	State Authority.....	Yes.....	
§ 60.11.....	Compliance with standards and maintenance requirements.	No.....	Requirements are specified in subpart IIII.
§ 60.12.....	Circumvention.....	Yes.....	
§ 60.13.....	Monitoring requirements...	Yes.....	Except that § 60.13 only applies to stationary CI ICE with a displacement of (>=30 liters per cylinder.
§ 60.14.....	Modification.....	Yes.....	
§ 60.15.....	Reconstruction.....	Yes.....	
§ 60.16.....	Priority list.....	Yes.....	
§ 60.17.....	Incorporations by reference.	Yes.....	
§ 60.18.....	General control device requirements.	No.....	
§ 60.19.....	General notification and reporting requirements.	Yes.....	

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127

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 AND ENFORCEMENT 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: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

FESOP Quarterly Report

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127
Facility: Truck dump pits EU001
Parameter: The amount of corn received
Limit: Less than 683,280 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER:_____ YEAR:_____

Month	Column 1 This Month	Column 2 Previous 11 Months	Column 1 + Column 2 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 AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127
Facility: DDGS Dryers
Parameter: The amount of DDGS Produced
Limit: Less than 201,480 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER:_____ YEAR:_____

Month	Column 1 This Month	Column 2 Previous 11 Months	Column 1 + Column 2 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 AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127
Facility: Fermentation and Distillation Process
Parameter: Hours the RTO is down
Limit: Shall not exceed 500 hours per twelve (12) month consecutive period (when RTO is down)

QUARTER:_____ YEAR:_____

Month	Column 1 This Month	Column 2 Previous 11 Months	Column 1 + Column 2 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 AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127
Facility: DDGS Cooler
Parameter: The DDGS Cooler's hours exhausting directly to SV010
Limit: Shall not exceed 3660 hours per twelve (12) month consecutive period

QUARTER:_____ YEAR:_____

Month	Column 1 This Month	Column 2 Previous 11 Months	Column 1 + Column 2 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 AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127
Facility: Boilers EU027 and EU028
Parameter: Natural Gas Usage
Limit: Less than 2,505.4 MMCF per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER:_____ YEAR:_____

Month	Column 1 This Month	Column 2 Previous 11 Months	Column 1 + Column 2 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 AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127
Facility: Ethanol Loading Rack EU036
Parameter: Denatured Ethanol Loadout
Limit: Less than 69 MMgal per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER:_____ YEAR:_____

Month	Column 1 This Month	Column 2 Previous 11 Months	Column 1 + Column 2 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 AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127
Facility: Diesel Generator EU037
Parameter: Operating Hours
Limit: Less than 100 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER:_____ YEAR:_____

Month	Column 1 This Month	Column 2 Previous 11 Months	Column 1 + Column 2 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 AND ENFORCEMENT BRANCH

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

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127

Months: _____ **to** _____ **Year:** _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked ANo deviations occurred this reporting period@.

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:	**Duration of Deviation:**

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:	**Duration of Deviation:**

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	**POET Biorefining - Alexandria**
Source Location:	**13179 N 100 E, Alexandria, IN 46001**
County:	**Madison**
SIC Code:	**2869**
Operation Permit No.:	**F 095-23482-00127**
Operation Permit Issuance Date:	**January 29, 2007**
Significant Permit Revision No.:	**095-28069-00127**
Permit Reviewer:	**Jillian Bertram**

On July 24, 2009, the Office of Air Quality (OAQ) had a notice published in Anderson Herald Bullentin, Anderson, Indiana, stating that POET Biorefining - Alexandria had applied for a significant permit revision to continue the operation the fermentation and distillation systems when the RTO is down for maintenance and unavoidable circumstances. The scrubber will still be in operation and continue to control the emissions form the fermentation and distillation process. This revision does not add or modify equipment. The notice also stated that the OAQ proposed to issue a significant permit revision 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. A public meeting was held on September 14, 2009, at the Alexandria-Monroe Public Library in Alexandria, Indiana and the public comment period was extended to September 18, 2009. This addendum contains written comments received during the public comment period.

Comments and Responses

Written comments on the draft permit were submitted by William Remington, Roger Bennett, Terry Hockersmith, Beverly Hockersmith, Missy Tanner, Darrin Haas, Martha Remington, Jimmy Morehead, Stephen Smith, Tom Fromholz, Dan Ice, Chad Van Horn, Paul Craib, Kristi Craib, Susan Long, Terry Hall, and Cheryl Hall.

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

Comment 1:

> Many comments were submitted requesting that IDEM deny POET Biorefining- Alexandria's request to operate the fermentation and distillation during periods of regenerative thermal oxidizer, RTO, downtime. Concerns were expressed about the health of citizen's breathing the air. Comments were also expressed suggesting that the source obtain a third control device to allow for downtime of the RTO without increasing emissions and to require the source to install an air monitor within close proximity to the source. Comments were also received suggesting that acetaldehyde should not be emitted at all.

Response to Comment 1:

The Office of Air Quality issues air pollution control permits to facilities that emit regulated levels of pollutants to the air. Permits require sources to comply with all health-based and technology-based standards established by the U.S. EPA and the Indiana Air Pollution Control Board. If an applicant demonstrates that they will be able to comply with all Federal and State laws regarding air pollution, IDEM is required by law to issue the air permit. For information on how to get involved in Indiana's Environmental Rulemaking Process, please go to http://www.in.gov/idem/rules/involved.html.

Since many comments expressed concern about the health impacts from air pollution emissions from POET Biorefining - Alexandria, IDEM, OAQ, conducted an air modeling analysis of the Limited Potential to Emit (PTE) criteria pollutants from this proposed source to estimate whether the Limited PTE criteria pollutants will cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS). The criteria pollutants included in the modeling analysis were carbon monoxide (CO), lead (Pb), sulfur dioxide (SO_2), particulate matter to a diameter of 2.5 microns (PM2.5), and nitrogen oxides (NOx).

The Screen 3 modeling results indicated that the Limited PTE criteria pollutants (Pb, SO_2, NOx, and CO) from this source will not exceed the National Ambient Air Quality Standards (NAAQS) (see Appendix A of the ATSD for more details).

This modification allows for an increase in emission of VOC, total HAP, and Acetaldehyde, therefore, more refined modeling was performed.

Modeling results for Hazardous Air Pollutants (HAP) indicate all HAP emissions are below regulatory thresholds (see Appendix B of the ATSD for more details). All modeled HAP emission hazard quotients are below levels the EPA has established to be health concerns. VOC emissions cannot be modeled at this time because the VOC emissions from the source cannot be fully speciated.

There are no changes to the permit due to these comments.

Comment 2:

Several comments related to citizen complaints about abnormal emissions from the source and POET's lack of response to citizen complaints. Citizens were not aware who they should contact when an abnormality is observed.

Response to Comment 2:

Residents should contact the Compliance Inspector assigned to Madison County. Action will be taken to address all citizen complaints. At this time, Anthony Rench is currently assigned to POET Biorefning - Alexandria. Anthony can be reached at (317)234-3495. In addition, IDEM's Complaint Clearinghouse provides more information regarding filing complaints and is available at http://www.in.gov/idem/contact/complaints/index.html

There are no changes to the permit due to this comment.

Comment 3:

Many residents expressed concern regarding odors and noise from the plant.

Response to Comment 3:

IDEM, OAQ recognizes that these matters are of great personal concern to the commenter's and other local residents. However, IDEM, OAQ does not have the authority to regulate zoning, noise, odor, or traffic on roads or railroads. These matters are under the separate authority of local government units, such as a zoning board, county council or county commission. IDEM, OAQ is required to issue air pollution control permits to sources that have indicated that they can comply with all applicable air pollution control requirements, whether or not the local government unit has made zoning or construction approvals.

However, odors might be an indicator that the source is out of compliance, please contact the current Compliance Inspector, Anthony Rench, at (317) 234-3495. In addition, IDEM's Complaint Clearinghouse provides more information regarding filing complaints is available at IDEM's website at http://www.in.gov/idem/contact/complaints/index.html.

There are no changes to the permit due to this comment.

Comment 4:

A comment was received relating to the ethanol emission standards in other states as they compare to those in Indiana.

Response to Comment 4:

With each proposed rule change, IDEM, OAQ submits a proposed change to the State Implementation Plan, SIP, to the USEPA for review and approval. USEPA then scrutinizes this plan to make certain that all state rules and regulations are as stringent, if not more stringent, than the federal rules. Only after this process does IDEM, OAQ have the authority to implement the approved SIP. All states are subject to this same evaluation. Also, rules that apply to ethanol production emissions are dependent upon the attainment status of the area in which the plant is located. Thus, it is difficult to compare Indiana rules to other states. However, IDEM, OAQ is unaware of any states with more stringent ethanol production rules

There are no changes to the permit due to this comment.

Comment 5:

Several comments were received questioning the integrity of the records of RTO downtime that POET will submit to IDEM, OAQ after this revision.

Response to Comment 5:

POET is responsible for performing the monitoring, record keeping and reporting requirements of the permit. This is not self-regulation, but self-compliance and self-monitoring. These records are reviewed by an IDEM, OAQ inspector during each inspection. In addition, IDEM, OAQ reviews each of the reports required by the permit. As required by Condition B.12 of the draft permit, each year POET is required to certify whether it is in compliance with each of the requirements in the permit. As required by Condition B.11 of the draft permit, this certification must be signed by POET’s authorized individual. Failure to keep the required records is punishable by a fine of up to $25,000 per day. Intentional failure to keep records and/or falsification of any required record or report is a criminal offense subject to combined state and federal prosecution. Also, POET currently uses a digital recordkeeping system and has agreed to incorporate use of this equipment into the permit, minimizing human error and variability.

D.2.16 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document compliance with Condition D.2.4(b), the Permittee shall maintain monthly records of the amount of hours the scrubber (CE008) is vented to the atmosphere. **A computerized system shall be used by and the maintain instantaneous records.**

Comment 6:

During the public meeting, several citizens expressed concern in the dust coming from incoming and outgoing corn trucks that were not covered. The citizens were also concerned that the trucks were driving too fast to and from the plant.

There are no changes to the permit due to this comment.

Response to Comment 6:

The delivery trucks are all independent operations from POET Biorefining. POET has encouraged the drivers to tarp their trucks but does not have the authority to enforce this. County Road 100E is a publicly owned road with posted speed limit signs; please contact the Madison County Sherriff's Department for further issues, (765) 646-4001.

There are no changes to the permit due to this comment.

Comment 7:

A photograph was submitted documenting stack emissions from the POET facility on September 22, 2009. The commenter also asked if this exhaust was within the limits of the source's operating permit.

Response to Comment 7:

The photograph was submitted to the Madison County Inspector. For further photographic complaint submittals, please include the time of day in the submission so that the inspector can use this to determine the types of production activities causing the exhaust. A photograph does not automatically trigger enforcement action; however it is sufficient evidence to trigger further investigation.

There are no changes to the permit due to this comment.

Comment 8:

A comment was submitted suggesting that POET knew when requesting the original operating permit that RTO downtime would be needed and that this plant intentionally requested a permit not including this downtime in order to build the facility.

Response to Comment 8:

IDEM recognizes that all control devices must have some downtime for maintenance. IDEM is taking this permitting action to change a permit term that would have been impossible to comply with. IDEM also notes that even with the allowed downtime, POET should comply with all state

and federal laws, rules, and regulations.

There are no changes to the permit due to this comment.

Comment 9:

During the public notice period, several comments received stated that the public was not adequately informed about the implications of the proposed revision.

Response to Comment 9:

IDEM, OAQ offered a public meeting relating to this proposed modification on September 14, 2009. At this meeting, the public was given an overview of the revision and the proposed increases in air emissions. IDEM, OAQ then took questions and comments related to this revision.

There are no changes to the permit due to this comment.

Comment 10:

A comment was received stating that there are too many unknowns about this process and to lower the restrictions would be putting the community at risk.

Response to Comment 10:

Emission standards are set by the USEPA after extensive testing, using the most conservative assumptions. Safety factors are also included to assure protection of human health of the most sensitive populations. Indiana's rules and regulations are regularly reviewed by the USEPA and must be as stringent, if not more stringent than USEPA standards.

There are no changes to the permit due to this comment.

Comment 11:

Comments were received regarding POET's lack of interest in cooperating with the community and being a "bad neighbor". A comment was also received stating that POET is not employing the number of people promised when the facility was constructed.

Response to Comment 11:

IDEM, OAQ only has the authority to regulate matters involving state and federal air pollution rules and regulations. Please contact you local representatives on these matters.

There are no changes to the permit due to this comment.

Comment 12:

Comments were received regarding the health of the drinking water supply and the relation to the POET plant.

Response to Comment 12:

IDEM, OAQ understands that this a concern to the citizens in the community, however, this permit only addresses air emissions. For concerns related to water quality issues contact either the

Madison County Wastewater Inspection, Jason Palin, at (317)233-5974 (for concerns regarding wastewater discharge from the plant), the Madison County Drinking Water Inspector, Paul Dick, at (317)308-3314 (for concerns about the local drinking water supply), or Beth Noel (312)232-8706 (for permitting concerns).

There are no changes to the permit due to this comment.

Comment 13:

Several comments were received stating that the community was unaware of previous air permit violations at the source.

Response to Comment 13:

Violation information is public information and can be found by searching IDEM's Virtual File Cabinet at http://12.186.81.89/Pages/Public/Search.aspx or by contacting the File Room Director, Melissa Farrington at (317)234-0111.

There are no changes to the permit due to this comment.

Comment 14:

Comments were received stating that POET should be held accountable for using the best filtration systems available.

Response to Comment 14:

During the initial permit review, F095-28483-00127, a "Best Available Control Technology" analysis was completed and it was determined that an RTO and scrubber system is the best available control technology.

There are no changes to the permit due to this comment.

Comments received by the President of the Madison County Board of Commissioners - Paul F. Wilson

Comments that were received from Mr. Wilson are separated below from the general public comments because Mr. Wilson represents the members of the community as well as himself.

Comment 15:

One of the comments received suggests that this approval is a relaxation of IDEM's rules.

Response to Comment 15:

IDEM's rules are not changing. POET is capable of complying with IDEM's rules when including 500 hours of RTO downtime into the permit.

There are no changes to the permit due to this comment.

Comment 16:

One of the comments received suggests that this approval would mean non-enforcement of IDEM's rules.

Response to Comment 16:

Enforcement procedures and policies are consistent throughout the state, throughout all types of source. Enforcement procedures and policies will not be changing because of this modification.

There are no changes to the permit due to this comment.

Comment 17:

A comment was received addressing local zoning issues stating "IDEM rules and regulations for air quality serve as a basis of reference in consideration of requested zoning changes for a particular project where air quality is an issue".

Response to Comment 17:

IDEM, OAQ does not have authority to regulate zoning. This matter is under the separate authority of local government units, such as a zoning board, county council or county commission. IDEM, OAQ is required to issue air pollution control permits to sources that have indicated that they can comply with all applicable air pollution control requirements, whether or not the local government unit has made zoning or construction approvals.

There are no changes to the permit due to this comment.

Additional Changes

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

(a) Language clarifying that the DDGS dryers shall not operate when the RTO is down has been added to Condition D.2.9 and clarifying language regarding the RTO downtime and scrubber control has been added.

Compliance Determination Requirements

D.2.9 VOC and HAP Control [326 IAC 8-5-6]

(a) During periods of normal operation (SV009):
In order to comply with Condition D.2.4(a) the regenerative thermal oxidizer (RTO) CE009 and the scrubber CE008 shall be in operation and control emissions from:

(i) the DDGS dryers (EU025 and EU026) at all times that the dryers are in operation and

(ii) the fermentation and distillation processes at all times that these units are in operation, except as specified in Condition D.2.9(b).

(b) When the RTO is down (SV008)
In order to comply with D.2.4(b), when the regenerative thermal oxidizer (RTO) CE009 is down, emissions from the fermentation and distillation processes shall be controlled by the scrubber CE008 only. When the RTO is down, the DDGS dryers shall not be in operation.

~~In order to comply with Conditions D.2.4 and D.2.5, regenerative thermal oxidizer CE009 shall be in operation and control emissions from the DDGS dryers (EU025 and EU026) at all times that the~~

~~dryers are in operation and the scrubber CE008 and regenerative thermal oxidizer CE009 shall be in operation, and control emissions from the fermentation and distillation processes at all times that these units are in operation , except in the event of regenerative thermal oxidizer CE009 downtime, then emissions from the fermentation and distillation processes will only be controlled by the scrubber CE008 only.~~

(b) IDEM has been made aware that in order to achieve 98% VOC control for the scrubber, as required by law, the scrubber must operate at a greater water flow rate. Based on the stack test results at a similar facility POET - North Manchester, a water flow rate of 70 gallons per minute resulted in 98.4% VOC control efficiency from the scrubber.

D.2.14 Scrubber Pressure Drop and Flow Rate [326 IAC 8-5-6]

The Permittee shall monitor and record the pressure drop and the flow rate of the scrubber CE008 at least once per day when the fermentation and/or the distillation process is in operation. When for any one reading, the pressure drop across the scrubber 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) ~~When,~~ **During normal operations as referenced in Condition D.2.4(a), when** for any one reading, the flow rate of the scrubber is less than the normal minimum of 35 gallons per minute, or a minimum established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.

(b) During RTO downtime as referenced in Condition D.2.4(b), when for any one reading, the flow rate of the scrubber is less than the normal minimum of 70 gallons per minute, or a minimum 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 or a flow rate that is below the above mentioned minimum 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.

***

D.2.16 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document compliance with Condition D.2.4(b), the Permittee shall maintain monthly records of the amount of hours **the RTO (CE009) is down** ~~the scrubber (CE008) is vented to the atmosphere~~. A computerized system shall keep and maintain instantaneous records.

***

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

FESOP Quarterly Report

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001

Mailing Address:	13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.:	095-23482-00127
Facility:	Fermentation and Distillation Process
Parameter:	Hours the ~~scrubber (CE008) is vented to the atmosphere~~ **RTO is down**
Limit:	Shall not exceed 500 hours per twelve (12) month consecutive period (when RTO is down)

(c) In order to better ensure that the source is in compliance with the 10 tons per year of a single HAP (acetaldehyde) source-wide limit, an additional limitation and corresponding record keeping requirements have been added for the fluidized DDGS Cooler (EU029).

D.4.6 Acetaldehyde Emissions [326 IAC 2-2] [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 8-1-6 (BACT) not applicable, the Permittee shall comply with the following:

(a) Acetaldehyde emissions from the DDGS cooler shall be controlled by the RTO and exhaust through SV008 unless as specified in Condition D.4.6(b).

(b) When acetaldehyde emissions are not being controlled by the RTO, the acetaldehyde emissions from the DDGS cooler shall exhaust through SV010. The hours of operation of the DDGS cooler when exhausting directly to SV010 shall not exceed 3660 hours per year.

Compliance with the requirements in combination with the Acetaldehyde emissions from other emission units, including emissions from the RTO downtime, the Acetaldehyde emissions from the entire source are limited to less than 10 tons/yr. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) are not applicable.

***

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

D.4.14 Record Keeping Requirements

(a) To document compliance with Condition D.4.6(b), the Permittee shall maintain monthly records of the amount of hours the emissions from the DDGS cooler exhaust through SV010.

***

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

FESOP Quarterly Report

Source Name:	**POET Biorefining – Alexandria**
Source Address:	**13179 North 100 East, Alexandria, IN 46001**
Mailing Address:	**13179 North 100 East, PO Box 717, Alexandria, IN 46001**

FESOP Permit No.: **095-23482-00127**
Facility: **DDGS Cooler**
Parameter: **Hours the emissions from the DDGS cooler exhaust through SV010**
Limit: **Shall not exceed 3660 hours per twelve (12) month consecutive period**

QUARTER:_____ 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.

(d) In the draft permit, the quarterly reporting for the DDGS produced by the DDGS dryers was missing. There were also two identical quarterly reporting forms for the operating hours of the generators. One generator form has been replaced with the DDGS dryer form.

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

~~**FESOP Quarterly Report**~~

~~Source Name: POET Biorefining – Alexandria~~
~~Source Address: 13179 North 100 East, Alexandria, IN 46001~~
~~Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001~~
~~FESOP Permit No.: 095-23482-00127~~

~~Facility: Diesel Generator EU037~~
~~Parameter: Operating Hours~~
~~Limit: Less than 100 hours per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~QUARTER: _____ YEAR: _____~~

~~Month~~	~~Column 1~~ ~~This Month~~	~~Column 2~~ ~~Previous 11 Months~~	~~Column 1 + Column 2~~ ~~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 AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: **POET Biorefining – Alexandria**
Source Address: **13179 North 100 East, Alexandria, IN 46001**
Mailing Address: **13179 North 100 East, PO Box 717, Alexandria, IN 46001**
FESOP Permit No.: **095-23482-00127**
Facility: **DDGS Dryers**
Parameter: **The amount of DDGS Produced**
Limit: **Less than 201,480 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

QUARTER: _____ **YEAR:** _____

Month	Column 1 This Month	Column 2 Previous 11 Months	Column 1 + Column 2 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.

IDEM Contact

(a) Questions regarding this proposed significant permit revision can be directed to jbertram@idem.in.gov 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)234-5377 or toll free at 1-800-451-6027 extension 45377.

(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

Minor Source Criteria Pollutant Modeling
Screening Form - Raw Data

Permit Summary

Permit Number: F 095-28069-00127
Company Name: POET Biorefining - Alexandria
Source Location: 13179 N 100 E, Alexandria, IN 46001
County: Madison
SIC Code: 2869
Permit Reviewer: Jillian Bertram

Source Specific Information

TABLE 1 - Pollutant Emission Rates (lb/hr) - based on the highest allowable emissions rate

Unit ID	Stack ID	CO	NO_X	PM_{10}	Pb	SO_2
EU001-EU003, EU032-EU035	SV001	0	0	0.8	0	0
EU004-EU005	SV002	0	0	0.09	0	0
EU006	SV003	0	0	0.41	0	0
EU007	SV004	0	0	0.41	0	0
EU008	SV005	0	0	0.41	0	0
EU009	SV006	0	0	0.41	0	0
EU010	SV007	0	0	0.41	0	0
EU011-EU012, EU017-EU026	SV009	10.5	0.23	6.85	0	0.09
EU011-EU012, EU017-EU026	SV008	0	0	0	0	0
EU027	SV013	5.72	5.00	1.07	0	0.08
EU028	SV014	5.72	5.00	1.07	0	0.08
EU029	SV010	0	0	0.82	0	0
EU030	SV011	0	0	0.14	0	0
EU031	SV012	0	0	0.14	0	0
EU036	SV016	0.66	0.26	0	0	0
EU037	SV015	0.01	0.63	0.05	0	0.12
***Max. Emissions Rate** (lb/hr) :*		*22.61*	*11.12*	*13.08*	*0*	*0.37*

TABLE 2 - Stack Information: (all heights are from ground level)

For non-circular stacks, take the average of the stack dimensions as the stack diameter.
If there is no building near the stack, zero out the building height, width, and length.

					Closest building related to stack:			
Stack ID	Stack Height (ft)	Flow Rate (acfm)	Stack Temp. (^oF)	Stack Diameter (ft)	Height (ft)	Width (ft)	Length (ft)	Closest Property Line (ft)
SV001	105	23450	70	3	15	25	45	1250
SV002	68	2500	70	1	15	25	45	1250
SV003	15	12000	70	1.25	15	25	45	1250
SV004	15	12000	70	1.25	15	25	45	1250
SV005	15	12000	70	1.25	15	25	45	1250
SV006	15	12000	70	1.25	15	25	45	1250
SV007	15	12000	70	1.25	15	25	45	1250
SV009	100	112000	320	6.3	15	25	45	1250
SV008	68	9000	75	2	15	25	45	1250
SV013	75	40000	280	4.5	15	25	45	1250
SV014	75	40000	280	4.5	15	25	45	1250
SV010	100	23400	100	3	15	25	45	1250
SV011	112	4000	70	1.25	15	25	45	1250
SV012	30	4000	70	1.25	15	25	45	1250
SV016	20	379	1832	0.75	15	25	45	1250
SV015	10	7600	810	0.66	15	25	45	1250

Minor Source Criteria Pollutant Modeling

SCREEN3 Data

Permit Summary

Permit Number:	F 095-28069-00127
Company Name:	POET Biorefining - Alexandria
Source Location:	13179 N 100 E, Alexandria, IN 46001
County:	Madison
SIC Code:	2869
Permit Reviewer:	Jillian Bertram

SCREEN3 Modeling Data

TABLE 3 - Pollutant Modeling Data - grams per second

Pollutant:	CO	NO_X	PM_{10}	Pb	SO_2
Totals (g/s):	*2.84886*	*1.40112*	*1.64808*	*0*	*0.04662*

TABLE 4 - Stack Modeling Data

The M-Value is calculated using a unit emission rate of 1 g/s.
The stack with the lowest M value represents the lowest dispersion coefficient and should be modeled.

Stack ID	Stack Height (m)	Stack Gas Velocity (m/s)	Stack Temp. (K)	Stack Diameter (m)	Closest building related to stack			Closest Property Line (m)	Volumetric Flow Rate (m^3/s)	Stack M-Value
					Height (m)	Width (m)	Length (m)			
SV001	32.01219512	16.86574721	294.26	0.914634146	4.573170732	7.62195122	13.7195122	381.097561	11.08131514	158874.3961
SV002	20.73170732	16.18248667	294.26	0.304878049	4.573170732	7.62195122	13.7195122	381.097561	1.18137688	98721.83002
SV003	4.573170732	49.71259904	294.26	0.381097561	4.573170732	7.62195122	13.7195122	381.097561	5.670609025	66898.55775
SV004	4.573170732	49.71259904	294.26	0.381097561	4.573170732	7.62195122	13.7195122	381.097561	5.670609025	66898.55775
SV005	4.573170732	49.71259904	294.26	0.381097561	4.573170732	7.62195122	13.7195122	381.097561	5.670609025	66898.55775
SV006	4.573170732	49.71259904	294.26	0.381097561	4.573170732	7.62195122	13.7195122	381.097561	5.670609025	66898.55775
SV007	4.573170732	49.71259904	294.26	0.381097561	4.573170732	7.62195122	13.7195122	381.097561	5.670609025	66898.55775
SV009	**30.48780488**	**18.26594615**	**433.15**	**1.920731707**	**4.573170732**	**7.62195122**	**13.7195122**	**381.097561**	**52.92568423**	**241216.298**
SV008	20.73170732	14.564238	297.04	0.609756098	4.573170732	7.62195122	13.7195122	381.097561	4.252956768	89688.37346
SV013	**22.86585366**	**12.7861623**	**410.93**	**1.37195122**	**4.573170732**	**7.62195122**	**13.7195122**	**381.097561**	**18.90203008**	**120141.5228**
SV014	22.86585366	12.7861623	410.93	1.37195122	4.573170732	7.62195122	13.7195122	381.097561	18.90203008	120141.5228
SV010	30.48780488	16.82978613	310.93	0.914634146	4.573170732	7.62195122	13.7195122	381.097561	11.0576876	159538.0489
SV011	34.14634146	16.57086635	294.26	0.381097561	4.573170732	7.62195122	13.7195122	381.097561	1.890203008	166503.0771
SV012	9.146341463	16.57086635	294.26	0.381097561	4.573170732	7.62195122	13.7195122	381.097561	1.890203008	44599.0385
SV016	6.097560976	4.361359962	1273.15	0.228658537	4.573170732	7.62195122	13.7195122	381.097561	0.179096735	33857.71607
SV015	3.048780488	112.9356278	705.37	0.201219512	4.573170732	7.62195122	13.7195122	381.097561	3.591385716	242870.8986

Minor Source Criteria Pollutant Modeling
Screening Form - Modeling Results

Permit Summary

Permit Number: F 095-28069-00127
Company Name: POET Biorefining - Alexandria
Source Location: 13179 N 100 E, Alexandria, IN 46001
County: Madison
SIC Code: 2869
Permit Reviewer: Jillian Bertram

Modeling Method

Model Used *(please check one)* **:**

☑ **SCREEN3** ☐ **AERSCREEN**
☐ **ISC3** ☐ **AERMOD**

Date Modeling Completed: _____
Modeler: _____

Modeling Results

TABLE 5 - Pollutants Modeling Results: 1 Hour Concentration ($\mu g/m^3$):

The modeled concentrations in this table are the 1-hour concentrationsfor each pollutant.
Use tables 6 and 7 to compare the modeled data to the air quality standard.

Pollutant:	CO	NO_X	PM_{10}	Pb	SO_2
Concentration ($\mu g/m^3$):	*10.84*	*12.23*	*6.269*	*0*	*127*

TABLE 6 - Pollutants Maximum Concentration ($\mu g/m^3$):

Averaging Period	CO	NO_X	PM_{10}	Pb	SO_2
1-hour modeled concentration	10.84				
NAAQ Standard	**40000**				
PASS or **FAIL**	PASS				
3-hour modeled concentration					114.3
NAAQ Standard					**1300**
PASS or **FAIL**					PASS
8-hour modeled concentration	7.588				
NAAQ Standard/CEP Benchmark	**10000**				
PASS or **FAIL**	PASS				
24-hour modeled concentration			2.5076	0	50.8
NAAQ Standard			**150**	**1.5**	**365**
PASS or **FAIL**			PASS	PASS	PASS
Annual modeled concentration		0.9784	0.50152		10.16
NAAQ Standard/CEP Benchmark		**100**	**50**		**80**
PASS or **FAIL**		PASS	PASS		PASS

Air Quality Analysis

POET Biorefining

Alexandria, Indiana (Madison County)

Tracking and Plant ID: 095-00127-28069

Proposed Project

POET Biorefining (POET), has submitted a request for a modification of their ethanol production facility. This analysis is to perform a Hazardous Air Pollutant (HAP) screening for informational purposes.

TABLE 1
HAP Emission Rates

Stack	Acetal-dehyde (TPY**)	Methanol (TPY)	Formal-dehyde (TPY)	Acrolein (TPY)	Propional-dehyde (TPY)	Hexane (TPY)	Toluene (TPY)	Total (TPY)
SV008	1.05							1.05
SV009	6.26	0.57	0.74	0.35	0.04			7.96
SV010	0.92	0.35	0.09					1.36
SV013						1.13		2.21
SV014						1.13		2.21
SV016						0.12	0.02	0.14
Total	8.23	0.92	0.83	0.35	0.04	2.38	0.02	12.77

**Tons per Year

Modeling Approach

Stack Height Compliance with Good Engineering Practice (GEP)

Applicability

Stacks should comply with GEP requirements established in 326 IAC 1-7-4. If stacks are lower than GEP, excessive ambient concentrations due to aerodynamic downwash may occur. Dispersion modeling credit for stacks taller than 65 meters (213 feet) are limited to GEP for the purpose of establishing emission limitations. The GEP stack height takes into account the distance and dimensions of nearby structures, which would affect the downwind wake of the stack. The downwind wake is considered to extend five times the lesser of the structure's height or width. A GEP stack height is determined for each nearby structure by the following formula:

$$Hg = H + 1.5L$$

Where: Hg is the GEP stack height
H is the structure height
L is the structure's lesser dimension (height or width)

New Stacks

Since some of the stack heights concerned for POET Biorefining are below GEP stack height, the effect of aerodynamic downwash will be accounted for in the air quality analysis for the project.

Model Description

IDEM Office of Air Quality (OAQ) used American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD), Version 07026. All regulatory default options were utilized in the U.S. EPA approved model, as listed in the 40 Code of Federal Register Part 51, Appendix W "Guideline on Air Quality Models".

Meteorological Data

The meteorological data used in AERMOD consisted of 1988 through 1992 surface data from Indianapolis, Indiana and upper air measurements taken at Dayton, Ohio. The meteorological data was downloaded from Lakes Environmental and preprocessed using AERMET.

Receptor Grid

OAQ modeling used 100 meter rectangular receptor grids generated by AERMOD. The receptor grid contains 1,918 individual receptors.

Treatment of Terrain

Receptor terrain elevation inputs were interpolated from DEM (Digital Elevation Model) data obtained from the USGS. DEM terrain data was preprocessed using AERMAP.

Modeling Results

OAQ currently requests data concerning the emission of 189 HAPs listed in the 1990 Clean Air Act Amendments (CAAA) that are either carcinogenic or otherwise considered toxic and may be used by industries in the State of Indiana. These substances are listed as air toxic compounds on the State of Indiana, Department of Environmental Management, Office of Air Quality's construction permit application Form GSD-08.

Potential emissions of aggregate HAPs are estimated to be less than 15 tons per year. For POET Biorefining, a full HAP analysis was completed comparing the maximum estimated concentrations of each pollutant with the Unit Risk Factor (URF) or Inhalation Unit Risk and the Reference Concentration (RfC). This analysis offers a refined, up to date, site specific analysis that takes into account the different potencies and health effects that each pollutant presents to the public.

The Unit risk factor (URF) is the upper-bound excess lifetime cancer risk estimated to result from continuous inhalation exposure to a pollutant over a 70 year lifetime. Multiplying the estimated concentration by the URF will produce a cancer risk estimate. The cancer risk estimate is the conservative probability of developing cancer from exposure to a pollutant or a mixture of pollutants over a 70 year lifetime, usually expressed as the number of additional cancer cases in a given number of people, e.g., one in ten thousand. For screening purposes, the cancer estimates for each pollutant are considered to be additive when deriving the cumulative maximum individual cancer risk.

Non-cancer health effects are determined using the Reference Concentration (RfC). The RfC is an estimate of a continuous inhalation exposure to the human population (including sensitive subgroups) that is

likely to be without an appreciable risk of deleterious effects during a lifetime. Dividing the estimated pollutant concentration by the RfC will determine the pollutant's Hazard Quotient (HQ). All of the HAPs' Hazard Quotients were added together to determine the applicant's Hazard Index (HI).

This HAP screening analysis uses health protective assumptions that overestimate the actual risk associated with emissions from the applicant. Estimates 1) assume a 70 year exposure time, 2) assume that all carcinogens cause the same type of cancer, 3) assume that all non-carcinogens have additive health effects, 4) assume maximum permit allowable emissions from the facility, and 5) use conservatively derived dose-response information. The risk analysis cannot accurately predict whether there will be observed health problems around the applicant; rather it identifies possible avenues of risk.

TABLE 2
Hazardous Air Pollutant Modeling Results

	Potential Emissions	Annual Concentration	Cancer	Cancer Risk	Non-Cancer	Hazard Quotient
Compound	**Tons per Year**	**(ug/m3)**	**URF, (ug/m3)-1**		**Chronic RfC, ug/m3**	
Acetaldehyde	8.23	0.298	2.2E-06	6.55E-07	9.00	0.033
Acrolein	0.35	0.005	N/A		0.02	0.250
Formaldehyde	0.83	0.011	5.5E-09	6.05 E-11	9.80	0.001
Propeinaldehyde	0.04	0.005	N/A		N/A	
Hexane	2.38	0.098	N/A		700.00	0.000
Methanol	0.92	0.022	N/A		4000.00	0.000
Toluene	0.02	0.001	N/A		5000.00	0.000
Total HAPS	12.77		**Total Cancer Risk**	**6.55E-07**	**Hazard Index**	**0.284**

Further information on URFs and RfCs can be found at the following EPA website:
http://www.epa.gov/ttn/atw/toxsource/chronicsources.html

The Hazard Index for the project is less than 1. Pollutants with a Hazard Quotient (HQ) greater than 1 are considered to be at concentrations that could represent a health concern. Hazard Quotients above 1 do not represent areas where adverse health effects will be observed but indicate that the potential exists.

- The bulk of the Hazard Quotient is attributed to acrolein. The major effects from chronic (long-term) inhalation exposure to acrolein in humans and animals consist of general respiratory congestion and eye, nose, and throat irritation. (1,3)

- The Reference Concentration (RfC) for acrolein is 0.00002 milligrams per cubic meter (mg/m^3) based on squamous metaplasia and neutrophilic infiltration of nasal epithelium in rats. The RfC is an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without appreciable risk of deleterious noncancer effects during a lifetime. It is not a direct estimator of risk but rather a reference point to gauge the potential effects. At exposures increasingly greater than the RfC, the potential for adverse health effects increases. Lifetime exposure above the RfC does not imply that an adverse health effect would necessarily occur. (2)

**1 Agency for Toxic Substances and Disease Registry (ATSDR). *Toxicological Profile for Acrolein*. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 2007.

**2 U.S. Environmental Protection Agency. *Integrated Risk Information System (IRIS) on Acrolein*. National Center for Environmental Assessment, Office of Research and Development, Washington, D.C. 2003

**3 National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances (NAC/AEG> Committee). *2006. Acrolein. Interim Acute Exposure Guideline Levels.* For NAS/COT Subcommittee for AEGLs.

The additive cancer risk estimate from all HAPs is 0.65 additional cancer cases in one million people. This means if an individual was exposed to these HAPs continuously for 70 years, the risk of getting cancer from this exposure would be 0.65 in one million. The US EPA considers one in ten thousand (1.0E-04) excess cancer risks to be the upper range of acceptability with an ample margin of safety. The probability for the general public to be exposed to these HAPs for 24 hours a day, seven days a week, and 52 weeks a year for 70 years is minimal.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP)

Source Description and Location

Source Name:	**POET Biorefining - Alexandria**
Source Location:	**13179 N 100 E, Alexandria, IN 46001**
County:	**Madison**
SIC Code:	**2869**
Operation Permit No.:	**F 095-23482-00127**
Operation Permit Issuance Date:	**January 29, 2007**
Significant Permit Revision No.:	**095-28069-00127**
Permit Reviewer:	**Jillian Bertram**

On June 2, 2009, the Office of Air Quality (OAQ) received an application from POET Biorefining - Alexandria related to a modification to an existing fuel ethanol production plant.

Existing Approvals

The source was issued FESOP No. 095-23482-00127 on January 29, 2007. The source has since received the following approvals:

(a) Administrative Amendment No. 095-25179-00127, issued on October 23, 2007;
(b) Administrative Amendment No. 095-25333-00127, issued on November 13, 2007; and
(c) Minor Permit Revision No. 095-27796-00127, issued on May 19, 2009.

County Attainment Status

The source is located in Madison County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective October 19, 2007, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(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. Madison 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

Madison County has been classified as attainment for PM2.5. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

(c) Other Criteria Pollutants

Madison County has been classified as attainment or unclassifiable in Indiana for all criteria 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, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Grain Receiving and Handling	12.9	12.9	12.9	0	0	0	0	0	0
RTO Stack	30.0	30.0	30.0	0.39	48.2	46.1	45.9	8.24	6.26 Acetaldehyde
DDGS Cooler	3.57	3.57	3.57	0	0	24.97	0	1.36	0.92 Acetaldehyde
DDGS Handling and Loadout	1.2	1.2	1.2	0	0	0	0	0	0
Boilers	2.33	9.33	9.33	0.74	43.8	6.75	50.1	2.32	2.21 Hexane
Wet Cake Production	0	0	0	0	0	0	0	0	0
Ethanol Loadout and Flare	0	0	0	0	1.15	2.48	2.88	0.14	negl.
Cooling Tower	7.13	7.13	7.13	0	0	0	0	0	0
Diesel Fire Pump (Emergency Generator)	0.23	0.23	0.23	0.53	2.77	0.05	0.06	negl.	negl.
Storage Tanks	0	0	0	0	0	2.56	0	negl.	negl.
Leaks	0	0	0	0	0	0	0	0.08	negl.
Other Insignificant Activities	1.0	1.0	1.0	0	0	1.0	0	0	0
Total PTE of Entire Source	**58.36**	**65.36**	**65.36**	**1.66**	**95.92**	**82.91**	**98.94**	**12.14**	**7.18**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA

negl. = negligible
These emissions are based upon F095-27796-00127, issued May 19, 2009.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the unlimited potential to emit HAPs are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by POET Biorefining - Alexandria on June 2, 2009, relating to the ability to continue the operation the fermentation and distillation systems when the RTO is down for maintenance and unavoidable circumstances. The scrubber will still be in operation and continue to control the emissions form the fermentation and distillation process. This revision does not add or modify equipment. The request is based on results of stack test on another

similar facility, POET Biorefining - Jewell, Iowa. Stack testing will also be completed at POET Biorefining - Alexandria to confirm compliance. The RTO is expected to be down for no more than 500 hours per year. However, during the downtime period, the DDGS dryers will not be in operation.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)								
	PM	PM10*	PM2.5	SO_2	NOx	VOC ***	CO	Total HAPs ***	Worst Single HAP ***
RTO Bypass Stack (SV008) **	0.00	0.00	0.00	0.00	0.00	384.5	0.00	1.1	1.1 - Acetaldehyde
Total PTE of Proposed Revision	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**384.5**	**0.00**	**1.1**	**1.1 - Acetaldehyde**

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".

** The RTO bypass stack is used when the RTO is down but the Scrubber is still in operation.

*** Emissions are based on 500 hours of operation per year, before control.

This FESOP is being revised through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1(g)(1) due to the addition of newly applicable requirements and 326 IAC 2-8-11.1(f)(E)(iv) because the potential to emit VOC from the modification is greater than 25 tons per year.

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)								
	PM *	PM10	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Grain Receiving and Handling	12.90	12.90	12.90	0.00	0.00	0.00	0.00	0.00	0
RTO Stack (SV009)	30.00	30.00	30.00	0.39	48.20	46.10	45.90	8.24	6.26 - Acetaldehyde
RTO Bypass (SV008)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**7.69 ****	**0.00**	**1.1 ****	**1.1 Acetaldehyde ****
DDGS Cooler	3.57	3.57	3.57	0.00	0.00	24.97	0.00	1.36	0.92 Acetaldehyde
DDGS Handling and Loadout	1.20	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0
Boilers	2.33	9.33	9.33	0.74	43.80	6.75	50.10	2.32	2.21 Hexane
Wet Cake Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Ethanol Loadout and Flare	0.00	0.00	0.00	0.00	1.15	2.48	2.88	0.14	negl.
Cooling Tower	7.13	7.13	7.13	0.00	0.00	0.00	0.00	0.00	0
Diesel Fire Pump (Emergency Generator)	0.23	0.23	0.23	0.53	2.77	0.05	0.06	negl.	negl.
Storage Tanks	0.00	0.00	0.00	0.00	0.00	2.56	0.00	negl.	negl.
Leaks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	negl.
Other Insignificant Activities	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0
Total PTE of Entire Source	58.36	65.36	65.36	1.66	95.92	~~82.91~~ **91.6**	98.94	~~12.14~~ **13.19**	~~7.18~~ **8.28**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	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".

** Limited PTE at 500 hours per year, after control.

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)								
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Grain Receiving and Handling	12.90	12.90	12.90	0.00	0.00	0.00	0.00	0.00	0
RTO Stack (SV009)	30.00	30.00	30.00	0.39	48.20	46.10	45.90	8.24	6.26 - Acetaldehyde
RTO Bypass (SV008)	0.00	0.00	0.00	0.00	0.00	7.69 *	0.00	1.1*	1.1 Acetaldehyde *
DDGS Cooler	3.57	3.57	3.57	0.00	0.00	24.97	0.00	1.36	0.92 Acetaldehyde
DDGS Handling and Loadout	1.20	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0
Boilers	2.33	9.33	9.33	0.74	43.80	6.75	50.10	2.32	2.21 Hexane
Wet Cake Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Ethanol Loadout and Flare	0.00	0.00	0.00	0.00	1.15	2.48	2.88	0.14	negl.
Cooling Tower	7.13	7.13	7.13	0.00	0.00	0.00	0.00	0.00	0
Diesel Fire Pump (Emergency Generator)	0.23	0.23	0.23	0.53	2.77	0.05	0.06	negl.	negl.
Storage Tanks	0.00	0.00	0.00	0.00	0.00	2.56	0.00	negl.	negl.
Leaks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	negl.
Other Insignificant Activities	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0
Total PTE of Entire Source	58.36	65.36	65.36	1.66	95.92	91.6	98.94	13.19	8.28
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA

negl. = negligible

* Limited PTE at 500 hours per year, after control.

(a) FESOP Status
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

(a) The Scrubber shall continue to control the VOC emissions for the fermentation and distillation processes, during the periods when the RTO is down. The RTO downtime shall not exceed 500 hours per year.

(b) VOC emissions from the scrubber (CE008) shall not exceed 30.8 pounds per hour.

(c) Acetaldehyde emissions from the scrubber (CE008) shall not exceed 4.2 pounds per hour.

(b) PSD Minor Source
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

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

National Emission Standards for Hazardous Air Pollutants (NESHAP)

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

Compliance Assurance Monitoring (CAM)

(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.

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

(a) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(c) 326 IAC 2-3 (Emission Offset)
This modification to an existing Emission Offset minor stationary source will not change the Emission Offset minor status, because the potential to emit of all nonattainment regulated pollutants from the entire source will continue to be less than the Emission Offset major source threshold levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not

apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the revision is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

(e) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

(f) 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.

(g) 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.

<u>RTO Bypass Stack (i.e. the RTO is down)</u>

(h) 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)
Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall control the VOC emissions from the fermentation and distillation processes and the DDGS dryers (EU025 and EU026) using the following controls:

(1) When the RTO is down, the VOC emissions from the fermentation and distillation process shall be controlled by scrubber CE008.

(2) The overall efficiency for the scrubber CE008 and thermal oxidizer CE009 (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv.

(3) The overall efficiency for the scrubber CE008 (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 20 ppmv.

(4) The VOC emissions from the DDGS dryers (EU025 and EU026) shall be controlled by thermal oxidizer CE009.

(5) The overall efficiency for the thermal oxidizer CE009 controlling the DDGS dryers (EU025 and EU026) (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv.

Prior approvals for this source contained this rule applicability. This is included to reaffirm that the scrubber is still subject to 326 IAC 8-5-6 after this modification.

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

Compliance Determination, Monitoring and Testing Requirements

The testing requirements applicable to this proposed revision are as follows:

Testing Requirements				
Emission Unit	**Control Device**	**Pollutant**	**Timeframe for Testing**	**Frequency of Testing**
Fermentation and Distillation	Scrubber CE008 *	VOC	upon next test	5 years

* Only when the RTO is down and the scrubber is the only control device in operaiton

Scrubber compliance determination and monitoring requirements were included in previous approvals for this source. The only addition is the annual RTO downtime limit. This has been added to the compliance determination section of the permit, Condition D.2.9. Therefore, the existing compliance requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP No: 095-27796-00127, issued on May 19, 2009.

Proposed Changes

(a) The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

(1) Allowing for the fermentation and distillation processes to be controlled by scrubber CE008 during RTO downtime with an operating limit of 500 hours annually.

(2) To be consistent, the description of the thermal oxidizer has been changed to regenerative thermal oxidizer (RTO) throughout the permit.

(3) "New Construction and" was removed mistakenly from the title of the permit for Administrative Amendment No. 095-25333-00012, issued November 13, 2007, and will be added back into the new permit because this is an initial FESOP permit.

NEW CONSTRUCTION AND FEDERALLY ENFORCEABLE STATE OPERATING PERMIT

****

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:

(e) One (1) fermentation process, approved for construction in 2006, with a maximum throughput rate of 55,400 gallons per hour, controlled by scrubber CE008 and **regenerative** thermal oxidizer **(RTO)** CE009, with emissions exhausted through SV009. This process consists of the following:

(1) One (1) slurry tank, identified as EU011, approved for construction in 2006.

(2) Five (5) fermenters, identified as EU012 through EU016, approved for construction in 2006.

(3) One (1) yeast propagation tank, identified as EU017, approved for construction in 2006.

(4) One (1) beer well, identified as EU018, approved for construction in 2006.

(f) One (1) regenerative thermal oxidizer **(RTO),** identified as CE009, approved for construction in 2006, with a maximum heat input capacity of 30 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack SV009.

(g) One (1) distillation process, approved for construction in 2006, with a maximum throughput rate of 54,000 gallons of ethanol per hour, controlled by scrubber CE008 and **regenerative** thermal oxidizer **(RTO)** CE009, with emissions exhausted through stack SV009. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved for construction in 2006.

(2) One (1) rectifier column, identified as EU020, approved for construction in 2006.

(3) One (1) side stripper, identified as EU021, approved for construction in 2006.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved for construction in 2006.

(5) One (1) set of four (4) evaporators, identified as EU023, approved for construction in 2006.

(h) One (1) set of four (4) centrifuges, identified as EU024, approved for construction in 2006, controlled by **regenerative** thermal oxidizer **(RTO)** CE009 during normal operation, with emissions exhausted through stack SV009. During wetcake production, emissions from EU024 are exhausted through the **RTO** bypass stack SV008.

(i) Two (2) natural gas-fired DDGS dryers, identified as EU025 and EU026, approved for construction in 2006, each with a maximum heat input rate of 60 MMBtu/hr, with a total maximum throughput rate of 26 tons of DDGS per hour, controlled by multiclones CE013 and CE014, respectively, with emissions venting to **regenerative** thermal oxidizer **(RTO)** CE009, and exhausting to stack SV009.

***

SECTION D.2 FACILITY OPERATION CONDITIONS – Fermentation/Distillation and DDGS Drying

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

(e) One (1) fermentation process, approved for construction in 2006, with a maximum throughput rate of 55,400 gallons per hour, controlled by scrubber CE008 and **regenerative** thermal oxidizer **(RTO)** CE009, with emissions exhausted through SV009. This process consists of the following:

(1) One (1) slurry tank, identified as EU011, approved for construction in 2006.

(2) Five (5) fermenters, identified as EU012 through EU016, approved for construction in 2006.

(3) One (1) yeast propagation tank, identified as EU017, approved for construction in 2006.

(4) One (1) beer well, identified as EU018, approved for construction in 2006.

(f) One (1) regenerative thermal oxidizer **(RTO),** identified as CE009, approved for construction in 2006, with a maximum heat input capacity of 30 MMBtu/hr, using natural gas as fuel, with emissions exhausted through stack SV009.

(g) One (1) distillation process, approved for construction in 2006, with a maximum throughput rate of 54,000 gallons of ethanol per hour, controlled by scrubber CE008 and **regenerative** thermal oxidizer **(RTO)** CE009, with emissions exhausted through stack SV009. This process consists of the following:

(1) One (1) beer stripper, identified as EU019, approved for construction in 2006.

(2) One (1) rectifier column, identified as EU020, approved for construction in 2006.

(3) One (1) side stripper, identified as EU021, approved for construction in 2006.

(4) One (1) set of three (3) molecular sieves, identified as EU022, approved for construction in 2006.

(5) One (1) set of four (4) evaporators, identified as EU023, approved for construction in 2006.

(h) One (1) set of four (4) centrifuges, identified as EU024, approved for construction in 2006, controlled by **regenerative** thermal oxidizer **(RTO)** CE009 during normal operation, with emissions exhausted through stack SV009. During wetcake production, emissions from EU024 are exhausted through the **RTO** bypass stack SV008.

(i) Two (2) natural gas-fired DDGS dryers, identified as EU025 and EU026, approved for construction in 2006, each with a maximum heat input rate of 60 MMBtu/hr, with a total maximum throughput rate of 26 tons of DDGS per hour, controlled by multiclones CE013 and CE014, respectively, with emissions venting to **regenerative** thermal oxidizer **(RTO)** CE009, and exhausting to stack SV009.

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

***

Operation Conditions

****

D.2.4 FESOP Limits [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-8-4] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4 (FESOP), the Permittee shall comply with the following emission limits for the RTO system (CE009) and **scrubber (CE008),** which ~~is~~ **are** used to control the emissions from the fermentation and distillation processes, and the DDGS dryers (EU025 and EU026):

(a) **During periods of normal operation (SV009):**

(1) PM/PM10 emissions shall not exceed 6.86 lbs/hr.

(2)~~(b)~~ VOC emissions shall not exceed 10.5 lbs/hr.

(3)~~(c)~~ CO emissions shall not exceed 10.5 lbs/hr.

(4)~~(d)~~ NOx emissions shall not exceed 11.0 lbs/hr.

(5)~~(e)~~ Acetaldehyde emissions shall not exceed 1.43 lbs/hr.

(6)~~(f)~~ Total HAP emissions shall not exceed 1.88 lbs/hr.

(b) When the RTO is down (SV008):

(1) The Scrubber shall continue to control the VOC emissions for the fermentation and distillation processes, during the periods when the RTO is down. The RTO downtime shall not exceed 500 hours per year.

(2) VOC emissions from the scrubber (CE008) shall not exceed 30.8 pounds per hour.

(3) Acetaldehyde emissions from the scrubber (CE008) shall not exceed 4.2 pounds per hour.

****

D.2.5 VOC Emissions [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall control the VOC emissions from the fermentation and distillation processes and the DDGS dryers (EU025 and EU026) using the following controls:

(a) Fermentation and Distillation Process

(1)~~(a)~~ The VOC emissions from the fermentation and distillation process shall be controlled by **the combination of scrubber CE008 and regenerative** thermal oxidizer CE009, **unless otherwise specified in D.2.4.**

(2)~~(b)~~ The overall efficiency for the scrubber CE008 and **regenerative** thermal oxidizer CE009 (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv.

(3) The overall efficiency for the scrubber CE008 (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 20 ppmv.

(b) DDGS Dryers

(1)~~(d)~~ The VOC emissions from the DDGS dryers (EU025 and EU026) shall be controlled by **regenerative** thermal oxidizer CE009.

(2)~~(e)~~ The overall efficiency for the **regenerative** thermal oxidizer CE009 controlling the DDGS dryers (EU025 and EU026) (including the capture efficiency and destruction efficiency) shall be at least 98%, or the VOC outlet concentration shall not exceed 10 ppmv.

***

Compliance Determination Requirements

D.2.9 VOC and HAP Control [326 IAC 8-5-6]

In order to comply with Conditions D.2.4 and D.2.5, thermal oxidizer CE009 shall be in operation and control emissions from the DDGS dryers (EU025 and EU026) at all times that the dryers are in operation and the scrubber CE008 and thermal oxidizer CE009 shall be in operation, and control emissions from the fermentation and distillation processes at all times that these units are in operation**, except in the event of regenerative thermal oxidizer CE009 downtime, then emissions from the fermentation and distillation processes will only be controlled by the scrubber CE008 only**.

D.2.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [326 IAC 2-2] [326 IAC 8-5-6]

(a) In order to demonstrate compliance with Conditions D.2.4, D.2.5, and D.2.7, the Permittee shall perform PM, PM10, VOC (including emission rate, destruction efficiency, and capture efficiency), NOx, CO, and Acetaldehyde testing for the RTO system stack (SV009) within 60 days after achieving maximum capacity, but not later than 180 days after initial startup, utilizing methods as approved by the Commissioner. PM10 includes filterable and condensable PM10. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

(b) In order to demonstrate compliance with Condition D.2.4, the Permittee shall perform VOC (including emission rate, destruction efficiency, and capture efficiency) and Acetaldehyde testing for the scrubber (CE008) when the RTO is down five (5) years from the date of the most recent valid compliance demonstration for the RTO system stack (SV009), utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

(b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

(1) Compliance monitoring of thermal oxidizer temperature has been reduced from once every minute to once every 15 minutes this because IDEM, OAQ has decided taking a data point no less often than once per fifteen (15) minutes is sufficient.

(2) IDEM, OAQ is revising Condition D.2.12 to increase clarity. The Permittee should begin monitoring against the new set point or range as soon as the valid compliant results are available.

D.2.12 Thermal Oxidizer Temperature [326 IAC 8-5-6]

To demonstrate compliance with 326 IAC 8-5-6, the Permittee shall meet the following requirements:

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the RTO system (CE009) for measuring operating temperature. For the purpose of this condition, continuous means no less than once per **fifteen (15)** minute**s**. The output of this system shall be recorded as 3-hour average. From the date of startup until the ~~approved~~ stack test results are available, the Permittee shall operate the thermal oxidizer at or above the 3-hour average temperature of 1,400°F.

(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.2.4 and D.2.5, ~~as approved by IDEM.~~

(c) On and after the date the ~~approved~~ stack test results are available, the Permittee shall operate the thermal oxidizers at or above the 3-hour average temperature as observed during the compliant stack test.

***

D.2.16 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document compliance with Condition D.2.4(g), the Permittee shall maintain monthly records of the amount of hours the scrubber (CE008) is vented to the atmosphere.

~~(a)~~**(b)** To document compliance with Condition D.2.11, the Permittee shall maintain daily records of visible emission notations of the stack SV009. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

~~(b)~~**(c)** To document compliance with Condition D.2.12, the Permittee shall maintain continuous temperature records for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

~~(c)~~**(d)** To document compliance with Condition D.2.13, the Permittee shall maintain daily records of the duct pressure or fan amperage for the RTO system (CE009). The Permittee shall include in its daily record when the duct pressure or fan amperage is not taken and the reason for the lack of the reading (e.g., the process did not operate that day).

~~(d)~~**(e)** To document compliance with Condition D.2.14, the Permittee shall maintain daily records of pressure drop and flow rate for scrubber CE008. The Permittee shall include in its daily record when the pressure drop and flow rate are not taken and the reason for the lack of the readings (e.g., the process did not operate that day).

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

D.2.17 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.4(b)(1) and 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
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: POET Biorefining – Alexandria
Source Address: 13179 North 100 East, Alexandria, IN 46001
Mailing Address: 13179 North 100 East, PO Box 717, Alexandria, IN 46001
FESOP Permit No.: 095-23482-00127
Facility: Fermentation and Distillation Process
Parameter: Hours the Scrubber controls VOC from the fermentation and distillation process
Limit: Shall not exceed 500 hours per twelve (12) month consecutive period (when RTO is down

QUARTER:_____ 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.

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 June 2, 2009.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Minor Revision No. 095-28069-00127. The staff recommends to the Commissioner that this FESOP Minor Revision be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Jillian Bertram 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) 234-5377 toll free at 1-800-451-6027 extension 4-5377.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emission Calculations
VOC and HAP Emissions
From the Fermentation and Distillation Process (during RTO downtime)

Company Name: POET Biorefining - Alexandria
Address: 13179 North 100 East, Alexandria, IN 46001
FESOP: 095-28069-00127
Reviewer: Jillian Bertram
Date: June 11, 2009

1. Process Description:

The exhaust from the fermentation/distillation scrubber (CE008) and RTO (CE009).

2. Potential to Emit (PTE) of VOC and HAP from the scrubber, when the RTO is down:

Pollutant	PTE before Control (tons/yr)	Control Efficiency (%)**	Emission Rate after Control (lbs/hr)*	PTE after Control (tons/yr) ***
VOC	384.5	98%	30.76	7.7
HAP				
Acetaldehyde	2.1	50%	4.20	1.1
Methanol	0.00	50%	0.00	0.0
Formaldehyde	0.00	50%	0.00	0.0
Propionaldehyde	0.00	50%	0.00	0.0
Total HAPs	2.10	50%	4.20	1.1

* Emissions are based on test results from sister facility Horizon Ethanol, Jewell, Iowa, multiplied by a safety factor of 1.5
** Pursuant to 326 IAC 8-5-6, the scrubber is required to operate at 98% VOC control efficiency at all times
*** Emissions are based on 500 hours of operation per year

Appendix A: Emission Calculations
Source-wide Summary (After Issuance)

Company Name: POET Biorefining - Alexandria
Address: 13179 North 100 East, Alexandria, IN 46001
FESOP: 095-28069-00127
Reviewer: Jillian Bertram
Date: June 11, 2009

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)								
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Grain Receiving and Handling	12.90	12.90	12.90	0.00	0.00	0.00	0.00	0.00	0
RTO Stack (SV009)	30.00	30.00	30.00	0.39	48.20	46.10	45.90	8.24	6.26 Acetaldehyde
RTO Bypass (SV008)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**7.69**	**0.00**	**1.05**	**1.1 Acetaldehyde**
DDGS Cooler	3.57	3.57	3.57	0.00	0.00	24.97	0.00	1.36	0.92 Acetaldehyde
DDGS Handling and Loadout	1.20	1.20	1.20	0.00	0.00	0.00	0.00	0.00	0
Boilers	2.33	9.33	9.33	0.74	43.80	6.75	50.10	2.32	2.21 Hexane
Wet Cake Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Ethanol Loadout and Flare	0.00	0.00	0.00	0.00	1.15	2.48	2.88	0.14	negl.
Cooling Tower	7.13	7.13	7.13	0.00	0.00	0.00	0.00	0.00	0
Diesel Fire Pump (Emergency Generator)	0.23	0.23	0.23	0.53	2.77	0.05	0.06	negl.	negl.
Storage Tanks	0.00	0.00	0.00	0.00	0.00	2.56	0.00	negl.	negl.
Leaks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	negl.
Insignificant Activities	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0
Total PTE of Entire Source	**58.36**	**65.36**	**65.36**	**1.66**	**95.92**	**91.60**	**98.94**	**13.19**	**8.28**

* Existing Unit Emissions are based on 097-27796-00127, issued May 19, 2009

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

November 18, 2009

TO: Alexandria Public Library

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

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

Applicant Name: **POET Biorefining - Alexandria**
Permit Number: **095-28069-00127**

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

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

Enclosures
Final Library.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

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

TO: Charles Beetz
POET Biorefining - Alexandria
13179 N 100 East
Alexandria, IN 46001

DATE: November 18, 2009

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

SUBJECT: Final Decision
Significant Permit Revision
095-28069-00127

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:
Dave Hudak - GM
Rafe Christopherson
OAQ Permits Branch Interested Parties List

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

Mail Code 61-53

IDEM Staff	GHOTOPP 11/18/2009 POET Biorefining- Alexandria 095-28069-00127 Final		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Charles Beetz POET Biorefining- Alexandria 13179 N 100 East Alexandria IN 46001 (Source CAATS) via confirmed delivery									
2		Dave Hudak GM POET Biorefining- Alexandria 13179 N 100 East Alexandria IN 46001 *(RO CAATS)*									
3		Alexandria Public Library 117 E Church St Alexandria IN 46001-2005 *(Library)*									
4		Madison County Commissioners 16 E. 9th Suite 104 Anderson IN 46016 *(Local Official)*									
5		Mr. Charles L. Berger Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 *(Affected Party)*									
6		Madison County Health Department 206 E 9th St Anderson IN 46016-1512 *(Health Department)*									
7		Alexandria Town Council 125 N. Wayne St. Alexandria IN 46001 *(Local Official)*									
8		Jon Montgomery 1250 East State Road 28 Alexandria IN 46001 *(Affected Party)*									
9		Mrs. Nancy Beher 2676 E 1450 N Summittville IN 46070-9011 *(Affected Party)*									
10		Mr. Rafe Christopherson POET Design & Construction 4615 N Lewis Ave Sioux Falls SD 57104 *(Source ¿ addl contact)*									
11		Mr. Gary McKinney Anderson Brownfields Coordinator 120 E. 8th St. Anderson IN 46016 *(Local Official)*									
12		Ralph & Joyce Harris 218 W 1300 N Alexandria IN 46001 *(Affected Party)*									
13		Mr. William Remington 132 W. 1400 N. Alexandria IN 46001 (Affected Party)									
14		Ms. Missy Tanner 202 E. Washington Alexandria IN 46001 *(Affected Party)*									
15		Mr. Darrin Haas *(Affected Party)*									

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

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Mail Code 61-53

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Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Terry & Beverly 276 E. 1400 N. Summitville IN 46070 (Affected Party)									
2		Mr. Roger Bennett 210 Orchard Lane Alexandria IN 46001 *(Affected Party)*									
3		Melinda DeVaney 1809 E 1300 N Alexandria IN 46001 *(Affected Party)*									
4		Michelle Bradford 76 W 1300 N Alexandria IN 46001 *(Affected Party)*									
5		Jennifer Fromholz 14364 St Rd 9 N Summitville IN 46070 *(Affected Party)*									
6		Bob Stinson 820 W Jefferson Alexandria IN 46001 *(Affected Party)*									
7		Mr. Tom Fromholz *(Affected Party)*									
8		Mr. Jimmy Morehead Franktoon Jr/Sr. H.S. *(Affected Party)*									
9		Mr. Stephen J. Smith 4501 Winter Dr. Anderson IN 46012 *(Affected Party)*									
10		Ms. Susan E. Long 2208 Quail Run Alexandria IN 46001 *(Affected Party)*									
11											
12											
13											
14											
15											

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